LEGEND

CENTRAL ALASKA NETWORK (CAKN)

DENA	Denali National Park & Preserve
WRST	Wrangell-St. Elias National Park & Preserve
YUCH	Yukon-Charley Rivers National Preserve

ARTIC NETWORK (ARCN)

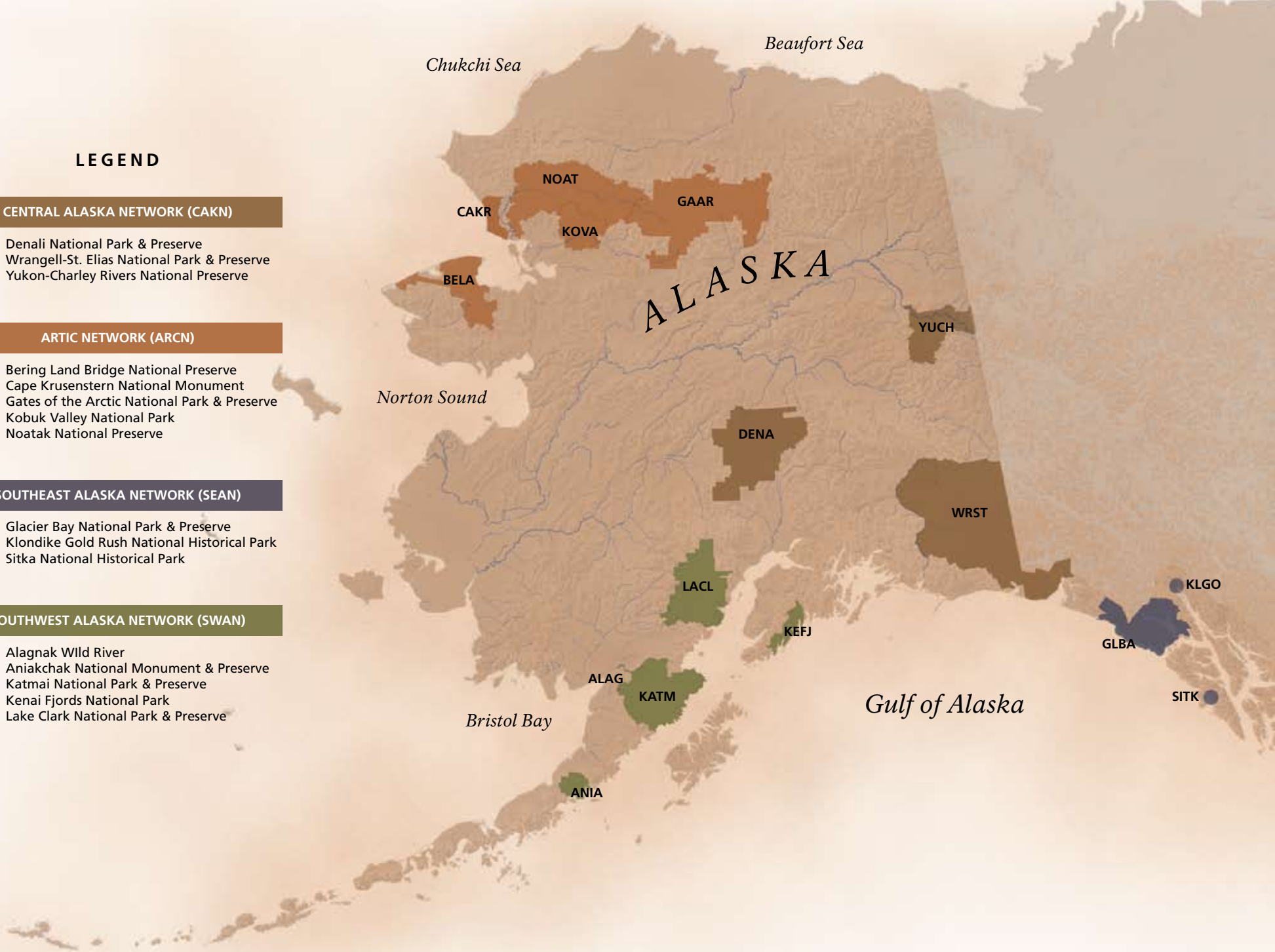
BELA	Bering Land Bridge National Preserve
CAKR	Cape Krusenstern National Monument
GAAR	Gates of the Arctic National Park & Preserve
KOVA	Kobuk Valley National Park
NOAT	Noatak National Preserve

SOUTHEAST ALASKA NETWORK (SEAN)

GLBA	Glacier Bay National Park & Preserve
KLGO	Klondike Gold Rush National Historical Park
SITK	Sitka National Historical Park

SOUTHWEST ALASKA NETWORK (SWAN)

ALAG	Alagnak WIld River
ANIA	Aniakchak National Monument & Preserve
KATM	Katmai National Park & Preserve
KEFJ	Kenai Fjords National Park
LACL	Lake Clark National Park & Preserve



Introduction

By Sara Wesser, Regional Inventory and Monitoring Coordinator

As we close the first decade of the Natural Resource Challenge, a major National Park Service (NPS) initiative for sound science in park management, we take pride in the significant advances we have made toward that goal. We dedicate this issue of Alaska Park Science to highlighting the Inventory and Monitoring Program, a key part of the Natural Resource Challenge. The Inventory and Monitoring Program (I&M), which began in the early 1990s, is the result of many years of effort to build recognition that understanding the condition of natural resources is vital to accomplishing the NPS mission of protecting park resources unimpaired for future generations. The goals of the I&M program are to develop scientifically sound information on the current conditions and long-term trends in park ecosystems and to determine how well current management practices are sustaining those ecosystems. These goals remain relevant today, particularly in the little studied, remote areas that comprise Alaska parks. During the 1990s, we began basic inventories which included maps of vegetation (landcover), soils, and geology, databases documenting the vertebrate species and vascular plants that occur in parks, as well as information on air quality, climate, and aquatic resources. These inventories, referred to collectively as the Baseline Inventories, will ultimately be completed for all national park units in the state, providing a rich set of reference material on current conditions for park managers, scientists, and the public.

With the advent of the Natural Resource Challenge in 2000, the 16 Alaska park units were organized into four networks of parks related by ecology and geography (see map on inside cover) in order to efficiently share resources and enhance collaboration with others. These networks, under the oversight of park managers, set the conceptual foundation of the vital signs monitoring program. NPS uses the term "vital signs", borrowing from the medical professions, to mean a small set of information-rich attributes that are used to track the overall condition or health of park ecosystems. All networks followed the same process, which emphasized sustainability and relevance of the monitoring — synthesizing existing information, developing objectives and ecological models portraying current understanding, identifying potential indicators and selecting the small subset that the network would monitor over time. Upon completion of a vital signs monitoring plan for each network, staff turned to the challenging work of designing statistically valid and logistically feasible monitoring protocols for each vital sign.

Now, ten years after establishment of the Natural Resource Challenge, we have moved out of design and into full implementation. This issue presents a sampling of the many vital signs now being monitored. Over time, the information derived from the natural resource monitoring will enhance the National Park Service's understanding of how management decisions and other factors affect resources in the parks, will improve planners' understanding of the resources under NPS stewardship, and increase understanding among park interpreters and the public of the condition of the nation's heritage, now and in the future.

For more information, see http://science.nature.nps.gov/im/units/akro/

NPS photograph

Figure 2. A field researcher collects vegetation data for use in land cover mapping in Kenai Fjords National Park.

Figure 1. (Left) The national park units in Alaska, grouped into four Inventory and Monitoring Networks.