



A Natural Step Case Study Canmore, Alberta



ON THE ROAD TO SUSTAINABILITY

The Town of Canmore is nestled in Alberta's spectacular Bow Valley, in the heart of the Canadian Rockies. Famous for its breathtaking limestone mountain walls and diverse wildlife habitat, Canmore has emerged as a premier destination for rock climbers, cyclists, and other outdoor enthusiasts.

The region's earliest residents were the *îyârhe* Nakodabi, known in English as the Nakoda. The Nakoda hunted and trapped throughout the Bow Valley based on the seasonal migration of bighorn sheep and deer until the arrival of European settlers. By the 1880s, coal miners were flocking to the area in pursuit of the mineral wealth promised beneath the surface of the Rocky Mountains, and the Nakoda were increasingly relegated to a reserve next to the Bow River in the foothills east of the mountains.

After nearly 75 years as one of the most important coal mining centers in southern Alberta, the Town of Canmore was incorporated in 1965 with a population of 2,000 people. From the beginning, the new mayor and council were in a difficult position: demand for coal had already begun to diminish and, as production slowed, many of Canmore's miners found themselves out of work. The future of the local economy, which had been based almost exclusively on the mines, seemed grim. Unlike other communities in the valley, however, Canmore did not become a ghost town when the last mines were closed. As the workers and their families moved away, artists and outdoor enthusiasts trickled in to buy up the old mining shanties and slowly revive the town. By 1988, when Canmore was thrust into the international spotlight as host of the Calgary Winter Olympics Nordic events, the town was already becoming a popular destination.

Canmore has grown to become a world-renowned outdoor recreational and adventure centre, boasting a permanent population of over 12,000 residents and another 5,000 "weekender" and part-time residents.¹ An estimated 1 million day and overnight tourists visit the town each year.² Today, the Town of Canmore is governed by a mayor and six councilors who are elected at large every three years. The Town's 120 administrative employees are directed by a Chief Administrative Officer (CAO), Deputy CAO, and 11 service area managers.



¹ Town of Canmore Official Website: Population and Demographics. <http://www.canmore.ca/business/population-and-demographics/population-demographics.html>

² Energy Management Action Plan, Town of Canmore page 5, 2000

FOCUS ON SUSTAINABILITY

In the decade following the 1988 Calgary Olympics, the Town of Canmore experienced a growth rate of nearly 10 percent each year, ballooning to more than triple its pre-Olympics size by 1998.³ Amid such rapid changes in Canmore's demographics and economy, concerns over sustainability began to emerge in public hearings and town council meetings. With rising demands being placed on the town's limited space and resources, it became clear that the municipality could not continue to grow as it had in the past.

The Bow Valley region is populated with the signatory wildlife of the Rocky Mountains, including wolves, bears, cougars and elk. One of the most immediate challenges the town faced at the time was finding a way to ensure that the local wildlife was not displaced by development in the area. By the mid 1990s, the municipality began to support scientific and stakeholder committees, which helped designate habitat patches and wildlife corridors to allow animals to migrate between areas affected by human activities. A new garbage pick up system was established which required residents to put household waste in bear proof bins to prevent the animals from venturing too close to residential areas.

In the year 2000, Don Kochan, then-Director of Environmental Services, worked with Canmore's Environmental Assessment and Review Committee (EARC) to establish an Environmental Care Program. The program defined goals related to water and energy conservation, waste reduction, cosmetic pesticide use and snow removal operations.

Goals of the Environmental Care Program

Water: with 2000 as a base year and 2012 as a target, goals are to:

- Reduce water distribution system losses from 22.4% to 10%
- Reduce residential consumption by 20% per capita
- Reduce industrial, commercial and institutional consumption by 20%

Energy: with 2000 as a base year and 2012 as a target, goals are to:

- Reduce energy use in municipal facilities by 20%
- reduce emissions community-wide by 6% per capita

Waste: 2001 as base and 2010 as target

- Reduce per capita municipal solid waste sent to landfills by 50%

Cosmetic Pesticides

- Be free of cosmetic pesticides by 2014

Snow Removal

- Use sand/salt mixture with no more than 10% salt

After extensive consultation, the Town began construction on a new civic centre. Since the building opened its doors in the spring of 2004, it has become a model for green building and development in Canmore. The Civic Centre uses 40 percent less energy and 55 percent less water than is specified by the Model National Energy Code for Buildings, uses natural daylight and ventilation, and is equipped with dual flush toilets and waterless urinals. It houses many of the municipality's administrative staff and hosts numerous community meeting areas, exhibit spaces, the local museum and a geosciences centre.⁴



The Town of Canmore's new Civic Centre

The Civic Centre is the first building in Alberta to receive the Leadership in Energy and Environmental Design (LEED)'s Silver Certification. It was also named 'project of the year' by the Alberta Construction magazine, received an Award of Merit from the Consulting Engineers of Alberta, and a CH2M Hill Sustainable Community Award from the Federation of Canadian Municipalities.

³ Draper, Diane. (1997) "Touristic Development and Water Sustainability in Banff and Canmore, Alberta, Canada." *Journal of Sustainable Tourism*. Vol 5, No 3.

⁴ Energy Management Action Plan, Town of Canmore. p 20

TAKING THE NATURAL STEP

Support for the Town's environmental initiatives, along with broader discussions regarding the community's rate of growth and resulting impact on the environment, meant that considerable momentum towards sustainability was developing.

During the construction of the Civic Centre, consultants Mary and Brian Natrass, both of whom had been involved in The Natural Step's partnership with the Resort Municipality of Whistler,⁵ came to the Bow Valley to look for another community with an interest in using the TNS Framework for sustainability planning. The organization's tested, practical approach had already been used by hundreds of organizations around the world to advance sustainability and facilitate cross-sectoral collaboration. The shared language, rigorous, science based understanding of sustainability and strategic planning process appealed to Canmore's Town Council; after watching the consultants' presentation on their work with Whistler, they voted unanimously to adopt The Natural Step's community-wide engagement program.

The Biosphere Institute, a local non-profit that promotes ecological integrity in the valley, agreed to coordinate the project and help secure the necessary funding. The Federation of Canadian Municipalities (FCM) was the key financial supporter. It issued a grant to match the \$148,000 in contributions Canmore received from the Alberta Ecotrust Foundation, the Alberta Real Estate Foundation, the Canmore Economic Development Authority, Community Initiatives Program Alberta, Three Sisters Mountain Village, and the municipality of the Town of Canmore. While the money was being raised, Dr. Melanie Watt, Executive Director of the Biosphere Institute, began working with The Natural Step Canada to develop a sustainability program that would be tailored to the town's needs.

"The Natural Step to a Sustainable Canmore" was officially launched in November 2004 amid considerable local media attention. The program began with a community capacity building program to bring the municipality, local businesses, community groups and citizens together. TNS provided training for eight Early Adopters, with the goal of developing a shared understanding of sustainability, creating local success stories to inspire the rest of the community, and building a support network for the organizations involved.

"Most of our initial focus was on the environment and wildlife. But once we got started down the road of questioning how and why we develop, looking at the broader picture of sustainability just seemed natural for us."

RON CASEY
MAYOR OF CANMORE

"Town council was starting to look for some help in dealing with its growth management issues. There had been tremendous growth in the town within a very restrained footprint, so it was obvious that we needed to make some changes."

BART ROBINSON
PROGRAM DIRECTOR,
THE BOW VALLEY SUSTAINABILITY HUB

The theory of innovation diffusion

The Early Adopters model is based on the theory of innovation diffusion, which holds that the adoption of a given innovation will follow a predictable pattern, starting with a small group of innovators, then spreading slowly through agents of change to "early adopters." The practices of the early adopters are eventually noticed and adopted by an early majority, which also begins to innovate and build a critical mass in the community.

⁵ For more information, read the Whistler case study: www.naturalstep.ca/documents/Whistler_TNScasestudy.pdf

Melanie Watt and Bart Robinson, a long-time board member of the Biosphere Institute, worked with Town of Canmore officials to recruit Early Adopters based on three criteria: that the candidate organizations were already recognized community leaders, that they had an interest in sustainability, and that they collectively represented the breadth of Canmore society. Ultimately, the Early Adopters included the municipality itself, the public library, the local Seniors' Association, Radisson Hotel and Conference Centre, Bow Valley Waste Management Commission, Rocky Mountain Flatbread Company, the Three Sisters Mountain Village, and Polar Pin, a small business that designs promotional products for events and corporations. By signing onto the program, each organization made a commitment to send small learning teams to five training workshops and create sustainability action plans for their own organizations.



Canmore Early Adopters Training Session

The Early Adopter workshops were held over a six month period in 2005, and gave the learning teams the opportunity to apply TNS' strategic planning framework to their own organizations. The workshops and assignments helped team members to:

- Learn what sustainability is and why it is needed;
- Perform a baseline evaluation of their own organization;
- Develop a sustainability vision for their organization;
- Create an action plan that would move them toward that vision; and
- Work together to share their knowledge with the rest of the community.

The Early Adopter teams spent their final workshop discussing barriers to the implementation of sustainability in their organizations and in the broader community, brainstorming ways to share their knowledge, and considering potential infrastructure projects for the Town to pursue. Among the community engagement ideas pursued by the teams was the organization of a one-day sustainability forum, held at the Canmore Radisson Hotel, one of the town's Early Adopters. TNS founder Dr. Karl-Henrik Robért and Canadian environmentalist David Suzuki each spoke about the challenge of sustainability and the solutions offered by the TNS Framework. The forum drew nearly 1,000 participants from Canmore and 13 other Alberta communities. The Early Adopters' teams lent their support to innovative classroom education programs organized by The Rocky Mountain Flatbread Education Company, helped create a sustainability display at the Canmore Public Library, and supported the training of all municipal staff in TNS Framework by the Town of Canmore.

Early Adoption at the Town of Canmore

Since the municipality is made up of 16 separate departments, the Town of Canmore's Early Adopter team decided it wouldn't be feasible for them to run a baseline analysis and create a vision for all municipal operations. Instead, the team chose to focus on the town's solid waste management plan and the Bow Valley Waste Management Centre for the purposes of the training phase of the program. The Town of Canmore had already developed a Solid Waste Action Plan in 2003, which confirmed the Environmental Care Program goal of diverting 50 percent of per capita municipal solid waste from landfills between 2001 and 2010. However, the team found that challenges relating to the Bow Valley Waste Management Centre's reliance on fossil fuels for the transportation of waste, leachate and gaseous emissions from the landfill, and the footprint of the landfill itself each continued to be problematic, and mapped out some of the key areas where improvements might be made. The learning team also came up with a suggested vision statement for the town: "Canmore is an environmentally sensitive community that produces a high quality of life for its citizens."

The Early Adopters also called for the creation of a sustainability network, which would build on the momentum generated by *The Natural Step to a Sustainable Canmore* to create and support a culture of sustainability in the Bow Valley. Since 2006, the Bow Valley Sustainability Hub has been operating out of the office of the Bow Valley Biosphere Institute where it offers a wide array of educational programs and green workshops. “We help keep sustainability work bubbling along,” Program Director Bart Robinson said of the Hub. “We often work in partnership with the Town of Canmore and with other groups in town that are interested in sustainability and The Natural Step.”

When the program drew to a close in April 2005, the Biosphere Institute gave 115 licenses to the municipality so that employees could access TNS’ award-winning eLearning program. The Town Council and mayor also signed a Sustainability Declaration that committed Canmore to continue to work towards a more sustainable future.



Mayor and Town Councilors present the Canmore Sustainability Declaration

“As Mayor and Councilors of the Town of Canmore, we acknowledge society’s desire to create a stable, sustainable future. We further acknowledge that such a future is not certain, and that it will take the good will and determined work of many individuals, organizations, and communities around the world to achieve our goal.”

TOWN OF CANMORE SUSTAINABILITY DECLARATION

The end of the Canmore Early Adopters program coincided with a community visioning process the Town called “Mining the Future.” Mayor Ron Casey and the Town Council asked the community to create a vision for the kind of community they wanted Canmore to become. The community clearly identified sustainability as a foundational value. “With mining the future, our vision was built around values and principles,” Mayor Ron Casey said. “That’s a fundamental change in how you plan your community.”

DOWN TO ACTION

In 2007, the Town developed a Natural Step Master Plan to guide all municipal operations. “Each municipal department sat down and made a list of what they can be doing more sustainably,” explained Canmore’s Communication and Environmental Care Coordinator, Sally Caudill. “It can be as small as having double sided printing as a default to as big as how we construct buildings or the kinds of cars we buy.” The departments brainstormed potential sustainability initiatives and identified which system conditions each would support. Target dates were set, and the staff is encouraged to review the Master Plan document twice a year to ensure each department has the budget capacity to follow through on proposed initiatives. Caudill is currently working with others to combine the elements of the TNS Master Plan into an integrated document and make the municipality’s plans more cohesive and clear.

At the municipal level, Canmore continues to pursue the Environmental Action Plans it had developed in 2002 with considerable success. The Town’s goal of reducing energy use in municipal facilities by 20 percent before 2012 has already been achieved, and the Town has surpassed its goal of reducing the volume of salt used to clear roads. It now uses 7 percent salt in the sand/salt mixture – 3 percent less than the original goal.



Canmore has reduced the amount of salt used in its snow removal operations to prevent soil damage.

“One of the real benefits to the Natural Step is that it has a language and process that people can understand. It also gave us a process to integrate throughout the Town of Canmore so that everyone at the municipality is aware of the Natural Step and considers sustainability when making decisions.”

RON CASEY
MAYOR OF CANMORE

that couldn't clearly demonstrate a net benefit to the community?”

Since the SSR process was adopted in July 2007, the development industry has taken on an active role in partnering with community organizations. These partnerships have included a donation of more than \$1 million to the town's affordable housing fund, a two-year formal “adoption” of the local daycare, and \$350,000 in funding support for a workshop and art gallery cooperative. It is currently being modified to include a points-based checklist which outlines the community's social, environmental and fiscal priorities. Developers can use the checklist to assess their own projects before presenting them to council for approval.

Canmore's built environment has a significant impact on the natural environment, with local buildings accounting for nearly 40 percent of total greenhouse gas emissions in the town. In 2007, the Town implemented a green building policy, which compels any applicant seeking a development or building permit to obtain third party certification for its environmental impact such as Built Green, LEED, or R2000. The new policy should help to reduce energy consumption by at least 20 percent in standard buildings, and will help the Town achieve its Energy Action Plan goals. The Green Building Policy is complimented by the Construction and Demolition Waste Recycling Policy, which encourages the recycling of construction materials.

Many of Canmore's actions for sustainability are a continuation or extension of the work the town was involved in before The Natural Step program began. According to Mayor Ron Casey, The Natural Step gave Canmore the framework that was necessary to integrate its sustainability work and ensure that it became a part of the decision making process.

In the years following Canmore's work with The Natural Step, the municipality has implemented a number of policies to formally include sustainability as a guiding principle in its decision making processes. Among the most innovative of these policies is the Sustainability Screening Report (SSR) process. A brainchild of Mayor Ron Casey's, the SSRs put the onus on developers to demonstrate the net environmental, economic, and social benefits of every development project to the Canmore community. The proposals are presented to Town Council at a public meeting, allowing an opportunity for the community to ask questions and provide comments. After the presentation, the council can choose to approve the project, deny it, or ask the developer to make some changes to the plan. “To me it's a very basic question. The problem is that no one had bothered to ask it: not the industry, not the Town, not anyone,” Casey said. “How could the council be expected to approve a development

“The [Green Building] policy is consistent with Systems Conditions #1, #2 and #3 of The Natural Step: less material will be removed from the earth's crust, less [waste material will be] produced by society, and [it will result in the] decreased degradation of natural systems.”

GREEN BUILDING POLICY
TOWN OF CANMORE

The municipality is further reducing its contribution to greenhouse gases with a policy that has it purchasing green power for 40 percent of its needs. The Town expects that the increased costs of purchasing green power will be offset by a reduction in energy demand based on retrofits and conservation.

Recognizing that its purchasing decisions provide opportunities to move towards the goal of becoming a more sustainable community, Canmore implemented Sustainable Purchasing Guidelines, which help staff members to assess social, environmental and economic performance factors in a systematic way. When municipal staff members are considering making a purchase, they are asked to begin by considering whether or not the purchase is really necessary. If it is, the staff member is instructed to consider all possible options, including newer or more technologically advanced products, in order to meet the municipality's needs with the most sustainable product possible. When it comes to the Town's larger and more regular purchases, staff can refer to a guide which is posted on the Canmore's website identifying the different options and encouraging people to look for indicators such as FairTrade or EnergyStar certifications.









When new staff members join the municipality, they receive a brief introduction to the town's sustainability initiatives, and are told how to find more information or obtain a Natural Step eLearning license. They are also given a stainless steel coffee mug which can be used immediately after the orientation tour when they are treated to a coffee by a Town representative. Sally Caudill, the Town's Communications and Environmental Care Coordinator, is in the final stages of creating an orientation video for employees in which staff members explain how their departments are making changes to become more sustainable.

"In general, the residents of Canmore tend to be naturally inclined to have an environmental focus, so that makes it easier. TNS' main influence on the municipality has been the shared language and the scientific understanding of sustainability - that's really been the biggest shift for us."

SALLY CAUDILL
COMMUNICATIONS AND ENVIRONMENTAL CARE
COORDINATOR, TOWN OF CANMORE

Meanwhile, the Bow Valley Sustainability Hub, created at the end of the Early Adopters Program and run out of the Biosphere Institute, has hosted a wide variety of programs from green living workshops to helping launch a local bike share program. Among the Hub's highlights are the sector-specific training sessions developed by Robinson, which alternates eLearning from the Natural Step's online education program with a series of face-to-face sessions for participants to exchange ideas and listen to guest speakers. After a successful first round with small businesses in the area, Robinson held "The Natural Step for Bow Valley Developers and Builders" to help local developers get on board with the Town's SSR requirements, and expects to offer another for realtors in the future.

Additional municipal sustainability initiatives include:

-  Water Conservation Rebate Program
-  Bus and Taxi Program – free bus rides and taxi passes for special needs residents
-  Two recycling depots and a mobile recycling trailer
-  20% biodiesel use in all diesel trucks
-  Green cleaning products used in all Town facilities
-  Addition of a hybrid vehicle to the town fleet
-  Computer recycling
-  Paperless municipal offices wherever possible

LAST WORDS

Currently, the Town is focused on updating its Municipal Development Plan based on the feedback received from Mining the Future and The Natural Step Framework. The new plan, called the Canmore Community Sustainability Plan, will be a comprehensive strategic planning document providing the Town with direction on matters of land use planning and social, economic, and environmental sustainability. It is slated for completion in early 2009.

Bart Robinson held two Natural Step training sessions for those involved in the community engagement project and is a member of the writing and editing team. He considers it to be one of the most important outcomes of *The Natural Step to a Sustainable Canmore*. “The Natural Step is an explicit part of the re-write of the Municipal Development Plan,” Robinson explained. “That’s going to influence everything that happens in the town...ensuring that everything is scrutinized through a lens of sustainability.”

Canmore’s experiences show that community engagement combined with a shared language and understanding of sustainability can produce some truly innovative and strategic responses to the challenges of sustainability.

“People now see sustainability as necessary. It’s no longer something you fear, but something that, in fact, you better start to think about, better be considering in how you do day to day business. If you don’t, of course, the converse to that is you’re not sustainable, and who wants to basically plan themselves out of existence?”

RON CASEY
MAYOR OF CANMORE

ADDITIONAL INFORMATION

<http://www.canmore.ca/living/our-environment/our-environment.html>

This case study was written and researched by Kim Mackrael for The Natural Step Canada. Thanks to Ron Casey, Sally Caudill and Bart Robinson for granting The Natural Step interviews. Creative Commons Copyright 2008. Some rights reserved.