Reducing Car Dependency in Small-Town British Columbia

Johanna Thompson

April 4th, 2012

Report prepared at the request of Dillon Consulting Limited in partial fulfillment of

UBC Geog 419: Research in Environmental Geography, for Dr. David Brownstein

Executive Summary

Research in sustainable urban planning is becoming increasingly common and accessible, but research for rural and small town communities has been less explored. Rural communities in British Columbia have a unique set of needs depending on the landscape of the area in question and the local economies. One general trend is that many small communities depend heavily on cars either for commuting purposes or to travel locally as a result of sprawl. Important tactics in reducing car dependency in small communities therefore should involve promoting amenity migration, Smart Growth planning projects and diversifying the local economy. Tools to help small communities achieve these goals include Geographic Information Science (GIS), Google Earth or the BC Climate Action Toolkit, depending on the resources available to the local communities.

Introduction

A variety of research in sustainable planning has been conducted for larger cities in British Columbia, yet smaller towns and rural communities have received less attention. In order for sustainable growth to be achieved throughout the province it is necessary that communities with populations below 15,000 receive equal, or at least proportional, attention as urban centres. Challenges to sustainable planning that are typical of small towns and rural communities, especially in northern BC, include car dependency, resource based economies, unique social structures and lack of resources. In what follows I will argue that in order to reduce car dependency in smaller communities it is important for rural and small communities to reduce sprawl, increase active transportation and diversify their economies. This transitional process can be achieved in

part by using Smart Growth planning strategies, promoting amenity migration, improving the accessibility of secondary economies, using tools, such as Geographic Information Science (GIS) and involving local community voices in the planning procedure in order to retain the rural sense of community. Towns in Canada that have successfully utilized one or more of these tactics, including Ucluelet, Rossland, Oliver and Pelham will be used to illustrate the potential for replication and improvement in the future.

Methods

In order to evaluate strategies proposed for small communities and what is already being done, peer-reviewed articles, Official Community Plans (OCPs), government websites and planning websites were utilized. OCPs, government websites and community newsletters for Ucluelet, Rossland, Oliver and Pelham were used to evaluate sustainability initiatives and proposals already being used in BC, which were then backed up by theoretical perspectives proposed in peer-reviewed articles. Government and planning websites were useful in providing feedback on what is being done day-to-day, in contrast to peer-reviewed sources that take longer to publish.

The structure of this paper has been written to reflect a planning strategy called "Backcasting", which has been developed by the Natural Step, a not-for-profit organization made to educate and create research on sustainable development ("The Natural Step"). The method of

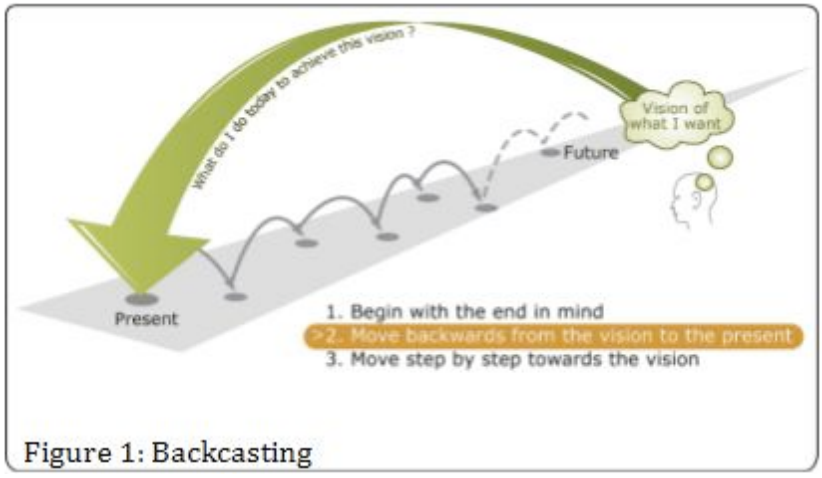

Figure 1: Backcasting

backcasting involves asking three questions: “where are we now”, “where do we want to be” and “how do we get there” (Figure 1). This method requires making sustainable planning goals for a community and then illustrating the methods needed to achieve the desired result, which is beneficial because it allows for individual communities to tackle unique and specific needs. This paper will follow a similar structure. In other words, the general status and examples of small communities in BC will be evaluated based on their current state, goals will be recommended and then methods for achieving those goals will be recommended, based on what is already being done in specific examples.

Results

Where Are We Now?

Rural and small town British Columbia are becoming an increasing concern for sustainable planning because of rapid and often uneven growing and shrinking of communities due to newly developing boom and bust markets and migration out of the city (Markey, Halseth, and Manson 409). In addition, exurbanization and amenity migration have increased growth in rural communities in recent decades. Amenity migration, or the movement of people from urban areas into non-urban areas for non-economic reasons is a potenetial cause for quick growth for small communities (Chipeniuk 222). Similarly, the phenomenon of exurbia describes the dispersal of people out of urban areas into peripheral areas while still maintaining some form of connection to the urban centres (Taylor 323). Amenity migration can be differentiated from exurbia because a certain aesthetic appeal is key in the migratory process (Taylor 333). The movement of people into rural and small town communities presents a problem of car

dependency because, despite moving away from cities, exurbanites require access to the cities still.

Where Do We Want to Be?

One important goal that could reduce car dependency caused by commuting for work would be diversifying the economy. Providing work opportunities locally would, in the long term, help the community to grow so that commuting to outside areas would be less necessary. Although this goal is clearly complicated by many factors and is a long-term project, Ucluelet represents an example of a town that has successfully incorporated this goal for this in their OCP. Traditionally Ucluelet, British Columbia focused its industry mainly in forestry, mining and fishing. Currently the sector that supplies the most jobs is the service sector ("Official Community Plan" 5). In the 2010 Economic Diversification Strategy the Ucluelet local government outlines a variety of end goals to achieve a diversified economy, many of which involve specific planning objectives. Ucluelet's strategy to achieve a diversified economy involved growing the tourist sector so that the town can sustain a diversified economy throughout the year. In order to do this planning tactics included developing walking path networks to support walking tours of the town centre, improving views to the waterfront, zoning so that the waterfront would be protected from development and promoting architecture, landscaping and design of the boardwalk in a way that emphasized west coast culture and First Nations heritage ("Official Community Plan" 6). By improving the town centre aesthetically the 2010 Economic Diversification Strategy aimed at enhancing tourism in order to support a year round diverse economy, which would have the effect of providing jobs and reducing commuter car dependency.

Increasing amenity migration could be an important tool to use in diversifying local economies. In his article "Some Tools for Planning for Promoting Amenity Migration in Remote Rural Settlements: Lessons From Participatory Action" Raymond Chipeniuk argues that, as much as amenity migration has, in part, contributed to challenges in rural planning it can also be part of the solution (Chipeniuk 222). By bringing diverse people with diverse skill sets and established incomes, savings and social networks there is the potential for job generation and investment in new and local interests. With the growth of educated individuals in rural areas there is more room for growth in investment and self-employment, which can stimulate the local economy (Nelson 36).

Another important factor in limiting car dependency would be reducing the effects and development of sprawl and enhancing infrastructure to promote active transportation locally. An increased use of active transportation, or transportation characterized by movement created by muscle power rather than mechanical energy (Lawrence, Sallis et al. 72), is feasible in rural and small communities when sprawl is avoided and the proper infrastructure is available. Active transport includes walking, bicycling, skateboarding and anything else that is "human-powered". Improved active transportation should be incorporated as a goal of small communities to reduce car dependency

Many of the same goals proposed by the Smart Growth on the Ground planning approach should be used as goals for small communities in reducing sprawl. Smart Growth planning is a philosophy based on a variety of standards aimed at promoting environmentally sound planning techniques and enhancing a sense of community (Kesley

1). Using Smart Growth tactics allows communities to grow while not suppressing individual character of a given place.

Two important planning goals of Smart Growth that should be considered for small communities include increasing mixed land use and compact building design. Mixed land use indicates that changes in zoning regulations should be made in order to allow for a variety of different land use types to occur close to home so that residents do not have to go very far in order to access what they need (Godschalk 10). For example, mixed-use land types would entail combining elements of commercial and residential areas in close proximity in order to make the needs of the population more accessible. One important strategy in compact building design involves building vertically, rather than horizontally into sprawl (Godschalk 7). Smart Growth building strategies encourage using less land through compact building and mixed land use in order to reduce transportation needs.

Improving connectivity and accessibility to walkways should be used as an infrastructural goal for small communities, because this tactic increases the desirability of using active transportation to the general public. The two strategies of Smart Growth mentioned support the basic principles of nodal development, or developing land that combines mixed use with high-density principles in order to reduce land use (Fillon 505). Nodal development promotes "walkability" in a community so that not only are daily needed commodities nearby, but they also are desirable to access by walking or other forms of active transport. In order to achieve walkability higher levels of connectivity in rural or small-town communities need to be developed (Capon and Blakely 52). By

increasing links and accessibility of paths and bike lanes small towns can increase the desirability of using active transportation.

How Do We Get There?

In order to attract amenity migration community planners and policy makers can work towards making rural areas more economically diverse and sustainable. This process of attracting migration should be sensitive to local social concerns. For example, small community cultures and traditions might worry about being displaced by newcomers (Chipeniuk 324). For Chipeniuk's study he interviewed residents of the Bulkley Valley, an area with employment historically focused in wood industries, mining, government and farming. Beginning in 2003 he surveyed all residential households and found that twelve percent of residents fit the qualifications as amenity migrants (Chipeniuk 328). Because of perceived social and environmental risks involved in promoting amenity migration carelessly, Chipeniuk advocates for researching trends of migration, making that research available to local governments, educating local governments on the effects of amenity migration and employing citizen juries to evaluate the needs of the community (Chipeniuk 234). Certain factors need to be taken into account when developing local economies by increasing planning for amenity migration, however in general amenity migration can be one of the tactics to increase job opportunity at home in order to decrease the need for commuting because of car dependency.

Structural techniques that could be used to enhance nodal development include investments in retrofitting and improving infrastructure. One example of a tactic for retrofitting proposed by Ellen Dunham-Jones is to replace parking lots resulting from

sprawl with compact buildings or green spaces (Dunham-Jones 9). This would have a twofold effect: it would reduce car use because it would take away parking options and it would allow for development inside the town limits. Improving and increasing sidewalks and bike lanes is an example of necessary steps for enhancing active transportation. In order to achieve Smart Growth goals it is essential that infrastructure be developed to promote walkability, connectivity and bike access. The City of Rossland, a mountain town in Eastern BC with a seasonal ski tourism focus in its economy, represents one example for which structural changes have been proposed and are in the process of being implemented in their "Sustainability Commission Planning". Rossland developed a list of steps to achieve land use Smart Growth goals by 2030. These steps included establishing growth boundaries, infilling and retrofitting within city boundaries, increasing cluster development, increasing development in the city centre, and generating potentially employment generating commercial and industrial lands ("Visions to Actions – Strategic Sustainabilit Plan" 14).

One important tool that can be used to help develop the necessary infrastructure to improve active transportation would be the use of GIS. This tool is important because it can help measure changes in the built environment, which would then help in properly gauging the necessary tools to use in the future based on current patterns of sprawl. GIS could be used to monitor the effects of sprawl by studying building density through measuring the distances between households, residences and businesses (Bantjes 171). Additionally, GIS could be used to chart information such as slope gradients, so that walking paths could be developed in a way that makes them accessible for the elderly or those with special needs. GIS is an important tool in planning for improving

infrastructure because it helps to assess the available landscape, how it is being used and how that use can be improved upon.

One complication with using GIS as a tool for planning is that it can be cost prohibitive, especially for smaller communities with fewer resources. For this reason, it may be more useful in some cases to use "laymen's GIS" or easily accessible products such as Google Earth. Not only is software, such as Google Earth, valuable because of its accessibility for local governments, but it also provides a simple opportunity for the general public to be involved early on in the planning process. (Sheppard 2106). Although in many ways using cheaper software may appear to be the better option, there are two aspects that should cause caution. Non-technical software carries a higher risk of misinformation. Because programs, such as Google Earth, are meant for everyday use, data can be somewhat distorted in favour of aesthetic appeal and "user-friendliness". Despite challenges involved with Google Earth, for broad planning matters it is a cost effective tool to use when GIS Software is unavailable (Sheppard 2111).

An important reference tool developed by the Union of Municipalities of British Columbia (UMBC) for small communities to reach sustainability goals is the BC Climate Action Toolkit. The Toolkit is a website developed by the BC's Ministry of Community, Sport and Cultural Development and the Union of British Columbia Municipalities (UBCM) designed to provide news, tactics, advice, information and guidance in planning to local governments to promote more sustainable communities ("BC Climate Action Toolkit"). Tools include a list of projects and processes being initiated throughout British Columbia including OCPs, Community Car Share Programs, Infrastructure Design and

Engineering and many other topics. The Toolkit provides a jumping off point for small communities and provides information on planning techniques and success stories.

Discussion

One possible criticism behind the proposed planning goals and strategies is that the recommendations above are strategies developed for urban planners, and using them for rural areas is simply trying to make small communities more sustainable by making them more urban. I would argue instead that the tactics outlined above retain their rural character if proper community engagement is initiated. For example, the Town of Oliver has adopted Smart Growth on the Ground, which is a grant funded program developed by Smart Growth BC that requires community input combined with input of local leaders to make sustainable planning decisions ("Smart Growth BC"). In the planning process Oliver developed a design brief, which combined the expertise of planners, land use specialists, engineers and architects. Afterwards members of the community were brought in for a charrette, which aimed in establishing community-generated goals, indicators and targets. One tactic used for Oliver's planning that was key in incorporating the local, small town community-feel was asset mapping. In this process members of the community were asked to photograph twelve places they found appropriately represented their community, in order to focus planning initiatives in a way that emphasized the priorities of the local residents. Once the members of the community had their combined work the "indicators" were then weighed by frequency and sensitivity to change, at which point a draft was created of important places. Once again the members of the community were asked to view and vote on top priorities by placing a sticky note over their top indicators in a process called "dotmocracy" (Johnstone 1). Figure 2 illustrates the

Figure 2: Community Planning Steps ("Ministry of Community Services")

complexity of sustainable decision making for small communities based on the wide variety of factors involved. What makes Smart Growth unique for rural community planning from urban planning is the different use of personal voice during community involvement events.

Community involvement is also key in keeping sustainability as a priority with the local government. If sustainability is maintained as a local priority, then infrastructural development are more likely to achieve the funding they need. The Pelham Active Transportation Committee, of Pelham, Ontario, provides an example of work that can be done when a community initiates active transportation as a priority. The committee formed in 2008 to provide community outreach and education in addition to support to City Council. The committee creates a seasonal newsletter advertising promotional events for active transportation and focusing on what has been done in the community to work towards that goal. For example, the Spring Edition of the Pelham Active Transportation Newsletter discusses incentives for snow shoveling to improve on Winter walkability, advertises the amount of sidewalks and sharrows (shared use bicycle markings on roads) that were added within the town, and advertises events to promote

active transportation, such as the car-free street festival ("Pelham Active Transportation Newsletter" 2). Pelham's Active Transportation Committee provides an example of a creative way of rallying public support for improving infrastructure to promote active transportation.

Conclusions and Recommendations

An important issue in sustainability that is especially prevalent in small and rural communities in British Columbia is a dependency on cars for transportation for reasons of sprawl and commuting for work. Ways to address these problems in the future should include increasing the use of Smart Growth planning techniques and diversifying the local economy by promoting secondary economic sectors and amenity migration in order to provide more work locally. Smart Growth planning techniques involve an increase in mixed land-use zoning and compact building design. Using Smart Growth strategies, with an emphasis on improving infrastructure, such as sidewalks and bike lanes, has the effect of increasing accessibility of active transportation in smaller communities. This change would come about, with help from government and community promotional events, because people would have to travel less distance to get what they need, given less sprawl and mixed land-use. Tools to help communities achieve these goals include GIS technology, Google Earth and the BC Climate Action Toolkit, depending on the level of resources given to community planners, local government decision makers and residents at a given time. One key aspect of planning for rural and small communities that needs to be taken into account is finding creative ways to involve the local community. This is important in maintaining small-town characteristics and helps gain support for sustainability projects.

Works Cited

Bantjes, Rod. "Rural Sustainability and the Built Environment." *Journal of Enterprising Communities: People and Places in the Global Economy*. 5.2 (2011): 158-178. Print.

BC Climate Action Toolkit. "BC Climate Action Toolkit." Province of BC Smart Planning for Communities, 2012. Web. 4 Apr 2012. <http://www.toolkit.bc.ca/>.

Capon, Anthony G., and Edward J. Blakely. "Checklist for Healthy and Sustainable Communities." *New South Wales Public Health Bulletin*. 18.4 (2007): 51-54. Print.

Chipeniuk, Raymond. "Some Tools for Planning for Amenity Migration in Remote Rural Settlements: Lessons from Participatory Action." *Community Development Journal*. 43.2 (2006): 222-238.

City of Rossland. Visions to Actions. *Visions to Actions - Strategic Sustainability Plan*. Rossland: The Sheltair Group, 2008. Print.

Dunham-Jones, Ellen. "Suburban Retrofits, Demographics, and Sustainability." *Places*. 17.2 (2005): 8-19. Print.

Filion, Pierre. "The Mixed Success of Nodes as a Smart Growth Planning Policy." *Environment & Planning B: Planning & Design*. 36.3 (2009): 505-521. Print.

Godschalk, David R. " Land Use Planning Challenges: Coping with Conflicts in Visions of Sustainable Development and Livable Communities." *Journal of the American Planning Association*. 70.1 (2004): 5-13. Print.

Johnstone, Shana. Government of Canada. Canada's Rural Partnership. *Community Decision-Making Toolkit*. Vancouver: Planning and Development Design Centre for Sustainability, 2010. Print.

Kesley, Craig W. Bakersfield. Department of Public Policy and Administration. *Smart Growth Planning Principles and Parks and Recreation*. Bakersfield: California State University, 2003. Print.

Lawrence, Frank D., James F Sallis, et al. "Many Pathways from Land Use to Health: Associations between Neighborhood Walkability and Active Transportation, Body Mass Index, and Air Quality." *Journal of the American Planning Association*. 72.1 (2006): 75-87. Print.

Markey, Sean, Greg Halseth, and Don Manson. "Challenging the Inevitability of Rural Decline: Advancing the Policy of Place in Northern British Columbia." *Journal of Rural Studies* . 24.4 (2008): 409-421. Print.

Ministry of Community Services. "The Integrated Community Sustainability Planning (ICSP) Initiative." Ministry of Community Services, 16 04 2007. Web. 4 Apr 2012. <www.cscd.gov.bc.ca/lgd/intergov.../library/ICSP_Backgrounder.pdf>.

Nelson, Peter B. "Quality of life, Nontraditional Income, and Economic Growth: New Development Opportunities for the Rural West." *Rural Development Perspectives*. 14.2 (1999): 32-37.

Pelham. Pelham Active Transportation Committee. *Pelham Active Transportation Newsletter*. Pelham: Pelham Active Transportation Committee, 2012. Print.

Sheppard, Stephen R.J., and Petr Cizek. "The Ethics of Google Earth: Crossing Thresholds from Spatial Data to Landscape Visualisation." *Journal of Environmental Management*. 90.6 (2009): 2102-2117. Print.

Smart Growth BC. "Programs." Smart Growth BC, n.d. Web. 4 Apr 2012. <http://www.smartgrowth.bc.ca/Programs/tabid/57/Default.asp&xgt;.

Taylor, Laura. "No Boundaries: Exurbia and the Study of Contemporary Urban Dispersion." *GeoJournal*. 76. (2011): 323-339. Print.

The Natural Step. "Backcasting." The Natural Step, n.d. Web. 4 Apr 2012. <http://www.naturalstep.org/backcasting>.

Ucluelet. District of Ucluelet. *Official Community Plan 2011*. Ucluelet: AECOM, 2011. Print.