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**Wildlife Corridors and the Three
Sisters Decision: Lessons and
Recommendations for Implementing
NRCB Project Approvals**

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CIRL Occasional Paper #16

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Executive Summary

The Three Sisters decision, issued by Alberta's Natural Resources Conservation Board (NRCB or Board) in 1992, approved a major recreational, tourism and residential development in the Town of Canmore. The Board's mandate was to determine whether or not the proposed project was "in the public interest", taking account of its social, economic and environmental effects. Since the project was located along one side of the Bow Valley at the crossroads between Banff National Park, Kananaskis Country and the Eastern Slopes of the Rocky Mountains, environmental impacts were a major focus of the Board's public hearings and decision report.

In particular, the project had the potential to fragment important habitat for large carnivores, elk and bighorn sheep. The NRCB concluded that the blockage of wildlife movement would constitute a "major impact" on certain species and, consequently, on regional ecosystems. It addressed this potential impact in five ways:

- The retention of wildlife movement corridors "in as undeveloped a state as possible" on the Three Sisters property was a condition of project approval;
- The Board offered recommendations to the Government of Alberta regarding the design and designation of these corridors;
- The establishment of corridors was to be overseen by the provincial government, with input from the proposed Regional Ecosystem Advisory Group;
- The applicant's undertakings regarding corridor design and associated land uses were incorporated into the project approval; and
- The Board recommended measures to promote a regional ecosystem perspective when establishing wildlife corridors on the Three Sisters property and surrounding land.

These elements of the Three Sisters decision set out the basic requirements for multi-species wildlife corridors, but left the details of corridor design and designation to subsequent planning and regulatory processes.

The resulting wildlife corridor saga can be divided into six components: (1) the creation of the Bow Corridor Ecosystem Advisory Group and the release in 1998 of guidelines for wildlife corridors in the Bow Valley; (2) the negotiation of a draft conservation easement agreement between the developer and the provincial government in 2001 and the debate and scientific studies relating to proposed corridor design and associated land uses; (3) the engagement of the NRCB, at the request of local environmental groups, in overseeing implementation of the Three Sisters decision; (4) the continuing evolution of the scientific basis for corridor design; (5) the implications for

the Three Sisters corridors of the regional context; and (6) the controversy surrounding the 2003 conservation easement agreement and detailed development plans for the project.

This paper reviews each of these components and then discusses several general lessons relating to the implementation of NRCB project approvals. While the end result of the implementation process may be satisfactory when measured against the conditions and recommendations relating to wildlife corridors in the Three Sisters decision, the path from 1992 to 2005 has been a tortuous one. Despite the clear language and intent of the NRCB's decision, a protracted, difficult and time-consuming public campaign by environmental groups and concerned citizens was required to ensure a reasonable prospect of wildlife movement across the Three Sisters property. More generally, implementation of the wildlife corridor condition in the Three Sisters decision depended on a particular set of circumstances rather than on well-established oversight and enforcement processes.

From this perspective, the wildlife corridor saga reveals the following deficiencies in the implementation process for the Three Sisters decision:

- The lack of formal monitoring and accountability mechanisms to ensure compliance with terms and conditions, especially for a project that is built over an extended period of time after the project review;
- The relatively *ad hoc* process for involving the Board in the oversight of its decision, including the lack of clear procedural guidance for all parties regarding the Board's role and the ultimate accountability mechanisms; and
- The absence of authoritative mechanisms to ensure that the detailed planning decisions for the Three Sisters property in combination with the multitude of other decisions on particular projects and land uses within the Bow Valley will yield a functional regional network of wildlife corridors.

The paper reviews four legal and policy options for addressing these deficiencies.

First, the NRCB could require or facilitate the establishment of a multi-party implementation committee when a project approval gives rise to complex and potentially contentious implementation issues. Membership should include the project developer, regulators and interested intervenor groups. The functions of this committee could include information exchange, project monitoring and regular reporting to the Board on the implementation of the project approval. It could also provide a forum for anticipating and addressing compliance issues.

Second, the process for engaging the NRCB's oversight role could be more clearly defined. For example, interested parties could apply formally to the Board for a

documentary review or a public hearing to investigate implementation issues. Interested parties might also request clarification regarding the interpretation of the project approval or ask the Board to revisit the decision if key underlying assumptions prove to be incorrect or specific terms and conditions are ineffective or unworkable. A distinction could be made between an expedited process for minor ‘variances’ and requests for major changes that might require a new hearing and a more fundamental reconsideration of the basis for the approval. This process could include fact-finding and dispute resolution before moving to a detailed review and final ruling by the Board.

Third, the NRCB’s mandate and capacity to undertake compliance monitoring and enforcement at its own initiative could be enhanced. While this role need not imply direct involvement in ongoing project regulation, it would at least make the Board responsible and accountable for ensuring compliance with the terms, conditions and applicant’s undertakings that are integral to its determination that approved projects are ‘in the public interest’. Adequate staff and other resources would, of course, be necessary to track approved projects and ensure follow-up in the event of compliance issues.

Finally, improved linkages between the NRCB review process and integrated regional frameworks for land-use planning and management are needed to reduce the risk that project-specific mitigation measures will be rendered ineffective by developments elsewhere. Wildlife corridors illustrate well the types of linkages that are needed. First, the regional framework should guide and constrain the project planning and review processes so that new projects fit with overall corridor design and contain appropriate mitigation measures to facilitate wildlife movement. Second, it should complement other mechanisms to ensure the full implementation of the terms and conditions in project approvals that relate to individual components of the regional corridor network.

The NRCB project review process places significant demands on all participants and results in a legally binding decision by a quasi-judicial body charged with protecting the public interest. Full implementation of a Board decision should therefore be a matter of course, not the fortuitous result of a particular confluence of circumstances. To this end, the principles of procedural fairness, transparency and independence from direct political influence that characterize the Board’s project review process should guide the establishment of formal mechanisms to ensure compliance with the terms and conditions contained in project approvals.

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1.0. Introduction

Project review processes are standard features of environmental management regimes throughout Canada. Proposed developments or activities are typically subject to environmental and socio-economic assessments at the project planning stage in order to determine their overall acceptability and identify likely impacts and appropriate mitigation measures. Once a review body has issued its decision, it generally has no further involvement with the project in question. Primary regulatory responsibility falls to the agencies that issue specific permits or licences and that have ongoing authority over project construction and operation.

When a review body includes terms and conditions in a project approval, however, it creates regulatory requirements that are intended to have effect after completion of the review process. In these circumstances, the institutional separation between project review and regulatory functions may be problematic. The project review body may not have a well defined role in overseeing the implementation of its decision and the lines of responsibility and accountability for ensuring compliance with that decision may not be clear. This situation may be further complicated if an approved development or activity occurs over an extended period of time and if general requirements established at the project review stage must be translated into more detailed regulatory decisions as the project evolves. Implementation of the original approval can become a source of controversy, raising challenging issues for all parties involved the project review and regulatory processes.

These issues are well illustrated by the Three Sisters decision,¹ issued in 1992 by Alberta's Natural Resources Conservation Board (NRCB or Board). The NRCB is a quasi-judicial tribunal established in 1991 to review significant proposed projects – including certain recreational and tourism projects – that may affect the natural resources of Alberta.² It is charged with determining whether or not, in its opinion, the projects that it reviews “are in the public interest, having regard to the social and economic effects of the projects and the effect of the projects on the environment.”³ The NRCB's review process, which includes public hearings, was modeled on that used for energy projects by Alberta's Energy and Utilities Board⁴ (EUB). Unlike the EUB, however, the NRCB is not

¹Natural Resources Conservation Board, *Application to Construct a Recreational and Tourism Project in the Town of Canmore, Alberta*, Decision Report – Application #9103, Three Sisters Golf Resorts Inc. (Calgary: Natural Resources Conservation Board, November 1992) [Three Sisters decision].

²*Natural Resources Conservation Board Act*, R.S.A. 2000, c. N-3.

³*Ibid.*, s. 2.

⁴The EUB was created in 1995 through the merger of the Energy Resources Conservation Board (ERCB) and the Public Utilities Board.

a regulatory agency with ongoing operational authority over the “natural resource development projects” that it approves.⁵

The Three Sisters decision concerned an application for a major recreational, tourism and residential project in the Town of Canmore, located about 100 kilometres west of Calgary and close to the eastern boundary of Banff National Park.⁶ The applicant sought approval for a multi-stage development in the Bow River Valley and in a contiguous area known as Wind Valley. The proposed project consisted of a resort and convention complex, housing, golf courses and a range of commercial facilities and infrastructure on an area of 1036 hectares. Most of this land had been annexed by the Town of Canmore in 1991. The population of Canmore was about 6,000 people at the time of the application and the project was expected to add an additional 15,000 residents over its projected 20 year build-out period.⁷

The NRCB held public hearings to examine the likely positive and negative impacts of the proposed project.⁸ The applicant emphasized direct and indirect economic benefits, while acknowledging some adverse environmental effects. Interveners raised concerns with the project’s environmental and social impacts. In particular, several interveners commented on the project’s likely effects on wildlife habitat in the Bow Corridor⁹ and on wildlife movement between Banff National Park, Kananaskis Country and the Eastern Slopes of the Rocky Mountains. Interveners also highlighted the risk of significant cumulative environmental effects from the Three Sisters project and other existing and proposed developments in Canmore and the rest of the Bow Corridor.

Following a detailed review of the evidence and competing arguments, the NRCB concluded that the development proposal for Wind Valley was not in the public interest but that the rest of the project was acceptable if certain mitigation measures were taken to address adverse impacts. These measures were set out in terms and conditions attached to the project approval and in undertakings by the applicant that were incorporated by reference. The Board’s decision report also included a series of recommendations to the project proponent, the Town of Canmore and the Government of Alberta.

⁵In 2002, the NRCB was given the mandate to regulate the Intensive Livestock Operation industries of Alberta. This regulatory role does not extend to the other ‘natural resource development projects’ that the Board reviews. See, <http://www.nrcb.gov.ab.ca/web/faq/resource.cfm?id=156>.

⁶The project is described in the Three Sisters decision, *supra* note 1 at 2-1 – 2-4.

⁷*Ibid.*, at 11-13.

⁸The supporting information provided by the applicant and the interveners’ submissions are summarized in the Three Sisters decision, *ibid.*, at 2-4 – 2-13 and 3-1 – 3-49.

⁹The term “Bow Corridor,” as defined in the Three Sisters decision, refers to the portion of the Bow River Valley between the Banff Park Gates and the Stoney Reserve. *Ibid.*, at 1-1.

Despite the Board’s attempt to anticipate and address implementation issues arising from its decision, the Three Sisters project has continued to generate considerable controversy.¹⁰ In particular, the stipulation that the project must include multi-species wildlife corridors in order to mitigate adverse environmental effects has been at the centre of an ongoing conflict that has involved the developer, environmental groups and concerned citizens, Canmore Town Council, the Government of Alberta, Banff National Park and the NRCB. This paper describes the origins and evolution of the controversy over wildlife corridors on the Three Sisters property and examines the implications of this experience for the NRCB’s project review process.

2.0. Wildlife Corridors and the Three Sisters Decision

The importance of maintaining wildlife movement through the Bow Corridor was a recurring theme in the public hearings on the Three Sisters application and in the Board’s decision report. The applicant recognized that the project could result in habitat fragmentation for wildlife, including large carnivores, elk and bighorn sheep, and proposed several mitigation measures.¹¹ According to the Board: “The most important of these measures was believed to be the provision of wildlife corridors to preserve movement patterns, although it was acknowledged that the possible success of these measures is unknown.”¹² The project’s potential impact on wildlife movement was also referred to by intervenor groups, notably the Canadian Parks Service (Environment Canada),¹³ the Canadian Parks and Wilderness Society,¹⁴ the Calgary Regional Planning Commission,¹⁵ the Bow Valley Naturalists,¹⁶ the Alberta Wilderness Association Group,¹⁷ and the Federation of Alberta Naturalists.¹⁸

The most detailed submission on this topic came from the Canadian Parks Service. Ensuring that the Three Sisters project would not impede low elevation wildlife

¹⁰Jeff Gailus, “The War for Canmore” in *Explore: Canada’s outdoor adventure magazine* (March/April 2002) at 44.

¹¹Three Sisters decision, *supra* note 1 at 2-7.

¹²*Ibid.*, at 2-7.

¹³*Ibid.*, at 3-5 – 3-8.

¹⁴*Ibid.*, at 3-3.

¹⁵*Ibid.*, at 3-24.

¹⁶*Ibid.*, at 3-10

¹⁷*Ibid.*, at 3-13. This group consisted of the Alberta Wilderness Association, Speak Up for Wildlife Foundation, and Adventure Group Ltd.

¹⁸*Ibid.*, at 3-25.

movements between Banff National Park and the montane region of the Eastern Slopes was one of three key objectives of its submission to the NRCB.¹⁹ Its other two objectives – ensuring that the Bow Corridor does not become a population sink for wildlife and ensuring that the development does not result in adverse cumulative effects in the Central Rocky Mountain Ecosystem, especially for wildlife species listed as valuable or endangered by the Committee on the Status of Endangered Wildlife in Canada – were also related directly to the project’s impacts on wildlife movement. The Canadian Parks Service therefore recommended that “critical habitat and corridors be identified and protected before development begins.”²⁰

Interveners’ submissions regarding wildlife movement were clearly influential in shaping the Board’s decision. One of the three fundamental questions guiding its evaluation of impacts on terrestrial ecosystems was:

“Would the Three Sisters project unacceptably damage an ecosystem by obstructing or impeding movement of organisms between areas occupied by the ecosystem?”²¹

The importance of wildlife movement across the Three Sisters property and surrounding areas was noted in the Board’s detailed review of the project’s likely impacts on elk,²² bighorn sheep,²³ mule deer,²⁴ grizzly bears,²⁵ wolverines,²⁶ black bears,²⁷ and wolves.²⁸ This analysis led it to conclude that the blockage of wildlife movement through the project area could constitute a “major impact” on certain species of large animals and, consequently, on the health of regional ecosystems.²⁹ The Board addressed this impact in five ways.

¹⁹*Ibid.*, at 3-5.

²⁰*Ibid.*, at 3-8.

²¹*Ibid.*, at 10-49. The other two questions were: “Is the area that the Three Sisters project would alienate sufficient to result in unacceptable damage to the ecosystem?” and “Would the Three Sisters project unacceptably damage an ecosystem by generating or facilitating sufficient increased access by people to areas occupied by the ecosystem?”

²²*Ibid.*, at 10-39.

²³*Ibid.*, at 10-41.

²⁴*Ibid.*, at 10-41.

²⁵*Ibid.*, at 10-42.

²⁶*Ibid.*, at 10-42.

²⁷*Ibid.*, at 14-44.

²⁸*Ibid.*, at 10-45.

²⁹*Ibid.*, at 10-51 – 10-52.

First, it made the retention of wildlife corridors on the Three Sisters property a formal condition of approval:

“Three Sisters shall incorporate into its detailed design, provision for wildlife movement corridors in as undeveloped a state as possible, and prepare a wildlife aversive conditioning plan, both satisfactory to Alberta Forestry, Lands and Wildlife.”³⁰

The Board’s requirement that wildlife corridors be as undeveloped as possible and the Government of Alberta’s role in overseeing implementation of this condition gave rise to important issues that will be examined later in this paper.

Second, the Board dealt with several substantive issues relating to the establishment of wildlife corridors. For example, it provided the provincial government with specific suggestions regarding the design and formal designation of corridors:

“It is recommended to Alberta Forestry, Lands and Wildlife that locations for wildlife movement corridors be legally designated and that in determining their locations and widths, primary corridors should not be narrower than 350 m except in unusual circumstances, that widths and locations be reviewed with the full range of species that may make use of them in mind, that corridors be located to allow movement across adjacent properties, that measure such as bundling road, utility line and pathway crossings be adopted, and that corridors correspond with known movement routes of the animals.”³¹

Elsewhere in its discussion of wildlife corridors, the Board cautioned that “favouring areas unsuitable for development which may or may not be used by elk is not likely to result in successful mitigation.”³²

These comments clearly imply that corridor design should be informed by wildlife science, including field work on wildlife movement in the Bow Corridor, and that vigilance would be required to ensure that this process not be compromised by commercial pressure to avoid locating corridors on developable land. Furthermore, the Board evidently viewed the applicant’s suggested parameters for corridor design (e.g., 350 metre width) as provisional, minimum requirements that were expected to be modified in light of subsequent scientific information and analysis.

Third, the Board provided procedural guidance regarding the establishment of wildlife corridors. As noted above, it designated Alberta Forestry, Lands and Wildlife as the provincial government department with primary responsibility for determining the acceptability of proposed corridors. The Board stated, however, that plans for corridors on the Three Sisters property “should also be subject to review and recommendation by

³⁰*Ibid.*, at C-4 (#14), 10-38, 10-51.

³¹*Ibid.*, at D-5, 10-38.

³²*Ibid.*, at 10-38.

the proposed Regional Ecosystem Advisory Group”.³³ This group was envisaged as a technical subcommittee of the Bow Valley Planning and Advisory Committee, the creation of which was recommended by the Board in order to facilitate ongoing planning, coordination and land-use controls.³⁴ The Board thus anticipated both ongoing oversight and additional input in relation to corridor design during the detailed planning for the project.

Fourth, the project approval incorporated by reference a series of specific undertakings by the applicant regarding the design and location of wildlife corridors. These undertakings, contained in the project application and in supporting material presented at the hearing, were viewed by the Board as part of the formal project description to which its approval applied.³⁵ In a letter to the project developer in 2002, the NRCB identified the following key undertakings relating to wildlife corridors that had been made by the applicant ten years earlier:³⁶

- The preservation of primary corridors between development areas to provide major routes for elk as well as foraging habitat, hiding cover and thermal cover;
- These corridors would consist of relatively undisturbed forest, shrub and shrub meadow;
- Permissible development would include roadway crossings, service right-of-ways and portions of fairways, but in all cases these intrusions would be as narrow as possible and would be oriented roughly at right angles to the long axes of the movement corridors; and
- The number of crossings of primary and secondary movement corridors by roadways, pathways, service right-of-ways and golf course fairways will be minimized and the widths of facility clearings within movement corridors will be as small as possible.

The Three Sisters decision stated clearly that, in addition to complying with the formal conditions attached to the approval, the Board expected the applicant “to discharge all of the relevant commitments and undertakings included in its Application or given at the hearing.”³⁷

³³*Ibid.*, at 10-38, 13-4.

³⁴*Ibid.*, at 12-2 – 12-6. The Board recommended that this body consist primarily of senior representatives from key decision makers in the Bow Valley.

³⁵*Ibid.*, at C-2 (#1).

³⁶Letter from Dr. Brian F. Bietz, Chair, NRCB to Mr. Stephen Livergant, representing the project developer, May 27, 2002 at 2 [NRCB Letter] (on file with the author).

³⁷Three Sisters decision, *supra* note 1 at 13-10.

Finally, the Board commented on the “need at this time for a regional ecosystem perspective in assessing and maintaining natural resource value.”³⁸ It elaborated on the implications of this perspective as follows:

“regional management should take into account cumulative effects of existing and foreseeable development, the key areas and *the corridors linking them* which should be preserved for ecosystem health, the types and extent of programs to control human access to such key areas *and corridors* and the types and frequency of monitoring programs to assist in ongoing management decisions.”³⁹

The Board also emphasized the need to look beyond the “specific project area” when considering cumulative environmental effects.⁴⁰ It thus left no doubt that a concerted management effort was necessary on the Three Sisters property and surrounding land in order to mitigate the cumulative effects of development on wildlife habitat and movement corridors.

To this end, the Three Sisters decision recommended that the proposed Regional Ecosystem Advisory Group examine a series of issues relating to the conservation of ecosystems and their key components in the Bow Corridor, notably the protection of critical wildlife habitat⁴¹ and “the locations and widths of corridors to be set aside for wildlife movements.”⁴² A regional perspective on this issue was deemed by the Board to be essential because of the obvious but sometimes overlooked fact that “corridors on one property should connect with corridors on other properties and on Crown land.”⁴³ The designation of wildlife corridors on the Three Sisters property should therefore be integrated with the establishment of a fully functional regional network linking key wildlife habitat within the Bow Corridor and on surrounding land in Banff National Park, Kananaskis Country and the Eastern Slopes of the Rocky Mountains.

The NRCB thus set out the basic requirement for multi-species wildlife corridors on the Three Sisters property, while leaving the details of corridor design and designation to be settled through the subsequent project planning and regulatory processes. As it turned out, the operation of these processes was not always consistent with the Board’s expectations.

³⁸*Ibid.*, at 10-52.

³⁹*Ibid.*, at 10-52 (emphasis added).

⁴⁰*Ibid.*, at 5-4.

⁴¹*Ibid.*, at 10-38.

⁴²*Ibid.*, at 10-53.

⁴³*Ibid.*, at 10-38.

3.0. The Wildlife Corridor Saga

Controversy surrounding the NRCB's conditions and recommendations relating to wildlife corridors emerged in the late 1990s and has continued into 2005. Much of this controversy has been played out in a series of development applications considered by the Canmore Town Council, the details of which will not be reviewed here. The following discussion summarizes six key elements of this chronology of events, highlighting the interaction of science, politics, business interests and citizen activism.

3.1. The BCEAG Guidelines for Wildlife Corridors – Sound Science, with Exemptions

Following the release of the Three Sisters decision in 1992, the project proponent confronted a series of financial and planning challenges, including a difficult relationship with the Town of Canmore, that combined to slow the pace of development and reduce the pressure to deal immediately with the designation of wildlife corridors. This issue was not forgotten, however, as the Town of Canmore, the Municipal District of Bighorn, Banff National Park and the Government of Alberta formed the Bow Valley Wildlife Corridor Task Force (Task Force) with the objective of creating a network of viable wildlife corridors throughout the Bow Valley.⁴⁴

The Chair of the Task Force initiated a motion that was endorsed by Canmore Town Council in 1994, requesting that the Minister of Environmental Protection create a Regional Ecosystem Advisory Group as recommended by the NRCB.⁴⁵ The intent was for this new group to incorporate within its mandate the Task Force's objective. The Bow Corridor Ecosystem Advisory Group (BCEAG) was established in 1995 and the Task Force was abolished by a unanimous resolution of its members. One of the first tasks undertaken by BCEAG was to implement the Board's specific recommendation⁴⁶ that it consider the appropriate location and design of wildlife movement corridors.

BCEAG reviewed relevant science and developed recommendations for functional wildlife corridors that were published in 1998 as the *Wildlife Corridor and Habitat Patch Guidelines for the Bow Valley* (BCEAG Guidelines).⁴⁷ The BCEAG Guidelines were

⁴⁴Gareth Thomson, Canmore Town Councilor 1992-1995, "Commentary on the NRCB's Recommendation to Create a Regional Ecosystem Advisory Group (REAG)", submission to the Natural Resources Conservation Board, April 4, 2001 (on file with the author).

⁴⁵*Ibid.*

⁴⁶Three Sisters decision, *supra* note 1 at 10-53.

⁴⁷Bow Corridor Ecosystem Advisory Group, *Wildlife Corridor and Habitat Patch Guidelines for the Bow Valley* (March 1998) [BCEAG Guidelines].

intended “to ensure the viability of a system of wildlife corridors linking habitat patches within the Bow Valley.”⁴⁸ A more specific objective was to establish “common ground rules” and “standards” for wildlife corridors, taking into account factors such as “maximum length, minimum width, topography, and vegetation characteristics.”⁴⁹ BCEAG also set out to identify appropriate land uses within and adjacent to wildlife corridors and to define special conditions that should apply to those uses. Its final objective was to identify development guidelines to lessen the impacts of approved projects on the viability of nearby corridors.

The BCEAG Guidelines were based on local fieldwork, notably in Banff National Park, a review of relevant wildlife studies from elsewhere in North America, and the application of conservation biology theory. Beginning with a basic model of corridor design, a stepwise approach was proposed for determining the shape, width and size of wildlife corridors under various circumstances. This recommended methodology for corridor design takes into consideration the interaction of corridor length and width, topography, and vegetative hiding cover in and beside the corridor. The BCEAG Guidelines also recommend that the only land uses permitted within wildlife corridors should be scientific research, designated perpendicular trails, perpendicular crossings of linear developments (e.g., power lines, roads, sewage and water pipelines), vegetation management for fire, disease and weed control, wildlife habitat management, and education.⁵⁰ The assumption underlying the design parameters specified in the BCEAG Guidelines is therefore that land set aside for wildlife corridors will be largely free of development and human presence.

The BCEAG Guidelines thus provided precisely the type of information that the NRCB presumably had in mind when it recommended that the proposed Regional Ecosystem Advisory Group examine general parameters for corridor design in the Bow Valley and provide input regarding corridors on the Three Sisters property. In a remarkable turn of events, however, the BCEAG Guidelines include an explicit exemption for various projects with pre-existing commitments and approvals, including “projects for which approvals have been granted by the Natural Resources Conservation Board.”⁵¹ The result is that this document – representing the best current science and a consensus of key decision-makers and land managers regarding the requirements for functional wildlife corridors in the Bow Valley – was expressly inapplicable to the Three

⁴⁸*Ibid.*, at 1.

⁴⁹*Ibid.*, at 1.

⁵⁰Additional recommendations regarding human activities in wildlife corridors – focusing primarily on trail use – were issued in BCEAG, *Guidelines for Human Use Within Wildlife Corridors and Habitat Patches in the Bow Valley (Banff National Park to Seebe)* (August 1999).

⁵¹BCEAG Guidelines, *supra* note 47 at 2.

Sisters property and to most if not all of the remaining developable land in the Town of Canmore.⁵²

Regardless of this formal limitation on their applicability, the BCEAG Guidelines constituted an important reference point for the subsequent debate over wildlife corridors on the Three Sisters property. This document was the first major step in filling the knowledge gaps regarding appropriate wildlife corridor design that had been alluded to in the NRCB's decision report.⁵³ Its credibility was further enhanced when it received a "Premier's Award of Excellence" from the provincial government in 1999 and was adopted as policy by the Town of Canmore in its 1998 Municipal Development Plan.⁵⁴ By providing a precise and science-based method for corridor design that was tailored to conditions and needs in the Bow Valley, the BCEAG Guidelines established a 'gold standard' for assessing plans to facilitate wildlife movement across the Three Sisters property and throughout the region.

3.2. The Draft Conservation Easement Agreement (2001) – Political Science versus Wildlife Science

The immediate consequence of exempting the Three Sisters project from the BCEAG Guidelines became evident in 2001 with the release of a draft conservation easement agreement following private negotiations between the Government of Alberta and the developer.⁵⁵ This document, which described the locations and land uses for wildlife corridors on the Three Sisters property, was a response to the NRCB's requirement that these corridors be satisfactory to provincial government authorities and its recommendation that they be given legal designation. Critics of the draft agreement argued that it did not satisfy the NRCB's substantive conditions for corridor design and the relevant undertakings by the applicant.⁵⁶ Furthermore, they maintained that the

⁵²Gailus, *supra* note 10 at 49.

⁵³Three Sisters decision, *supra*, note 1 at 2-2. See also the NRCB Letter, discussed *infra* note 87.

⁵⁴Gailus, *supra* note 10 at 49; Jacob Herrero & Scott Jevons, *Assessing the Design and Functionality of Wildlife Movement Corridors in the South Canmore Region*, Prepared for BowCORD, Bow Valley Naturalists, Canadians for Corridors, Canadian Parks and Wilderness Society and UTSB Research, September 2000 at 3 [Herrero-Jevons Report].

⁵⁵*Conservation Easement: Three Sisters Resort Inc. and Her Majesty the Queen in Right of the Province of Alberta as represented by the Minister of Sustainable Resource Development* (Draft – April 30, 2001) [Draft Agreement].

⁵⁶See letters and supporting material from the Bow Valley Corridors Working Group to the NRCB, June 1, 2001 and October 23, 2001 (on file with the author). The core members of this working group were representatives of local environmental groups, notably the Canadian Parks and Wilderness Society (CPAWS), the Bow Corridor Organization for Responsible Development (BowCORD), the Bow Valley Naturalists (BVN), Canadians for Corridors and UTSB Research.

proposed corridors lacked a credible scientific basis and therefore were inconsistent with the intent of the Board's decision.

On the first point, the main difficulty was that the draft agreement permitted extensive golf course development, including fairways running the length of the corridors, in the areas designated for wildlife movement.⁵⁷ The overlay of golf courses on wildlife corridors violated the NRCB's requirement that corridors be left in "as undeveloped a state as possible".⁵⁸ It was also inconsistent with the project applicant's legally binding undertakings that wildlife corridors would consist primarily of "trees, shrubs and shrub meadows" and that crossings by fairways and other disturbances would be minimized and, when unavoidable, would be located at right angles to the corridors.⁵⁹

The second major problem with the draft conservation easement agreement was that it lacked a transparent and credible scientific basis. Designated corridors and associated land uses did not meet the standards defined in the BCEAG Guidelines, which represented the best available science at the time. Critics also argued that in the eight years that had elapsed since the release of the NRCB report, the Government of Alberta had failed to undertake systematic studies of wildlife movement in and around the Three Sisters property and had not interpreted data on wildlife movement provided by the project developer.⁶⁰

In addition to the concerns regarding the scientific foundation for corridor design, it was noted that there was a high correlation between the location of these corridors and associated golf courses and the undermined areas on the Three Sisters property that were unsuitable for other types of development.⁶¹ The Board's warning that corridor location should be guided by wildlife movement patterns rather than by the avoidance of developable land thus proved to be prescient.⁶² At the very least, the absence of a transparent process and a well documented scientific basis for corridor location and design made it difficult to explain and defend the rationale for the corridors set out in the draft conservation easement agreement. Among those familiar with this process, a

⁵⁷Draft Agreement, *supra* note 55 at 4-5 (Part 5 Approved Golf Course Development Plan). See also letters and supporting material commenting on this agreement, *ibid*.

⁵⁸*Supra* note 30.

⁵⁹*Supra* note 36.

⁶⁰See letters and supporting material from the Bow Valley Corridors Working Group to the NRCB, June 1, 2001 and October 23, 2001 (on file with the author).

⁶¹Confidential interviews; letters and supporting material from the Bow Valley Corridors Working Group to the NRCB, June 1, 2001 and October 23, 2001 (on file with the author).

⁶²*Supra* note 32.

frequently repeated observation is that the wildlife corridors agreed to by the Government of Alberta and the developer in 2001 reflected “political science, not wildlife science”.⁶³

The controversy surrounding the draft conservation easement agreement was, however, a catalyst for changes in both the politics and the science relating to wildlife corridors on the Three Sisters property. Politically, environmental groups and concerned citizens engaged in an organized campaign to raise public awareness and pressure decision-makers to comply with the NRCB’s project approval by ensuring the maintenance of functional corridors. At the same time, the publication of two important reports in 2000 contributed significantly to the scientific component of the debate over wildlife corridors.

The first report, entitled *Golf Courses and Wildlife: A Literature Review* (Miistakis Institute Report), was commissioned by the Government of Alberta and prepared by the Miistakis Institute for the Rockies at the University of Calgary.⁶⁴ This report examined the current state of scientific knowledge regarding the suitability of golf courses for wildlife habitat and movement corridors. The government’s decision to commission an independent review of the compatibility of these land uses was commendable given the issues raised by the draft conservation easement agreement.

The Miistakis Institute reviewed the small number of studies dealing directly with the impacts of golf courses on wildlife and the broader literature examining the sensitivity of particular species to habitat alteration and increased human presence. Anecdotal observations were also obtained from individuals familiar with golf course development in the Rocky Mountains.⁶⁵ The report discussed the evidence for each selected species and then presented general conclusions.

It noted that golf course development may affect wildlife by altering habitat, increasing human presence, displacing individuals, shifting movement corridors, and contributing to direct or indirect mortality (e.g., due to human-wildlife conflicts).⁶⁶ Impacts will differ depending upon the wildlife species in question, the context (e.g., the availability of alternative habitat or corridors and the amount and type of other development close to the golf course), the amount of habitat alteration, and the level of human presence.

⁶³Confidential interviews.

⁶⁴Miistakis Institute for the Rockies, *Golf Courses and Wildlife: A Literature Review – Assessing the Current State of Knowledge of Golf Course Compatibility for Selected Wildlife*, prepared for Alberta Environment, August 20, 2000 [Miistakis Institute Report].

⁶⁵*Ibid.*, at i (Executive Summary), 1-2.

⁶⁶*Ibid.*, at 37-39.

Overall, the Miistakis Institute found that the use of golf courses for habitat or movement corridors appears to provide “very few long-term benefits to wildlife”.⁶⁷ Wildlife species that are sensitive to human presence will be particularly affected and, when habituation occurs, the result is to increase the risk of human-wildlife conflict. The Miistakis Institute Report concluded that the increased human presence associated with golf course development is difficult to mitigate and that the economic objective of maximizing human use of this type of recreational facility “is fundamentally at odds with the needs of most wildlife.”⁶⁸

The second important scientific report, entitled *Assessing the Design and Functionality of Wildlife Movement Corridors in the South Canmore Region* (Herrero-Jevons Report), was prepared for several environmental groups by two environmental scientists and consultants, Jacob Herrero and Scott Jevons.⁶⁹ The authors examined the scientific basis for proposed corridor design on the Three Sisters property, noting that the parameters proposed by the developer in its application (e.g., minimum primary corridor width of 350 metres) were based on specifications that had been developed for non-winter use by deer and elk in conjunction with forestry operations in a remote setting in Washington and Oregon.⁷⁰ This approach to corridor design, they argued, was inappropriate in an area like Canmore where there is considerable human activity and wildlife corridors will be used by a wide range of species in all seasons. In contrast, the authors noted that the BCEAG Guidelines adopted a multi-species approach to corridor design that was based largely on studies carried out in the Bow Valley.

The Herrero-Jevons Report then presented a systematic evaluation of proposed wildlife corridors on the Three Sisters property using the BCEAG Guidelines, taking account of factors such as their width, slope and available cover. On this basis, the authors concluded that these proposed corridors “consistently fail to meet the minimum standards for functional, viable corridors set by BCEAG” and that “this failure has the potential to severely impair the movement of wildlife in the Bow Valley between the Kananaskis Valley, Banff National Park and beyond.”⁷¹

The combination of public opposition to the proposed corridor design and scientific evidence that golf courses are unlikely to constitute effective multi-species wildlife corridors was decisive in the conflict over the 2001 draft conservation easement agreement. In the end, this agreement was abandoned by the province and the developer. The controversy over wildlife corridors on the Three Sisters property was, however, far

⁶⁷*Ibid.*, at i (Executive Summary).

⁶⁸*Ibid.*, at 39.

⁶⁹Herrero-Jevons Report, *supra* note 54.

⁷⁰*Ibid.*, at 3.

⁷¹*Ibid.*, at 5.

from over. For environmental groups and individual citizens concerned with preserving ecosystem health in the Bow Corridor and on surrounding lands, this experience demonstrated the need for ongoing pressure on decision-makers to ensure that the development of the Three Sisters property was consistent with the maintenance of functional multi-species wildlife corridors as required by the NRCB's project approval. One component of the resulting strategy was to call on the Board itself to oversee implementation of its decision.

3.3. Engagement of the NRCB – Preserving the Integrity of the Board's Review Process

The controversy surrounding wildlife corridors on the Three Sisters property entered an important new phase in 2001, when a coalition of environmental groups initiated contact with the NRCB and formally requested that the Board review the implementation of the Three Sisters decision in order to assess compliance with the terms and conditions – including the legally binding undertakings by the applicant – that were part of the project approval.⁷² The early stages of this process included a meeting with NRCB staff, correspondence from the environmental groups⁷³ and the developer,⁷⁴ and a letter from the Chair of the NRCB in July 2001 affirming that "... the integrity of the NRCB requires that approval-holders comply with any conditions of its approval."⁷⁵ Thus began the formal involvement of the Board in the process of implementing the letter and spirit of the wildlife corridor components of the Three Sisters decision.

The environmental groups' strategy for engaging the Board also included the submission of a legal opinion that the *Natural Resources Conservation Board Act*

⁷²Letter and supporting material from the Bow Valley Wildlife Corridors Working Group to the NRCB, April 4, 2001 (on file with the author). The ongoing public campaign for functional wildlife corridors on the Three Sisters property has been coordinated since 2001 by Dr. Heather MacFadyen, a Canmore resident who has served as a member of the Board of Directors of the Canadian Parks and Wilderness Society (Calgary-Banff Chapter) and a member of the Steering Committee for the Bow Corridor Organization for Responsible Development. See, Heather MacFadyen, Ph.D., Steering Committee, BowCORD, "Wildlife Corridors, Municipal Authority and Public Consultation: A Citizen's Perspective", Submission to the NRCB, April 4, 2001 (on file with the author) and Dr. Heather MacFadyen, "Protecting Corridors for Wildlife Forever" in *Green Notes*, Newsletter of the Canadian Parks and Wilderness Society, Calgary-Banff Chapter, Spring 2003 (Vol. 12, No.1).

⁷³Letters and supporting material from the Bow Valley Wildlife Corridors Working Group to the NRCB, June 1, 2001, October 23, 2001 and April 11, 2002 (on file with the author).

⁷⁴See, for example, letters from the developer to the NRCB dated May 7, 2001, May 23, 2001, July 24, 2001.

⁷⁵Letter from Dr. Brian Bietz, Chair, NRCB to the Bow Valley Wildlife Corridors Working Group, July 11, 2001, quoted in a letter from the Bow Valley Wildlife Corridors Working Group to the NRCB, October 23, 2001 at 3 (on file with the author).

provides mechanisms for the Board to ensure compliance with conditions attached to its project approvals.⁷⁶ As noted earlier, the NRCB's initial involvement with the Three Sisters project was purely as a project review body. The Board stated in the decision report that its role was "to determine whether the proposed development ... is in the public interest" and that it "does not have jurisdiction to act as an ongoing regulator of the operations of the project, if it is approved."⁷⁷ Nonetheless, the legal opinion argues that the Board has both the power and the responsibility to intervene when necessary to ensure compliance with the conditions of an approval.

The first enforcement mechanism is the Board's power under section 23 of the *Natural Resources Conservation Board Act* to seek a judicial order to restrain activities that do not comply with an order or direction issued by the Board. Second, the Board has the power under section 24 to "review, rescind, change, alter or vary an order or direction made by it." Given these options, the legal opinion concluded that the Board should apply for a court order "to restrain further development until there is compliance with the directions and orders" contained in the Three Sisters decision and that a failure to do so "would result in defeating the purpose of the Act and make a sham of the original hearing."⁷⁸

It appears that neither the environmental groups that commissioned the legal opinion nor the Board felt that legal action was required at that time to secure compliance with the Three Sisters decision. Nonetheless, beginning in 2001 the Board's attention to the implementation of its decision was recognized as a key factor by parties with an interest in wildlife corridors on the Three Sisters property. For example, Banff National Park sent a letter to the Board in April 2002 that raised significant concerns with the proposed design for wildlife corridors on the Three Sisters property.⁷⁹ This letter endorsed the BCEAG Guidelines and the use of "up-to-date science" to guide the Three Sisters development process, arguing that "intensive development up to the edge of wildlife corridor boundaries, or development within the corridors themselves, will result in impaired corridor function."⁸⁰ Particular concerns included several areas where the housing and resort infrastructure proposed by the developer would abut steep slopes and might therefore make wildlife corridors ineffective.

⁷⁶Letter "Re: Three Sisters Golf Resorts Inc. et al." from John Kingman Phillips, Heenan Blakie, to William Young Kennedy, General Counsel, NRCB, 25 July 2001 [Legal Opinion] (on file with the author).

⁷⁷Three Sisters decision, *supra* note 1 at 1-4.

⁷⁸Legal Opinion, *supra* note 76 at 2.

⁷⁹Letter from Mr. Bill Fisher, Superintendent, Banff Field Unit, Banff National Park to Dr. Brian Bietz, Chair, NRCB, April 26, 2002 (on file with the author).

⁸⁰*Ibid.*, at 2.

In response to the submissions from interested parties, the Board sent the project developer an important letter on May 27, 2002 that set out its views and expectations regarding wildlife corridors on the Three Sisters property.⁸¹ The principal elements of this letter are as follows:

- The Board affirmed that it “has a responsibility to ensure that the substantive commitments and undertakings made by applicants are met” and noted that “such commitments and undertakings are critical because they are a key element of all the various trade-offs that the Board has considered in determining whether a project is in the public interest.”⁸²
- The Board recognized that “with the passage of time, it may become evident that assumptions made by an applicant during the original review are no longer correct or relevant and the associated commitments have to change.”⁸³ While minor changes are generally unproblematic, the Board stated that “more significant changes by an applicant do create the risk that they may affect the benefit/costs of the proposed project enough to put the original approval in jeopardy unless addressed.”⁸⁴ In these circumstances, the applicant will face the choice of complying with its original commitments or re-applying to the Board.
- The Board reiterated its condition of approval that wildlife corridors be “in as undeveloped a state as possible” and its reliance on provincial government authorities (now Alberta Sustainable Resource Development (SRD)) to oversee the designation of wildlife corridors. While it noted that a conservation easement agreement between the developer and SRD had been negotiated, the Board cautioned that “if more significant levels of protection were originally committed to by the company in its application, meeting the requirements of SRD may not be sufficient to meet the original expectations of the Board in granting its approval.”⁸⁵
- The Board summarized the applicant’s undertakings regarding wildlife corridors, notably the commitment that corridors “would consist of relatively undisturbed forest, shrub and shrub meadow” and that the crossing of corridors by linear facilities and golf course fairways would be minimized, with facilities crossing at or close to right angles to the long axes of movement corridors.⁸⁶

⁸¹NRCB Letter, *supra* note 36.

⁸²*Ibid.*, at 1.

⁸³*Ibid.*, at 1.

⁸⁴*Ibid.*, at 1.

⁸⁵*Ibid.*, at 2.

⁸⁶*Ibid.*, at 2.

- The Board stated that when it accepted the applicant’s proposal that properly designed wildlife movement corridors could contribute to mitigating the project’s environmental impacts, “it also recognized that the conceptual designs it reviewed in 1991 were based on limited site-specific wildlife movement data and an incomplete scientific understanding of the requirements for functional corridors.”⁸⁷
- Finally, the Board stated that, in light of concerns raised by various interested parties, “the key question that the Board believes must be addressed is whether the conceptual plans for wildlife movement corridors, as currently proposed, continue to respect the spirit of the commitments made by the company at the hearing and upon which the Board relied in issuing its approval?”⁸⁸

The Board thus signalled in no uncertain terms that it would ensure compliance by the project developer with the conditions and undertakings embodied in the project approval and that it had not delegated ultimate responsibility for overseeing implementation of its decision to SRD.

What followed was ongoing correspondence from environmental groups that kept the NRCB informed as the detailed development plans for the Three Sisters property were prepared and submitted to Canmore Town Council for approval. The Board was also in contact with the project developer and SRD, receiving updates on plans for wildlife corridors. In a letter dated April 9, 2003, the Board reiterated that it “has a responsibility to see that the substantive commitments, undertakings and conditions with respect to wildlife corridors on the Three Sisters property are met and this responsibility will remain until the corridors are finally designated for the entire property.”⁸⁹ Almost a year later, another letter from the Board expressed satisfaction with progress towards the establishment of wildlife corridors consistent with the project approval.⁹⁰ The Board endorsed modifications to the corridor design that was approved in 1992 on the grounds that they incorporated “more recent scientific thought” and also accepted the approach to corridor planning on the eastern portion of the Three Sisters property that would result in the finalization of corridor design prior to development planning.

While the NRCB’s involvement in the wildlife corridor saga has not involved a formal re-hearing of the application or the direct threat of legal action to ensure compliance with its decision, the Board has clearly indicated that it takes compliance

⁸⁷*Ibid.*, at 2.

⁸⁸*Ibid.*, at 3.

⁸⁹Letter from Dr. Brian F. Bietz, Chair, NRCB to representatives of local environmental groups, April 9, 2003 at 1-2 (on file with the author).

⁹⁰Letter from Mr. William Young Kennedy, General Counsel, NRCB to the developer, April 6, 2004 (on file with the author).

issues very seriously. Correspondence from the Board has undoubtedly had an effect on the balance of power between development interests and advocates of functional wildlife corridors. It remains to be seen, however, what enforcement action the Board would take in response to the finalization of development plans that failed to ensure functional corridors across the Three Sisters property.

3.4. The Evolving Basis for Corridor Designation – Science Gains Ground

The initial difficulties and successes in establishing a scientific basis for corridor designation on the Three Sisters property were reviewed above. The BCEAG Guidelines provided a science-based method for designing functional multi-species corridors in the Bow Valley, but the Three Sisters project was formally exempted from their application. The Government of Alberta's commitment to science-based planning of corridors was further called into question when the first draft conservation easement agreement was released in 2001. On balance, however, it appears that science has steadily gained ground during the implementation of the Three Sisters decision. The Miistakis Institute Report and the Herrero-Jevons Report confirmed that sound science had an important place in the wildlife corridor saga. Two additional reports, released in 2002, solidified the scientific basis for corridor design on the Three Sisters property.

The first report was commissioned by the Town of Canmore and the project developer. The Town initiated a Wildlife Corridor Review in 2002 and Golder Associates Ltd. was commissioned to undertake a 'desktop study' and prepare a report (Golder Report), the goal of which was:

“to determine and recommend the most functional wildlife corridors and habitats possible on the review lands while applying the most current data and science available and to consider the connectivity of wildlife movement between Banff National Park and Kananaskis while keeping to a minimum the loss of developable acres in the review area.”⁹¹

To this end, the study took into account both BCEAG Guidelines and the locations of wildlife movement and habitat on adjacent lands. An additional objective of the Golder Report was “to provide recommendations regarding human use on and adjacent to corridors, management techniques and monitoring requirements.”⁹² A scientific advisory group consisting of wildlife and corridor experts from the Bow Valley area was established to assist with the study.⁹³

⁹¹Golder Associates Ltd., *Assessment of Wildlife Corridors Within DC Site 1, DC Site 3, and District “R” – Final Report*, submitted to Three Sisters Resorts Inc./United Inc. and The Town of Canmore (November 2002) at 3 [Golder Report].

⁹²*Ibid.*, at i.

⁹³*Ibid.*, at v.

The Golder Report’s recommendations did not conform to the BCEAG Guidelines in all respects, but the proposed widths for corridors and associated buffers on the Three Sisters property were well in excess of the 350 metres referred to in the original application.⁹⁴ The final design includes an across-valley corridor with a minimum width of 410 metres, which is increased to a minimum “effective width” of 480 metres with the inclusion of two 35 metre buffers. These buffer areas were to be thinned for the prevention of forest fires and protected under a conservation easement. The proposed along-valley corridor has an average width of 600 metres and an average minimum “effective width” of 635 metres with the inclusion of a 35 metre buffer.

The Golder Report also included specific recommendations on land use within corridors.⁹⁵ It stated that trees should be planted to reach a minimum cover value of 40% over most of the area and that thinning for fire control would not be permitted within the corridors, although it would be allowed in the 35 metre buffers. Human uses in the corridors would be restricted to a small number of designated trails and the parkway. Golf courses would not be permitted.

Finally, the Golder Report recognized that the functionality of corridors could be compromised by development and activities on surrounding lands. It therefore recommended a layering of land uses adjacent to corridors – moving from less intensive to more intensive uses as distance from the corridor increases. For example, the proposed sequencing of land uses within and adjacent to the along-valley corridor was as follows:⁹⁶

- Conservation easement on the “effective width” of the corridor, including the 35 metre buffer);
- Golf course;
- Human use trail;
- Large acreage lots with houses positioned away from the corridor;
- Business park, hotel development;
- Low density housing; and
- High density housing.

The Golder Report concluded that the proposed redesign was consistent with the original environmental impact assessment and with the NRCB’s Three Sisters decision, notably

⁹⁴*Ibid.*, at 49.

⁹⁵*Ibid.*, at 45-46.

⁹⁶*Ibid.*, at 44.

because corridors would be largely undeveloped and there would be fewer crossings and other disturbances.

With the release of the Golder Report, the debate about corridor design became significantly more focused and the science more prescriptive. In particular, this report provided a clear and science-based alternative to strict compliance with the BCEAG Guidelines. The involvement of wildlife experts and stakeholder representatives on the scientific advisory committee for this study ensured that it represented a broad consensus regarding the design features that were needed for functional corridors across much of the Three Sisters property.

The second important report released in 2002, the *Regional Wildlife Corridor Study – Wind Valley/Dead Mans Flats* (Wind Valley Study), applied the BCEAG Guidelines and wildlife monitoring data to produce specific recommendations for wildlife corridors crossing the eastern end of the Three Sisters property.⁹⁷ This report was prepared for the Wind Valley Wildlife Corridor Committee, which consisted of regulatory agencies and developers with an interest in an area including the east end of the Three Sisters property. It addresses the need for an across-valley corridor linking Wind Valley with the key along-valley corridors and important wildlife habitat across the Trans Canada Highway and north of the Bow River. The analysis and recommendations are based on a series of delineation criteria and the results of wildlife movement studies in the area. Like the Golder Report, the Wind Valley Study provides a clear scientific basis for designating functional wildlife corridors.

The Golder Report and the Wind Valley Study show that the science of wildlife corridor design in the Bow Corridor had advanced significantly in the decade since the Three Sisters decision was released. All that remained was for the project developer, the Town of Canmore and Alberta Sustainable Resource Development to sign off on specific development plans that respected the reports' standards for corridor design and adjacent land uses for the areas in question and to apply either the BCEAG Guidelines or the Golder Report's standards to corridor design in the rest of the Three Sisters property (e.g., the remaining sections of the along-valley corridor, including the Stewart Creek Recreation Area and the connecting link to the Wind Valley end of the corridor). Subsequent events were to show, however, that even the increasingly specific scientific criteria were not sufficient to make corridors designation a non-contentions and largely technical exercise.

⁹⁷*Regional Wildlife Corridor Study, Wind Valley Dead Mans Flats, Part II, Wildlife Corridor Delineation*, prepared for The Wind Valley Wildlife Corridor Committee (November 2002) [Wind Valley Study]. See, Herrero-Jevons Report, *supra* note 54 at 4 and Golder Report, *supra* note 91 at 8.

3.5. The Regional Context – A Chain as Strong as its Weakest Link

The evolution of policy and practice regarding wildlife corridors in the Bow Valley as a whole is beyond the scope of this paper. Nonetheless, it is worth underlining again that the functionality of wildlife corridors on the Three Sisters property is dependent on linkages with habitat and corridors on surrounding land. Of immediate concern for the Three Sisters corridors were two key obstacles to wildlife movement across adjacent land.

The first obstacle was a blockage to the west of the Three Sisters property caused by the Rundle Forebay reservoir and an adjacent subdivision.⁹⁸ This obstacle threatened the ability of the main along-valley corridor to provide the important linkage between Banff National Park and wildlife habitat in Wind Valley, Kananaskis Country and the Eastern Slopes. The second obstacle was the Trans Canada Highway at Dead Man's Flats, which threatened the effectiveness of the across-valley corridor extending from Wind Valley at the east end of the Three Sisters property.⁹⁹

Prospects for a regional network of functional wildlife corridors brightened considerably as a result of a commitment by the Government of Canada in 2002 to finance the construction of wildlife crossing structures to address both of these blockages.¹⁰⁰ This initiative was part of the environmental 'legacy' from the G8 meeting in Kananaskis Country. The federal governments' commitment to build these structures underlined the regional, and indeed national, significance of wildlife movement in the Bow Corridor and provided two more pieces of the puzzle that must be fully assembled to create an effective regional corridor network.

The regional picture was complicated in 2004, however, by a development proposal for land owned by the Municipal District of Bighorn at the northern end of the Trans Canada Highway crossing structure.¹⁰¹ Critics argued that this development would compromise the functionality of the crossing structure and the associated across-valley wildlife corridor connecting with Wind Valley.¹⁰² Environmental groups organized against this proposal and officials from Alberta Sustainable Resource Development also

⁹⁸See, Herrero-Jevons Report, *ibid.* at 4 and Golder Report, *ibid.* at 8.

⁹⁹See, Herrero-Jevons Report, *ibid.* at 24, Golder Report, *ibid.* at 9, 49 and Wind Valley Study, *supra* note 97 at s. 7.2.

¹⁰⁰See, <http://www.g8legacy.gc.ca/english/help.html>.

¹⁰¹Grady Semmens, "'Blunderpass' Could Be A Wasteful Legacy – Kananaskis Country, Alberta" in *Prairie Peaks News*, December-January 2005 (available at http://www.prairiepeaks.com/dec_archive/feature4.pdf) and subsequent letters from readers, "Blunderpass, Indeed!", *Prairie Peaks News*, February 2005 (available at <http://www.prairiepeaks.com/ideas.html>).

¹⁰²See, *ibid.*, and CPAWS Action Alert – Public Input Needed on Dead Man's Flats Development Proposal – Sept. 8 Hearing and Deadline, September 3, 2004 (on file with the author).

signalled their opposition when the project came before the municipal council.¹⁰³ The development was eventually approved, albeit with design modifications intended to reduce impacts on wildlife habitat and movement corridors.

The regional context for the Three Sisters project thus illustrates both the potential for different jurisdictions to contribute to establishing a functional network of wildlife corridors in the Bow Corridor and the risk to the entire enterprise if an important linkage is compromised by development under the control of a single decision-maker. Despite considerable evidence of interjurisdictional cooperation regarding wildlife corridors, the emergence of a development proposal in Dead Man's Flats suggests that the regional corridor network remains vulnerable to the creation of weak links.

3.6. The 2003 Conservation Easement Agreement and Specific Development Plans – The Devil in the Details

One might have anticipated that the specific recommendations provided by the Golder Report and the Wind Valley Study would have brought a close to the controversy over wildlife corridors on the Three Sisters property. The Wind Valley study has, it appears, resolved this issue at the east end of the property. Elsewhere, however, there has been some reluctance by the project developer and, at times, the Government of Alberta, to accept the Golder Report's compromise of the BCEAG Guidelines as the definitive standard for corridor design.

Slippage in terms of the Golder Report's recommendations was evident in a revised draft conservation easement agreement between the province and the project developer that was released in 2003. Although the corridors were designed in accordance with the Golder Report and no longer included golf courses, critics pointed out that most of the 35 metre buffer areas were not designated and protected under the agreement.¹⁰⁴ Concerns were also raised that the draft agreement allowed for various land uses that were inconsistent with the Golder Report's recommendations and with the NRCB's condition that corridors be as "undeveloped" as possible. Subsequent modifications to this draft agreement included the designation of some of the recommended buffer areas. A separate agreement between the Town of Canmore and the developer was also negotiated to protect the remaining east buffers of both the across-valley and along-valley corridors,

¹⁰³*Ibid.*, and confidential interviews.

¹⁰⁴Letters and supporting material from representatives of four environmental groups to the NRCB, April 24, 2003 and to The Honourable Mike Cardinal, Minister of Sustainable Resource Development, Mr. Dave Nielson, Director, Kananaskis Country, Alberta Community Development and Mayor Glen Craig and Council, Town of Canmore, April 27, 2003 (on file with the author).

which are part of the “effective width” of these corridors as recommended by the Golder Report.¹⁰⁵

The debate over corridor design continued, however, as Canmore Town Council was presented with detailed development proposals for components of the Three Sisters project that arguably failed, in various ways, to comply fully with the Golder Report’s recommendations regarding land use adjacent to corridors. For example, environmental groups have opposed plans that included cabins and development nodes within the golf course ‘buffers’ along corridors.¹⁰⁶ In response to the developer’s more ‘flexible’ interpretation of the Golder Report, environmental groups¹⁰⁷ and wildlife scientists¹⁰⁸ have argued that these recommendations are already a compromise when compared with the BCEAG Guidelines and that rigorous compliance with them is essential to ensure that the effectiveness of the entire corridor network is not jeopardized by design flaws in individual sections.

The NRCB continues to monitor this process, with operational decision-making firmly in the hands of Canmore Town Council. Despite the clear intent of the NRCB’s project approval and the very specific scientific guidance that is now available regarding the design parameters for functional wildlife corridors, the process for designating key corridors on the Three Sisters property has continued to be subject to development pressure and remains potentially vulnerable to the vagaries of municipal politics.

4.0. Lessons from the Three Sisters Project

As of the spring of 2005, the final designation of wildlife corridors and the approval of adjacent land uses have yet to be completed on some parts of the Three Sisters property, specifically in the Stewart Creek Recreation Area and the connecting link to the Wind Valley end of the corridor.¹⁰⁹ It is not too early, however, to begin drawing lessons from the wildlife corridor saga. Although development pressures could still result in decisions on individual corridor segments and adjacent land uses that compromise corridor functionality, there appears to be a reasonable prospect that the implementation of the

¹⁰⁵Confidential interview.

¹⁰⁶Letters and supporting material from representatives of four environmental groups to the NRCB, August 11, 2004 and August 25, 2004 (on file with the author).

¹⁰⁷*Ibid.*

¹⁰⁸Letter from Danah Duke, M.Sc. and Dr. Shelley Alexander, Ph.D. to the Mayor and Canmore Town Council, August 17, 2004 and letter from Jacob Herrero to the Town of Canmore Council and Administration, August 16, 2004 (on file with the author).

¹⁰⁹Confidential interview.

wildlife corridor components of the Three Sisters decision will soon be completed and that the final result will be consistent with the approval issued by the NRCB in 1992.

Looking back at the Board's decision from this vantage point, key elements of the process have unfolded as the Board expected. The project has, of course, evolved considerably since the initial application – some observers contend that Three Sisters Mountain Village as currently conceived is in fundamental respects a different project from the original plan for Three Sisters Golf Resorts.¹¹⁰ As anticipated by the Board, the Town of Canmore has assumed primary jurisdiction over the detailed planning and approvals process.¹¹¹ The Board's condition regarding the establishment of wildlife corridors and its associated recommendations have, however, continued to provide the broad framework for decisions on the design and location of corridors on the Three Sisters property.

As the Board expected, the scientific basis for corridor design has improved and this knowledge has been applied to the Three Sisters project, although not as rigorously and consistently as it might have been had compliance with the BCEAG Guidelines been required for all corridors. The Miistakis Institute Report, the Herrero-Jevons Report, the Golder Report and the Wind Valley Study all contributed to a growing scientific consensus regarding the standards for functional corridors on the Three Sisters property. While the ultimate effectiveness of these corridors remains to be determined through post-development field studies, corridor design for the Three Sisters project has undeniably improved from the proposals contained in the original application.

The final result may therefore be satisfactory when measured against the Three Sisters decision, but the path from 1992 to 2005 has been a tortuous one. The striking feature of the wildlife corridor saga is that, despite the clear language and intent of the NRCB's project approval, a protracted, difficult and time-consuming public campaign has been required to ensure a reasonable prospect of wildlife movement across the Three Sisters property. It is abundantly clear from this experience that compliance with the terms and conditions of NRCB decisions cannot be taken for granted. Furthermore, implementation of the wildlife corridor condition in the Three Sisters decision depended on a particular constellation of circumstances rather than on well-established oversight and enforcement processes. Had one or more of these circumstances been different, pressures to maximize development could easily have irrevocably compromised the functionality of wildlife corridors on the Three Sisters property and, as a result, throughout much of the Bow Corridor.

¹¹⁰Confidential interviews.

¹¹¹This important role has not, it appears, been compromised by the amendments to section 619 of the *Municipal Government Act* – commonly referred to as the 'Canmore clause' – that were intended to limit local control over the development process for projects approved by the NRCB and the EUB.

The principal factor influencing the course of events was undoubtedly the organizational ability and tenacity of the environmental groups and individual citizens who brought the issue of compliance with the NRCB decision to the fore and who continued to raise public awareness and apply pressure to decision-makers. The intervention by the NRCB in this process, at the request of the environmental coalition, was also a significant factor. The willingness of the Canmore Town Council to address corridor design in the municipal planning process and to resist pressure from the developer and the Government of Alberta to compromise corridor functionality was also critically important. Local democracy in Canmore provided a forum for public discussion of wildlife corridors that might not have been available had municipal politicians been unable or unwilling to address this issue. Finally, as noted above, the environmental groups, Banff National Park, the Government of Alberta and the project developer all contributed to the scientific basis for corridor design through the studies that they supported.

In some respects it is not surprising that interveners in the NRCB hearing and other interested groups and individuals should play an ongoing role in scrutinizing a project like the Three Sisters development. The NRCB process itself depends on adversarial hearings to raise issues and to provide the information and arguments on which the Board makes its decision. Likewise, the development planning and approval process of the Town of Canmore is an appropriate forum for individual citizens and other interested parties to make their views known to decision-makers. Some of the conflict over wildlife corridors on the Three Sisters property should perhaps be viewed as the healthy operation of the municipal planning process as it confronts different visions for the future of a community.

The fact remains, however, that an NRCB approval is a legally binding document, issued by a quasi-judicial public body under its statutory mandate to determine whether – and under what conditions – proposed projects are in the public interest. Furthermore, that decision is the outcome of a public hearing process that provides interested parties with an opportunity to present evidence and argument. The integrity of this process in the eyes of participants and the public at large depends on compliance with approvals that are issued by the Board and on the ultimate effectiveness of required mitigation measures. Implementation of the Board’s decisions should not be left to chance, nor should the value of mitigation measures developed for one project be put in jeopardy by decisions affecting adjacent land.

From this perspective, the wildlife corridor saga reveals the following deficiencies in the implementation process for the Three Sisters decision:

- The lack of formal monitoring and accountability mechanisms to ensure compliance with terms and conditions, especially for a project that is built over an extended period of time after the project review;

- The relatively *ad hoc* process for involving the Board in the oversight of its decision, including the lack of clear procedural guidance for all parties regarding the Board's role and the ultimate accountability mechanisms; and
- The absence of authoritative mechanisms to ensure that the detailed planning decisions for the Three Sisters property in combination with the multitude of other decisions on particular projects and land uses within the Bow Valley will yield a functional regional network of wildlife corridors.

The following section reviews several legal and policy options for addressing these deficiencies.

5.0. Strengthening the Implementation Process for NRCB Decisions

The lessons from the Three Sisters project indicate that the implementation process for NRCB decisions should be reinforced, particularly in the areas of compliance monitoring, accountability, enforcement and regional coordination. Four options for addressing these issues could be considered.

5.1. Establishment of Project-Specific Implementation Committees

When a project approval gives rise to complex and potentially contentious implementation issues, a multi-party implementation committee could be established at the time of project approval in order to bring together the developer, regulators, interested intervener groups and other stakeholders. NRCB staff could provide this committee with technical advice and logistical support, although participation by the Board as a full member would likely be inappropriate given its role as the final arbiter of implementation issues relating to its decision.

The functions of an implementation committee could include information exchange, project monitoring, and regular reporting to the NRCB on implementation of the project approval and any compliance issues that arise. This body could also facilitate coordination in areas where roles and responsibilities overlap – for example, between the Town of Canmore and the Government of Alberta on the subject of wildlife corridor designation and the negotiation of conservation easements. If provided with adequate resources, another function could be to retain independent experts and undertake studies to assist with the resolution of implementation issues. Finally, it could provide a vehicle for anticipating and addressing conflicts, either through informal discussions among the parties or through recourse to independent expertise or formal dispute resolution. Where issues cannot be resolved in this way, the implementation committee could provide a

vehicle for bringing them before the NRCB for formal review and adjudication (see below).

The value of providing a forum for stakeholder oversight and involvement following project approval has been recognized in other contexts. Alberta's Energy and Utilities Board, for example, encourages oil and gas companies to establish liaison groups to maintain contact with landowners over the course of development.¹¹² In the Northwest Territories, Aboriginal organizations, local communities and mining companies have established project-specific monitoring agencies for major diamond mines.¹¹³ These mechanisms reflect a growing recognition that the parties who participate in a project review process or are affected by a project over the long term have a legitimate interest in overseeing the project's construction and ongoing operations. This interest includes ensuring compliance with regulatory requirements, notably the terms, conditions and undertakings that can be traced back to the original project approval.

The NRCB could not, of course, oblige parties to work together on implementation issues. Nonetheless, it could encourage the establishment of implementation committees through specific recommendations in its decision reports and by offering ongoing support in the form of staff participation. Furthermore, it could require as a condition of approval that project applicants actively support these committees, notably by providing funding to meet operating expenses, pay *per diems* to volunteer members, and perhaps contribute – along with government agencies – to a pool of money for project monitoring and independent studies. Had this type of mechanism been in place from the outset, it is possible that some of the confusion and rancor relating to the designation of wildlife corridors on the Three Sisters property might have been avoided and that parties might have found it easier to reach a common understanding regarding the practical implications of the Board's decision for corridor design.

5.2. A Formal Process for Engaging the NRCB in Compliance Review

A noteworthy feature of the wildlife corridor saga is the relatively unstructured process that was used for re-engaging the NRCB in the Three Sisters project. While this process may ultimately have been sufficient to achieve satisfactory implementation of the Board's decision, consideration could be given to a more formal mechanism for involving the NRCB.

¹¹²See, for example, EUB, Numac Energy Inc., Application to Amend Approval No. 7936 for Reduced Spacing in the Wolf Lake and Bonnyville Sectors, EUB Decision D 98-2, 29 January 1998, at 24.

¹¹³See, Independent Environmental Monitoring Agency for the BHP Billiton Ekati Diamond Mine (<http://www.monitoringagency.net/>) and Environmental Monitoring Advisory Board, Diavik Diamond Mine (<http://www.emab.ca/>).

As discussed earlier, the *Natural Resources Conservation Board Act* provides the Board with the legal powers necessary to take enforcement action. Nonetheless, the process leading up to the exercise of these powers, should that prove necessary, has not been spelled out by the Board. It appears that there was some initial uncertainty surrounding the NRCB's willingness to become actively involved in overseeing implementation of the Three Sisters decision, although the Board subsequently set out its general views on this topic in correspondence cited earlier in this paper.¹¹⁴

Establishing a clearly defined and transparent process for engaging the Board's oversight role would provide all parties with greater certainty in the event of a dispute over implementation. For example, interested parties could apply formally to the Board for a documentary review, a public hearing or an independent investigation of issues relating to the implementation of decision reports. An opportunity for all interested parties to respond to such an application and an initial review by the Board could be used to screen out frivolous applications. The Board might also retain the option of facilitating, with the consent of the parties, informal discussions in the nature of fact-finding and dispute resolution before moving to a formal review process. Following the completion of one or more of these processes, the Board would be empowered to issue an authoritative ruling on compliance issues arising from the implementation of its project approval.

A formal process for engaging the Board following the completion of the project review would also provide a mechanism for the project proponents and other parties to request relatively minor clarifications or elaborations regarding the interpretation or implementation of decisions. Implementation issues that may arise could therefore be addressed in a transparent manner that would not compromise the independence of the Board and the rights of all interested parties – notably participants in the original hearings – to be involved should they so choose.

Finally, this process could allow parties to return to the Board for adjustments to decisions in the event that key underlying assumptions prove to be incorrect or specific terms and conditions, such as required mitigation measures, turn out to be ineffective or unworkable. In this context, a distinction could be made between minor 'variances' that could be dealt with through an expedited procedure and requests for major changes that might require a new hearing and a more fundamental reconsideration of the basis for the approval.¹¹⁵

¹¹⁴Confidential interviews and NRCB Letter, *supra* note 36.

¹¹⁵The possibility that an approval might have to be revisited in certain circumstances was noted by the Board in a letter to the developer of the Three Sisters project, *supra* notes 83 and 84.

This compliance review could be established through formal amendments to the *Natural Resources Conservation Act*, changes to the NRCB's Rules of Practice,¹¹⁶ or more informal guidance to participants in the Board's process. Explicit provision for triggering Board oversight could also be included in project approvals.

The establishment of a formal review process need not preclude recourse to more informal dispute resolution. In fact, the threat of a formal compliance review by the Board could reduce the risk of controversy, since it would act as a deterrent to those who might otherwise be inclined to deviate from the letter and spirit of an approval. Where intervention by the NRCB is necessary to ensure compliance, however, the parties should know from the outset the process to be followed when seeking an authoritative Board ruling on the issue in question.

5.3. Enhancing the NRCB's Mandate and Capacity to Undertake Compliance Monitoring and Enforcement

The NRCB is to be commended for its judicious interventions to support the implementation of the Three Sisters decision and to safeguard the integrity of its review process. The fact remains, however, that its role was largely reactive. The wildlife corridor saga suggests that the Board's ability to respond to the possibility of a major compliance issue with a key condition in one of its decisions may be contingent on citizen activism. For projects in remote locations or in circumstances where local environmental groups and individual citizens lack the capacity or information that are needed to provide effective volunteer project oversight, compliance issues might go unnoticed until it is too late to address them. Furthermore, the Government of Alberta's uneven record in the wildlife corridor saga, particularly in relation to the initial draft conservation easement agreement, suggests that the Board cannot simply rely on government departments to respect and implement the letter and spirit of its decisions.

The very real risk that non-compliance with a Board decision may go undetected and uncorrected suggests that the Board should have both the duty and the capacity to undertake, at its own initiative, systematic compliance monitoring for projects that it approves. While this role need not imply direct involvement in ongoing project regulation, it would at least make the Board responsible for ensuring compliance with the terms, conditions and applicants' undertakings that are integral to its determination that these projects are 'in the public interest'. Clear lines of accountability for the implementation of Board decisions would therefore be established. Since these decisions can have important long-term consequences for project applicants and other interested parties, it is appropriate that the NRCB should have formal responsibility and accountability in the implementation process.

¹¹⁶Alberta Regulation 345/91.

As with the earlier recommendations, the basis for a proactive Board role in the implementation of its decisions could be provided through amendments to the *Natural Resources Conservation Act*, the elaboration of policy and operating procedures by the Board itself, or the insertion of terms and conditions in project approvals. For example, the Board could be directed to conduct periodic compliance reviews of approved projects and make the results available to the public. These reports could include the systematic review of the implementation of significant terms and conditions attached to project approvals. Board oversight could also be facilitated by the requirement that project developers, regulatory agencies and perhaps the multi-stakeholder implementation committees submit regular compliance reports to the Board. In addition, the Board could set time-lines, benchmarks and processes for compliance monitoring that are tailored to each project. Finally, it could formulate terms and conditions with a view to facilitating the monitoring and evaluation of their implementation – notably by specifying objective standards and clear procedural requirements against which the performance of project developers and regulators could be measured.

For these mechanisms to work in practice, of course, the Board would require adequate staff and other resources to track approved projects and ensure follow-up in the event of compliance issues. At the present time, the NRCB may lack the resources and internal procedures that are needed to support a proactive role in project follow-up.¹¹⁷ The Board's institutional memory relating to approved projects is also vulnerable to being lost because project follow-up now depends primarily on the interests and availability of individual staff members. Without both a formal mandate and the resources needed to carry it out, compliance monitoring by the Board is likely to be overwhelmed by the day-to-day pressure to address new project applications and other priorities.

The Board's responsibility and accountability for implementing its decisions could also be strengthened by more far-reaching legal and administrative reforms. For example, the Board could participate more directly in ongoing regulation through an integrated approval and permitting process that would consolidate or coordinate regulatory requirements for the projects that it reviews. Another alternative would be for the Board to serve as a 'single window' for project regulation. Under this model, the Board would remain the principal point of contact for project developers and other interested parties regarding regulatory issues. Finally, the NRCB might assume EUB-like regulatory functions or it might be merged with the EUB to provide a comprehensive project-review and regulatory process for major projects affecting Alberta's energy and non-energy resources. Under these models, the NRCB would assume an ongoing regulatory role that would make it directly accountable for the implementation of its decisions and require it to respond to issues raised by the implementation of the associated terms and conditions. Merging the EUB and NRCB into a single body might make also it easier in some

¹¹⁷Confidential interviews.

instances to address landscape-level issues, such as cumulative effects and land-use conflicts, at the project review stage.

All of these options for significant regulatory reform raise complex issues that are beyond the scope of this paper. For example, a move to ‘cradle-to-grave regulation’ of projects by the NRCB might require removing some regulatory authority from resource managers (e.g., land, water or wildlife managers), thereby further fragmenting the regulatory regime as it attempts to address the cumulative effects of development. Greater integration of review and regulatory functions for individual projects or sectors could also have adverse consequences for integrated decision-making at the landscape level if it reinforces sectoral ‘silos’ within government. Similarly, merging existing regulatory agencies will not necessarily facilitate landscape-level integration if project-specific decisions continue to be made on an incremental basis without an adequate policy and planning framework. These broader issues should be borne in mind when considering how improved implementation mechanisms for NRCB decisions fit within the broader institutional architecture for resource and environmental management in Alberta.

5.4. Linking NRCB Decisions with an Improved Regional Planning and Management Framework

The regional planning and management framework in the Bow Valley has evolved considerably since the NRCB decision in 1992. The experience with corridor designation on and around the Three Sisters property suggests, however, that there is not yet an authoritative plan or mechanism in place to prevent individual decisions that might jeopardize the functionality of the corridor network as a whole. This deficiency was clearly illustrated by the emergence of a proposal for development in Dead Man’s Flats that may adversely affect wildlife movement at the north end of the Trans Canada Highway crossing structure.

Developing and maintaining a regional corridor network through project-by-project decisions is an undertaking fraught with risk, particularly when these projects are under the authority of a range of municipal and provincial authorities. In an ideal world, the regional corridor network would be established through a comprehensive planning process well before wildlife movement is threatened by specific development proposals. At the very least, formal mechanisms should exist to ensure that project-specific measures to facilitate wildlife movement in one area are not rendered ineffective by development elsewhere. This mechanism could operate in a ‘top-down’ manner under the auspices of the Government of Alberta or it might be a product of cooperation among municipalities and other key land managers and decision-makers (e.g., Banff National Park and provincial government departments with land management responsibilities).

The establishment of a broader policy and planning framework for regional corridor design should be formally linked to project-specific decisions in two ways. First, it should guide and constrain the project planning and review processes so that new projects fit with overall corridor design and contain mitigation measures to facilitate wildlife movement. Second, it should provide mechanisms to ensure the full implementation of the terms and conditions in project approvals that relate to the establishment of individual components of the regional network. Modifications to the NRCB legislation and process might be required to accommodate and reinforce these linkages once the regional mechanism is in place.

6.0. Conclusion

The establishment of functional wildlife corridors on the Three Sisters property has been a critically important local and regional issue for those concerned with the maintenance of functioning ecosystems in the Bow Corridor and on surrounding public land. Decisions regarding the Three Sisters project will have implications for Banff National Park, Kananaskis Country and throughout the Central Rockies Ecosystem that includes the ecologically important montane areas and extends north and south along Alberta's Eastern Slopes.

Almost thirteen years after the NRCB's Three Sisters decision, the final designation of wildlife corridors on the Three Sisters property may be immanent. In contrast to 1992, there is now a significant body of field work, scientific literature, and specific guidelines and recommendations on which to base these decisions. If science guides the remaining decisions on corridor designation and adjacent land uses, the NRCB's objective of maintaining wildlife movement for a range of species may be within reach.

Despite the real prospect of success in this instance, the Three Sisters wildlife corridor saga raises some troubling questions regarding the implementation of NRCB decisions. A clear condition of approval, specific recommendations, and reliance on oversight by line government departments were, by themselves, inadequate to ensure designation of functional wildlife corridors. Compliance with the Three Sisters decision would likely not have been achieved without a confluence of circumstances, the most important of which were the concerted efforts of citizen activists, the strategic interventions of the NRCB at the request of environmental groups, and the willingness of Canmore Town Council to resist pressure from the developer to cut corners on corridor design.

The principal lesson from this experience is that more formal mechanisms should be established to ensure compliance with the terms, conditions and applicants' undertakings that are incorporated into the Board's approvals. Compliance monitoring should be strengthened through multi-stakeholder implementation committees and by the Board

assuming a more proactive role in project oversight. In addition, there should be a clear path for resolving implementation issues that leads, if necessary, to an authoritative ruling by the NRCB. Finally, the NRCB review process should be linked to an effective regional planning and management regime in order to reduce the risk that project-specific mitigation measures will be rendered ineffective by decisions affecting surrounding land.

While civil society undoubtedly has a role to play in the implementation process for Board decisions, the burden of monitoring compliance and ensuring that project developers and regulatory agencies respect legally binding conditions and undertakings should not fall largely on the shoulders of individuals acting, for the most part, in a volunteer capacity as concerned citizens or members of environmental organizations. The NRCB project review process places significant demands on all participants and the Board's decision constitutes a legally binding determination by a quasi-judicial body charged with protecting the public interest. Enforcement of Board decisions should be a matter of course, not the fortuitous result of a particular confluence of circumstances. To this end, the principles of procedural fairness, transparency and independence from direct political influence that characterize the Board's project review process should guide the establishment of formal mechanisms to ensure compliance monitoring and enforcement for approved projects.

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