



The Status of Resource Stewardship in 2010: A Scorecard Approach to Reporting



A scorecard was used to provide a 2010 report on the Resource Stewardship Strategy, the 20-year “road map” for Denali’s natural and cultural resources.

In 2008, staff at Denali National Park and Preserve began using the park’s new Resource Stewardship Strategy (RSS) as a 20-year “road map” for protecting and maintaining the desired condition of the park’s natural and cultural resources. Now that the “road trip” is underway, what is the best way to evaluate and report how the trip is faring? Natural and cultural resources staff have recently applied and modified a scorecard approach—currently under development elsewhere—to evaluate the 2010 status of Denali’s resource stewardship.

Applying a scorecard to report RSS status

A broad multi-disciplinary group of park staff with natural, cultural, and social science expertise individually scored each of dozens of indicators identified in the RSS. The scores assess the resource condition in 2010 against the desired condition or a reference condition if known. Later this group met to discuss and refine scoring methods and rules, and come to consensus on scores for indicators.

The score (symbol) portrays four informational items at once: (1) degree of control that park management has over the resource condition or opportunity (three background shades of blue, with darker shade symbolizing greater park influence), (2) trend in resource condition (up, down, or level arrows), (3) level of management concern about the resource (red, yellow, and green circles), and (4) degree of confidence in the data (circles bounded by solid, dashed or dotted lines). The legend is on page 2.

Hierarchy of reporting

After reviewing the scores for each indicator (see examples for selected indicators on page 4), staff summarized or “rolled up” the indicator scores to report a score for the desired condition for each

resource and value. The desired condition scores were likewise summarized into the scores at the resources and values level (see page 2).

The scores for the resources and values report the big picture: Are wildlife populations maintained in natural habitats where natural processes persist? Are opportunities for solitude provided in untrammelled wilderness? Are scenic and geologic values being preserved? Do visitors continue to enjoy observing wildlife in its natural habitat? The scores for the indicators report the details, for example: Have any vertebrate species been lost? What is the population size and distribution of Dall’s sheep?

What was learned from using the scorecard?

The scorecard exercise was valuable for several reasons: (1) Scoring challenged park staff to review indicators selected—could they be assessed and measured? Could composite indicators (e.g., wetland plant community structure; floodplain morphology) be simplified? (2) Portraying all four items at once in the score was very useful in allowing resource staff to provide caveats about the scores (e.g., reporting any uncertainty about the data, and noting whether park staff could do something to affect the resource score. (3) Scoring raised questions about the temporal or spatial scale of scores. For example, if an indicator is measured in one watershed, should the score on that knowledge be assigned as the score for the parkwide resource? (4) The trend (resource health) should not be confused with the trend in “numbers” (e.g., more fires might be bad for the ecosystem). (5) A common understanding of the scoring elements allowed staff to reach consensus about scores. (6) If the rollup score for a park resource or value were strictly an average of the indicator scores, the concern about indicators (red or yellow symbols) would be lost.

*Now, here, you see, it
takes all the running you
can do, to keep in the
same place.*

—Red Queen
(Lewis Carroll)

Legend for symbols used in the tables.


Management Control


Park has high degree of control over resource condition or opportunity


Park has moderate degree of control over resource condition or opportunity

Park has low degree of control over resource condition or opportunity

Trend of Resource Condition or Opportunity

 Condition is improving


 Condition is unchanged

 Condition is deteriorating

Management Concern (because of condition, trend, or confidence)

 Significant concern

 Caution

 No current management concern (this may be because of resources devoted to this resource)










Confidence (in data for current or reference condition, trend, or ability to gauge management concern)

 High confidence

 Medium confidence

 Low confidence

Table 1. Scores for the fundamental (coral shading) and other important (olive-green shading) park resources and values as identified in the Resource Stewardship Strategy. See explanation of symbols at left.

Park Resources and Values	Status in 2010
<p>(1) Wildlife populations, habitat, ecosystems: The natural abundance, behavior, diversity, and ecological integrity of native animals as part of their ecosystems will be maintained. The aquatic habitat of the park and preserve will be protected to maintain natural, self sustaining aquatic populations. These lands will be managed to ensure that natural processes prevail. Human activity will not result in a decrease of wildlife viewing opportunities along the park road. The community of life is untrammled by human activity. Wildlife populations should be natural and healthy.</p>	
<p>(2) Wilderness resource values and wilderness recreational opportunities: Opportunities are available for solitude, privacy, isolation, and freedom from reminders of society. The imprint of human-kind's work is substantially unnoticeable (signs of human activity are limited). There are opportunities for a natural sound environment.</p>	
<p>(3) Scenic and geologic values: Scenic and geologic values are preserved.</p>	
<p>(4) Visitor enjoyment and inspiration from observing wildlife in its natural habitat and other natural features: Crowding issues and visual impairment from development are limited. Basic needs of the visitor are ensured. Visitors enjoy their experiences and are inspired through understanding wildlife and habitats.</p>	
<p>(5) Historic, archaeological, and ethnographic resources: Historic and archeological sites, and the resulting identified cultural landscapes, are appropriately protected. Historic objects and ethnographic resources are appropriately preserved. The National Park Service will ensure the preservation of resources associated with native peoples whose cultural memory, traditions, and lives are closely associated with the park and its general vicinity.</p>	
<p>(6) Paleontological resources: Paleontological resources remain unimpaired.</p>	
<p>(7) Air quality: Denali achieves the highest attainable air quality levels and visibility standards consistent with the applicable Clean Air Act designations and the mandates specified by ANILCA and the NPS Organic Act; Denali is designated as a Class I airshed.</p>	
<p>(8) Subsistence Resources and Opportunities: Opportunities exist for subsistence trapping, hunting, fishing, and uses of firewood and cabin logs.</p>	
<p>(9) Scientific research, education, and interpretation about natural ecosystems and geologic features and processes: Denali serves as a living laboratory for research. Park science is shared through education and interpretation to enhance visitor experience and build relationships with park resources and values.</p>	



NPS Photo by Kent Miller

Seeing the behaviors of a wild bear in Denali is an unforgettable experience.



The *Seasons of Denali* quilt at the Eielson Visitor Center portrays the rich “fabric” of Denali’s wildlife and intact ecosystems.



Researchers gather data about water quality.



Wildland fire is a natural process.



A red fox stretches on the Denali Park Road.



NPS Photo by Kent Miller

Wolves are viewed by thousands of visitors.

NPS Photo by Ken Conger

Table 2. Scores for the six desired conditions for *one* of the fundamental resources and values as identified in the Resource Stewardship Strategy—*Wildlife populations, habitat, ecosystems*. See explanation of symbols on page 2.








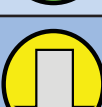
Desired Conditions	Status in 2010
(1) Wildlife populations, habitat, ecosystems:	
The natural abundance, behavior, diversity, and ecological integrity of native animals as part of their ecosystems will be maintained.	
The aquatic habitat of the park and preserve will be protected to maintain natural, self-sustaining aquatic populations.	
These lands will be managed to ensure that natural processes prevail.	
Human activity will not result in a decrease of wildlife viewing opportunities along the park road.	
The community of life is untrammelled by human activity.	
Wildlife populations should be natural and healthy.	



NPS Photo by Kent Miller

A scene near Eielson Visitor Center—here as elsewhere in the park, the natural abundance, behavior, diversity, and ecological integrity of native animals will be maintained.

Table 3. Scores for selected indicators within one of the desired conditions—*The natural abundance, behavior, diversity, and ecological integrity of native animals as part of their ecosystems will be maintained*—for one of the fundamental resources and values—*Wildlife populations, habitat, ecosystems*—as identified in the Resource Stewardship Strategy. See explanation of symbols on page 2.

Selected Indicators	Status in 2010
# Native vertebrate species losses	
# Exotic vertebrate species added	
Number, demography, distribution of Denali caribou herd	
Number, demography, distribution of moose	
Number and distribution of Dall's sheep	
Population size, distribution of beavers	
Population size, distribution of snowshoe hares	
Population size, demography, and distribution of wolves	
[11 additional indicators for this desired condition]	

For more information

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