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Via e-mail: doug.gilmore@ontario.ca

RE: Whitefeather Forest Dedicated Protected Areas – Cheemuhnuchcheecheekuhtaykeehn – Management Planning, EBR Registry Number: 010-8821

Dear Doug,

Thank you for the opportunity to provide comments on Cheemuhnuchcheecheekuhtaykeehn (*Dedicated Protected Areas*) for the Whitefeather Forest. We are submitting comments in our respective capacities as Wildlife Conservation Society (WCS) Canada scientists¹ specializing in fish and wildlife ecology, conservation biology, co-management, and landscape ecology in northern Ontario. WCS Canada scientists also provided comments on the *Draft Land Use Strategy for the Whitefeather and Adjacent Areas* in January 2006.

Because Whitefeather is part of one of the world's largest intact boreal systems, we are pleased to see the prioritization of ecological integrity by both Ontario's Parks legislation (*Ontario Provincial Parks and Conservation Reserves Act, 2006*, (PPRCA)², c.12, s.3) and the *Keeping the Land* strategy, which states, "Pikangikum Indigenous knowledge of the land and our Ahnneshsheenahbay kahnahwaycheekahwin (customary stewardship) will play a fundamental role in the conservation of biodiversity and maintenance of ecological integrity" (PFN and MNR 2006: 38). We also appreciate and acknowledge the need to manage this region as a social-ecological system that includes natural processes (e.g., fire, flooding) as well as the relationships between the Pikangikum Anishinaabeg and the landscape (e.g., planting Manoomin, spring marsh burns, fishing, hunting, trapping). Finally, we are aware of the challenges for First Nations with protected area concepts and management and acknowledge that the current management proposal represents a complex and unique

¹ WCS Canada (www.wcsCanada.org) was established in May 2004 as a Canadian non-government organization with a mission to conserve wildlife and wildlands by improving our understanding of and seeking solutions to critical problems that threaten key species and large wild ecosystems throughout Canada. We implement and support comprehensive field studies that gather information on wildlife needs and then seek to resolve key conservation problems by working with First Nation communities, Government and regulatory agencies, conservation groups, and industry.

² http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_06p12_e.htm

response to concerns about governance, Aboriginal and treaty rights, and historical context that affects current perspectives on the role and value of protected areas as a tools to conserve ecological systems and support the social systems that depend on them. We have a number of comments relating to species-at-risk, planning approaches for protected area design, and fisheries as described in the current management proposals.

1. Development of new roads and implications for species at risk, particularly woodland caribou.

WCS Canada Scientist Justina Ray recently provided comments on the Development of a Range Management Policy in support of Woodland Caribou (**EBR Registry No. 011-9448**). As outlined in Ontario's Caribou Conservation Plan (CCP), managing and limiting cumulative disturbance at the scale of population ranges will be key to achieving the ambitious goals of Ontario's boreal caribou recovery plan. Our main concerns about the current policy include: lack of mechanisms to coordinate decision making at the range scale; lack of direction on limiting new disturbance; the reliance on mitigation rather than limitation of disturbance; and, an overemphasis on "sub-range habitat components" such as calving areas. We do not repeat our comments here, but note that planning and decision-making regarding future development, particularly roads, and woodland caribou in the current proposal provides further evidence of the disconnect between Ontario's stated plans for woodland caribou (as articulated in the Caribou Conservation Plan) and mechanisms to do so.

Protected areas should play an important role in the consideration of conservation of woodland caribou at the range scale as one means to limit human development (including roads) across caribou population ranges. We appreciate the detail and information provided in the proposal on access (existing road, water, and air as well as future forest access roads). We are also encouraged that remoteness remains an important value in planning for both Ontario and Pikangikum Anishinaabeg. While this is a peopled landscape and this proposal notes an implicit understanding of how remoteness values affect tourism and economic opportunities, there is little attention to this value with respect to wide-ranging species that are sensitive to development. We found the lack of connection between this information and species sensitive to fragmentation and disturbance due to roads particularly troubling. It is well documented that species like woodland caribou, wolverine, lake sturgeon and others are sensitive to disturbance related to linear features such as roads. Other than acknowledgement of a precautionary approach for caribou in the section on motorized snow vehicles (4.2.1 p. 20), the access proposals provide little or no consideration of range management issues for woodland caribou, wolverine, or fisheries that may be affected by new access and fragmentation due to roads and crossing features. An explicit link to the province's committed approach to management of cumulative disturbance at the range scale for woodland caribou would, for example, be important to provide.

In general, we find the lack of necessary detail pertaining to woodland caribou in the species-at-risk section (4.6.3.1 p. 37) surprising given the current level of conservation interest and the extent of traditional and scientific knowledge regarding this species in the Whitefeather region in particular. While we are pleased there is interest outlined in the proposal to provide recreational and tourism opportunities to non-Aboriginals about First Nations perspectives on caribou, it remains unclear to us how the proposed protected areas support Ontario's goals and objectives for caribou conservation at the range scale in the Far North. Although (as we have said elsewhere) current provincial direction does not articulate a clear process and mechanism for how decision-making at appropriate scales for caribou will be coordinated and perhaps most importantly, establish limits to new disturbance, this management proposal could proactively acknowledge these issues. We recommend the management proposals acknowledge the need for updates of caribou range condition and population monitoring to address the impacts associated with these proposed developments.

Finally, we note that most of the planning and decision-making about new roads and modification of existing roads will occur under the Class EA-PPCR. Class EA decisions are not subject to Ontario's *Environmental Bill of Rights, 1993* (EBR)³. Consequently, it is unclear how the public or interested parties will ever be made aware of the development or impacts of new linear features in the proposed areas. We currently consider the lack of EBR listing for these kinds of proposals to be as serious impediment to public consultation on proposed management. More importantly, approaches to planning and decision-making under Class EA in Ontario do not address cumulative effects or impacts beyond the narrow scope of the project.

2. Need for regional direction to support community and protected area planning to address ecological and cultural integrity and the provincial scale.

Despite stated commitment to ecological integrity and adaptive management (see 5), current environmental and land use planning and decision-making in Ontario makes reviewing the value and importance of current management proposals a challenge. For example, the Far North Land Use Strategy mandated under Ontario's *Far North Act, 2010*⁴, is meant "to assist in the preparation of community-based land-use plans and guide the integration of matters that are beyond the geographic scope of the planning area of each of those plans." (s. 8(1)). Since Whitefeather is the first land use plan in the Far North, there has been little or no attention to regional scale issues by MNR beyond overlap with adjacent planning areas. In addition, MNR has not publically announced when it might develop the Strategy or how. Consequently, it is unclear if and how the Strategy - one of the few mechanisms available to address regional scale issues - would ever be applied to this plan. As such, we do not see how current management proposals focused on zoning and designations in proposed protected areas can address the risks to the protected areas and the social and ecological systems due to regional scale effects, climate change, and cumulative effects.

3. Fisheries management proposals

Section 4.2.3. Power Boats. We generally agree with the management proposal to implement a maximum horsepower restriction and consider more restrictions in areas where remoteness, ecological, and cultural values have priority. It is not clear how these restrictions will be monitored and enforced in this proposal. We encourage these considerations in the preliminary management plan where specific lakes and waterways as well as the location of private and tenured property can be assessed.

Section 4.2.8 Ice-fishing (non-Aboriginal). There is not enough detail to comment on the management proposal. Access management, including monitoring and enforcement, are important components of managing impacts of ice-fishing activity on fisheries. We strongly recommend baseline traditional and scientific knowledge be collected for waterways in proposed protected areas where historic and current ice-fishing is occurring or planned. Without this baseline information, impacts on fisheries due to changing access because of weather (e.g., climate change) and/or new economic opportunities (e.g., forestry access roads) will be difficult to address.

Section 4.2.9. Commercial bait harvesting

As you are aware, MNR (Fisheries Policy Section in conjunction with Parks and Protected Areas Policy Section (PPAPS)) is initiating a bait policy review. PPAPS will update and modernize policies on bait use and harvest in

³ http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_93e28_e.htm

⁴ http://www.e-laws.gov.on.ca/html/source/statutes/english/2010/elaws_src_s10018_e.htm

protected areas, taking into consideration the purpose, objectives and principles of the PPCRA, as well as the role of protected areas within the provincial bait management framework. Concerns over bait harvest and use in protected areas include the risk of invasive species introductions, ecological sustainability of activities, and consistency with protected area and park class objectives.

We are currently providing scientific advice to Ontario as a member of the Bait Review Advisory Group (BRAG). We anticipate that the regulations around bait harvest, use, and possession in provincial parks, including new proposals for parks, will be changing in the near future. It is unclear how the current proposal aligns with the bait policy review process, including the Minister's commitment as part of the 2011 Ontario Parks "Phase Out" policy decision to complete a policy review of bait use and harvest in protected areas or the extent to which there has been consultation with Pikangikum First Nation on this issue.

With respect to commercial bait harvesting (4.2.9, p. 24), while we appreciate the need to find economic opportunities, from an ecosystem perspective, we require more information on the nature and extent of commercial bait harvesting in the proposed protected areas. In general, we understand that bait management and regulation in protected areas will be more strict in terms of personal use and movement of bait, as well as commercial harvest, than any new regulations covering all of Ontario. This likelihood isn't obvious in the current management proposal. In addition, Map 6, which we assume would identify these locations, was not available for download and review.

From a scientific and ecosystem management perspective, we think that commercial live bait harvesting of wild populations poses multiple risks to native populations and aquatic communities including:

- Overharvest of bait fish resulting in population declines of wild stocks and/or depleted genetic resources.
- Facilitates the movement and introduction of invasive species, particularly by storage in open water, and through the use of vehicles and equipment that may also harbour other invasive species such as aquatic plants.
- Can create a cascade effect in aquatic communities through food web dynamics. For example, overharvest of smaller fish, such as minnows, leaves less food resources for lake trout, walleye, and other top-level fish species, most of which are significant for subsistence and sport fisheries.

We take this opportunity to recommend that commercial bait harvesters in protected areas should report their harvest seasonally. To meet Ontario's and Pikangikum Anishinaabeg's goal of maintaining ecological and cultural integrity, having baseline data of harvest by waterbody and season would support management decisions on fisheries.

Finally, there are 38 bait harvest areas (BHAs) within or partially within Cheemuhnuhcheecheekutaykeehn that are allocated to 11 harvesters. Although the size of each BHA (e.g., 100 square miles each) implies that there is plenty of area available to avoid overharvest by multiple bait harvesters, we would require more information on how accessible these areas are and where they are located with respect to each other to understand whether harvest is disproportionately distributed because of current access. Understanding how this harvest impact may change with proposals for new access is critical and should be considered in this proposal and addressed more explicitly in draft management plans.

Movement and use of live bait. Unlimited movement of bait fish results in two main conservation issues for native fisheries: jeopardizing the health of aquatic ecosystems through the introduction of invasive species and disease/pathogens; and, introducing native species into new watersheds homogenizing the genetic structure of the aquatic community. This latter issue affects the ability of the native fish population to adapt to climate change and other stressors. We suggest the appropriate management unit for bait issues should be within a Fishery Management Zone (FMZ) (e.g., within FMZ 2 and 4 for Cheemuhnuccheecheekuhtaykeehn). We also recommend that the FMZ boundaries be modified to align with the boundaries of watersheds, specifically secondary watersheds as opposed to MNR jurisdictional boundaries which lack ecological context.

Type of baitfish. From an ecosystem management perspective, the **white list** should be reduced in order to protect and conserve Ontario's natural resources, and to maintain a sustainable recreational fisheries and the **black list** should be expanded. In addition, only species that are easy to identify should be on the white list. The white list should be minimized to include easily recognizable species. The white list should also emphasize the impacts (and consequences) of harvesting endangered species and invasive species.

Possession Limits. We recommend a reduction in possession limit. From an ecosystem perspective, this reduces the risk of introducing invasive species and diseases/pathogens that have been shown to be related to the number of live bait fish bought at the sale point. This also lowers live bait releases and supports the sustainability of bait species populations by reducing pressure on these populations from commercial harvesters. In general, current possession limits in Ontario are too high. The large number of fish purchased at the sale point also make it hard to identify by-catches of native species, species-at-risk, and invasive species.

Storage of Live Bait. From an ecological perspective, a storage prohibition in Ontario waters would reduce the risk of live bait transfers, invasive species introduction, and pathogen spread and may eliminate the illegal harvest and sale of fish. Bait storage by harvesters currently poses higher risks to native ecosystems than bait storage by anglers. For example, harvesters routinely store the bait collected from several waterbodies in one in one area such as a river, creek, or brook. Mixing bait from several isolated waterbodies increases the risk of introducing new species and pathogens/diseases to new systems.

Section 4.2.10 Commercial Fishing. While we generally support the management proposal of providing livelihood opportunities for Pikangikum Anishinaabeg that acknowledge and support the value of subsistence fisheries, we do not support commercial fisheries in protected areas due to the disruptive nature of commercial fishing on healthy fish populations. However existing commercial fisheries should be honoured. We recommend that both TK and scientific information inform management decisions about the sustainability of existing commercial fisheries and consider the implications of climate change, contaminant and health assessments, and access management on fisheries before decisions are made. Any consideration of new fisheries should require baseline data collected from the protected area to ensure sustainability and resilience of the system to this new pressure. We would be interested in discussing the research opportunities associated with this if requested.

We are concerned that information about new commercial fisheries developments would proceed under Class EA-PPCR and may not be subject to public or interested party review under EBR. The management proposal should clarify how these proposals will be shared with the public and interested parties.

Section 4.3 and 4.4. Recent amendments to the PPCRA (see below) created "aquatic class parks" where the objectives are to "protect aquatic ecosystems and associated natural and cultural features for their intrinsic

value, to support scientific research and to maintain biodiversity" (2006, c. 12, s. 57 (2)). While we are not clear what the criteria are for these classes of parks, we suspect they are more appropriate for the aquatic ecosystems being considered in this proposal. We recommend including this class in Section 4.3 and consider the management implications in the zoning section (4.4).

Section 4.6.3.1. We are pleased that Ontario recognizes lake sturgeon as an important species in Cheemuhnuccheekutaykeehn. Ontario's recovery strategy for lake sturgeon, however, does not address the role of protected areas in conserving or recovering lake sturgeon populations. We are pleased Pikangikum Anishinaabeg also recognize the value and importance of lake sturgeon and have been involved in and supported research on this species (3.5). However, as with woodland caribou, there is a general lack of attention to how fisheries, access management, and the proposed protected areas will maintain lake sturgeon fisheries and support recovery planning. This region has been identified as a threatened portion of lake sturgeon range and is also characterized by very low genetic variability. The latter means that lake sturgeon may be less able to adapt and more vulnerable to climate change and other stressors compared to lake sturgeon populations outside this region (McDermid et al. 2011). Due to our expertise with lake sturgeon research, we would be interested in discussing these issues and possible research opportunities associated with lake sturgeon if requested.

Section 4.6.3.2. We support the need for fish population surveys, water quality, and contaminant analyses and recommend that these surveys be required before the development of new fisheries in the proposed protected areas. A monitoring plan should be developed for the proposed protected areas with special consideration for sensitive species and sensitive habitats as well as the species targeted by the fishery. Monitoring plans would provide baseline data important for future reassessment of any proposed resource use or development activity.

4. Management of invasive species in protected areas.

WCS Canada Scientists recently commented on the discussion paper for Ontario's Invasive Species (OIS) Strategic Plan (**EBR Registry No. 011-9780**). We agree that invasive species are an important threat to conserving native biodiversity and recognize they have important consequences on economic sectors such as agriculture, forestry, and recreation. We are pleased that MNR has begun to address invasive species in Ontario in a more comprehensive way with an overarching strategy rather than a piecemeal approach to a few targeted species (ECO 2004).

For provincial parks in particular, the Discussion Paper identified the lack of tools to proactively prevent the introduction of all groups of invasive species, or to initiate a rapid response to these species before they become established. While the current proposal acknowledges the importance of invasive species in 4.6.4 (p. 37), we recommend it include relevant information about parks from Ontario's OIS Strategic Plan. We recommend the current management proposal include the need to develop tools to address invasive species in protected areas, implement monitoring, and address prevention through a whole-ecosystem approach (e.g., Zavaleta et al. 2001).

In general, we think there is a lack of attention to the prevention of invasive species in the Far North. The Far North deserves attention with respect to invasive species because:

- The Far North contains globally significant aquatic and terrestrial ecosystems, with a high degree of intactness and ecological integrity. These systems currently have little or no form of protection.
- For aquatic species at least, a natural barrier between primary watersheds in the Far North reduces the likelihood of natural expansion of invasive species.

- Despite the resiliency of the Far North ecosystems to natural disturbance, they tend to have fewer species and smaller food webs and communities. Invasive species could have a disproportionate impact on ecosystems as a consequence. It remains unclear how resilient these systems will be in the face of novel industrial development and climate change, prompting a precautionary approach to these threats.
- There is a general lack of scientific data on fish, wildlife, and ecosystem processes in the Far North and few tools to address conservation planning and cumulative effects of development and impacts due to climate change.

5. Need to address adaptive management explicitly

We appreciate the attention to adaptive management principles and concept by Ontario. While we agree with the value of this approach in management and planning, we feel adaptive management can only succeed with adequate baseline data, research (both traditional knowledge and science), and a commitment to monitoring to provide the basis for learning and applying those lessons on-the-ground and in policy. In a number of places in this proposal, the attention to research and monitoring is tentative at best (e.g., fisheries, species-at-risk, access and road use) and clearly resource dependent. We are therefore less certain of Ontario's commitment to adaptive management to occur.

6. Ontario's policy context and changes to PPCRA

In 2012, Bill 55, the Strong Action for Ontario (Budget Measures) Act, 2012, created a number of changes to PPCRA⁵. Although we take this opportunity to mention these, we remain uncertain about the implications of these changes with respect to the current proposal.

Of concern, is the new subsection, 14 (2.1), and Section 28 in PPCRA which we feel increases the risk to the ecological integrity of protected areas. For example, subsection 14, gives the Minister discretion to issue new land use permits for private, non-commercial purposes so long as they are consistent with the Act and regulations whereas previously only existing leases/permits were continued. Section 28 removes the requirement of the Lieutenant Governor in Council to be included in agreements on building access roads in protected areas and leaves this to the Minister's discretion and their ability to delegate this authority to another person. In general, we remain concerned that MNR in particular continues to operate in a period of declining resources and reduced staffing across many of its departments making it unlikely to be able to meet MNR's mandate. Consequently, we are deeply concerned about how MNR will address assessment and regular review of new and existing management directions for protected areas and conservation reserves.

In closing, we respect that this is the first land use plan under Ontario's *Far North Act* and as such we feel it is also sets an important precedent for protected area planning in the rest of the Far North. Unlike the near north and southern Ontario, the Far North is a globally significant terrestrial and aquatic landscape because of the high degree of intactness. Consequently planning for protected areas warrants a different approach from that in fragmented and degraded landscapes. In 2010, the Far North Science Advisory Panel⁶, convened by Ontario to provide scientific advice to Ontario on conservation planning for the Far North recommended the conservation matrix model (Schmiegelow et al. 2006, Krawchuck et al. 2012) be considered for boreal ecosystems. In this

⁵ <http://www.ecojustice.ca/media-centre/media-release-files/ecojustice-cela-legal-analysis-re-bill-55-ontario-budget-2012/view>

⁶ <http://www.mnr.gov.on.ca/en/Business/FarNorth/2ColumnSubPage/266512.html>

approach, planning is integrated with renewable and non-renewable resource use through adaptive management with attention to managing “islands” of development (Appendix 1). One of the key components are "benchmark areas" which could include protected areas. In this current proposal, we cannot determine whether the proposed protected areas could function in the manner described in the conservation matrix model and encompass multiple scales of ecological processes necessary to support ecological integrity and biodiversity as per MNR and Parks mandates. We encourage Ontario to consider this planning approach more critically going forward.

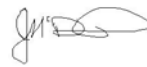
We remain greatly appreciative of the opportunity to comment on Cheemuhnuccheecheekuhtaykeehn. Please contact Cheryl Chetkiewicz (cchetkiewicz@wcs.org or 807-472-1440) if you require further clarification of our comments.



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Justina Ray, PhD



Jenni McDermid, PhD



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Appendix 1. The Conservation Matrix Model (with Dr. Hilary Cooke, WCS Canada)

The **Conservation Matrix Model** is a novel approach to conservation planning developed for Canada's boreal region by the BEACONS (Boreal Ecosystem Analysis for Conservation Networks) research team at University of Alberta (Edmonton, Canada) and Université Laval (Montreal, Canada) (Schmiegelow et al. 2006). The model was developed specifically for the large, relatively intact landscapes of Canada's boreal region and the natural disturbance regimes that drive change over space and time (Krawchuck et al. 2012). The premise of the model is to integrate systematic conservation planning with opportunities for sustainable resource use and adaptive resource management and thus facilitate integrated conservation planning over large regions.

The conservation-matrix concept includes four landscape elements (Figure 1), which together achieve the goal of adaptive resource management while ensuring maintenance of ecological flows across the landscape, such as movements of organisms, water, and nutrients, under the uncertainty of natural disturbance regimes.

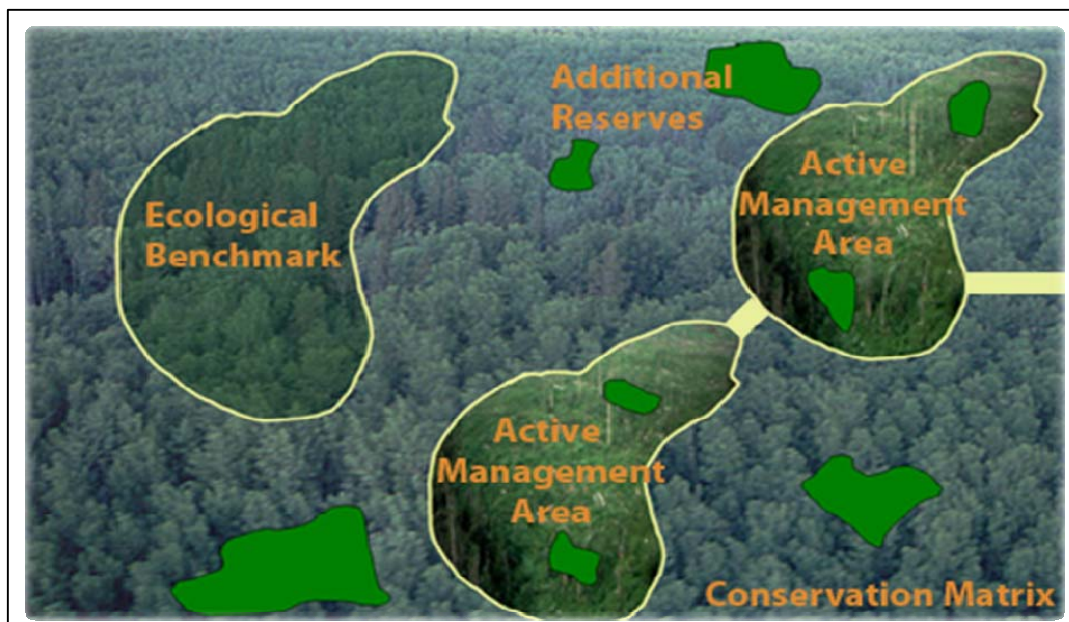


Figure 1. The Conservation matrix model (credit BEACONS).

Active Management Areas are islands of relatively intense human development, e.g. human settlements, forestry, mining, agriculture, and the associated infrastructure. Active Management Areas are embedded in a **Conservation Matrix** 'sea'. The emphasis is on deciding limits to development and carefully managing for less-intense human activities within the Conservation Matrix. Thus, activities within the Matrix, such as recreation or hunting, are to be carefully planned and managed in an integrated fashion so as not to erode other values, such as ecosystem and landscape connectivity.

Ecological Benchmark Areas (BA) are the foundation of the Conservation Matrix Model. These are relatively intact areas (i.e. with little or no human footprint) representative of natural environmental variation and sufficiently large to support natural ecosystem dynamics (specifically fire), ecologically functional wildlife populations, and maintain terrestrial and hydrologic connectivity (Schmiegelow et al. 2006, Krawchuk et al. 2012). Leroux et al. (2007) argue that, 'considering natural disturbance in reserve design may be especially important for the world's remaining intact areas, which still experience active natural disturbance regimes. Thus, BA design is intended to encompass the full natural variability of ecosystem structure and process, including fire

and hydrologic regimes, and conserve biodiversity at all levels. A single BA will not be able to encompass all values of a planning region and thus a network of BAs is identified and which functions as a network of core protected areas for a region. A key component of the Conservation Matrix Model is incorporating opportunities for adaptive resource management into planning for intact landscapes. BAs are also intended to serve as reference or control sites for understanding the natural dynamics of ecosystems and their response to human activities, within an adaptive resource management framework.

The final element identified in the landscape are **Additional Reserves**. These site-specific protected areas are identified to capture values that may not be well represented within benchmark areas, such as areas of cultural significance, rare species occurrences, ecosystems of conservation concern, etc.

