

## Protocol Development Summary

### Protocol: Visitor Use

**Parks Where Protocol will be Implemented:** Bering Land Bridge National Preserve (BELA), Cape Krusenstern National Monument (CAKR), Gates of the Arctic National Park and Preserve (GAAR), Kobuk Valley National Park (KOVA), Noatak National Preserve (NOAT)

### Justification/Issues Being Addressed:

Recreational visitors to ARCN parks can have unexpected and significant effects on ecosystems and ecosystem processes. Humans can serve as a vector for exotic plant and animal species and diseases, which in turn may decrease the competitive ability of resident species. Heavy use can fragment the landscape for sensitive wildlife, modify wildlife behavior through conditioning, and lead to overfishing, or overharvest in focal areas.

Adequate information on the levels and patterns of human use is essential for sound longterm stewardship of park areas. Information about the spatial and temporal distribution of visitor use can help managers identify potential recreation-related threats to the natural resources of an area as well as the quality of visitors' experiences. In ARCN parks, on-the-ground observation and documentation of visitor impacts is difficult because of the remoteness of ARCN's nearly 19 million acres of parklands and the dispersed presence of visitors at any one time. Additionally, not all visitors stop at designated visitor centers in Fairbanks, Nome, Kotzebue, Bettles, Anaktuvuk Pass, or Coldfoot before entering the parks, meanwhile technological advances in access have already increased visitation. Most visitors access these parks by commercial float plane or by walking in from resident zone communities or the Dalton Highway. Methods to determine park visitation vary between and within park units, and no rigorous written protocols exist. The primary purpose of this protocol is to compile information that is already collected by park staff about visitation to ARCN parks, and to make this information available for analysis. This vital sign focuses on the effects of recreational visitors to ARCN parks. The effects of subsistence and sport hunting and fishing in ARCN parks will be covered by the Subsistence/Harvest vital sign protocol. Data for the Visitor Use vital sign will be closely related to data collected for several other vital signs: fish, bird, and mammal assemblages; subsistence/harvest, stream, lake, and lagoon communities and ecosystems; terrestrial vegetation; rare and unique species, communities, and features; and point source human effects.

### Specific Monitoring Questions and Objectives to be Addressed by the Protocol:

#### Questions:

- How is the number of visitors (nature-oriented tourists) changing in ARCN parks?
- How is the type of visitor use, timing of visits, and areas of use changing in ARCN parks?
- How are visitors accessing ARCN parks and where are modes of access changing?

#### Objectives:

1. Track annual numbers and distribution of recreational visitors in ARCN parks.

**Justification:** *Visitation is expected to increase over time with increased popularity of wilderness travel and publication about these areas, but, because these parks are remote*

*and not accessible by Alaska's road system, there may also be decreases in visitation or changes in visitor destinations due to rising fuel costs. Year-to-year changes in the number and distribution (destination) of visitors may be linked to other vital signs monitoring (such as water quality in lakes) on a more frequent scale while informing objective 2 which involves the collection of more detailed information every five years.*

2. Monitor 5-year trends in entry points and access methods used by visitors; timing of visits, activities, and destinations of visitors. **Justification:** *Access methods and entry points for visitors are expected to increase over time with increased popularity and publication about these areas, but there may also be decreases in visitation or changes in visitor destinations due to rising fuel costs.*
3. Monitor impacts of visitor use on vegetation and water quality. **Justification:** *Increased visitation and changed modes of access and activities, particularly to popular destinations including Serpentine Hot Springs (BELA), Great Kobuk Sand Dunes (KOVA), and Arrigetch Peaks (GAAR), may alter these landscapes including the introduction of exotic or invasive species.*

**Basic Approach:** Visitor use monitoring plans will be developed in collaboration with park staff. ARCN parks currently do not require visitor registration or permits, but there is a bear resistant food container requirement for which many visitors contact park staff to temporarily loan these containers. However there are visitation data already collected and analyzed by law enforcement and interpretation personnel in the individual park units. These include:

- 1) Park visitor logs at visitor centers at which a portion of park visitors stop for park information, orientation, registration, and bear resistant canister loans;
- 2) Direct visual observations by NPS personnel at specific, focal locations such as landing strips and float-plane accessible lakes, river corridors for wilderness float trips, high-use fishing and hunting areas, and popular back-country hiking routes;
- 3) Existing reporting systems such as those for commercial uses (in particular float plane companies) or other required procedures of concession operators, such as the IBP process.

Data collected by these methods will be added to an ARCN Visitor Use database every five years to complement visitor numbers reported annually by Western Arctic Parklands (BELA, CAKR, NOAT, and KOVA) and GAAR. Additionally, visitor impacts will be assessed at specific sites designated for monitoring the terrestrial vegetation, lagoons, streams, lakes, and rare and unique vital signs by comparing changes in vegetation, water quality, or presence of exotic/invasive plant species with known visitor use data (objective 3).

**Principle Investigators and NPS Lead:** Jim Lawler, ARCN coordinator

**Development Schedule, Budget and Expected Interim Products:**

- Scoping of network parks for current data gathering activities and needs: FY 2009
- Develop protocol: FY 2010
- Test and implement data compilation and database development: FY 2011
- Peer review and finalize: FY 2012