



Sound Monitoring Technical Assistance Request Summary: Winter 2009



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Abstract

Soundscape was identified as a social indicator during the Visitor Experience Resource Protection (VERP) planning process used in the development of the Amendment to the Exit Glacier Area Management Plan. Because of the technical skills and equipment involved in sound monitoring, a Technical Assistance Request was submitted to the NPS Natural Sounds Program. The Natural Sounds Program accepted our request, and sent Acoustic Technicians during the summer of 2008 and again in the winter of February of 2009. One Acoustic Technician and one Planner visited the park on February 22 through Wednesday 25. They assisted with choosing and setting up monitoring sites in the two winter management zones and with creating Indicators and Standards to maintain desired future conditions in each zone identified in the planning process.

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Alaska, Kenai Fjords National Park, KEFJ, Exit Glacier

Acronyms:

GIS	Geographic Information System
KEFJ	Kenai Fjords National Park
NPS	National Park Service
TAR	Technical Assistance Request
VERP	Visitor Experience Resource Protection

Introduction

Soundscape was identified as a social indicator during the Visitor Experience Resource Protection (VERP) planning process used in the development of the Amendment to the Exit Glacier Area Management Plan which was finalized in 2004. Because of the technical skills and specialized equipment involved in sound monitoring, a Technical Assistance Request was submitted to the NPS Natural Sounds Program in 2006. The Natural Sounds Program accepted our request, and sent Acoustic Technicians during July of 2008 and again in the February of 2009. One Acoustic Technician and one Planner visited the park on February 22 through Wednesday 25. They assisted with choosing and setting up monitoring sites in the two winter management zones and with creating Indicators and Standards for summer management zones to maintain desired future conditions in each zone identified in the planning process.



The Acoustic Technician from the NPS Natural Sounds Program, and Exit Glacier volunteers setting up sound monitoring equipment in the winter Visitor Facilities Zone.

Summary of Activities

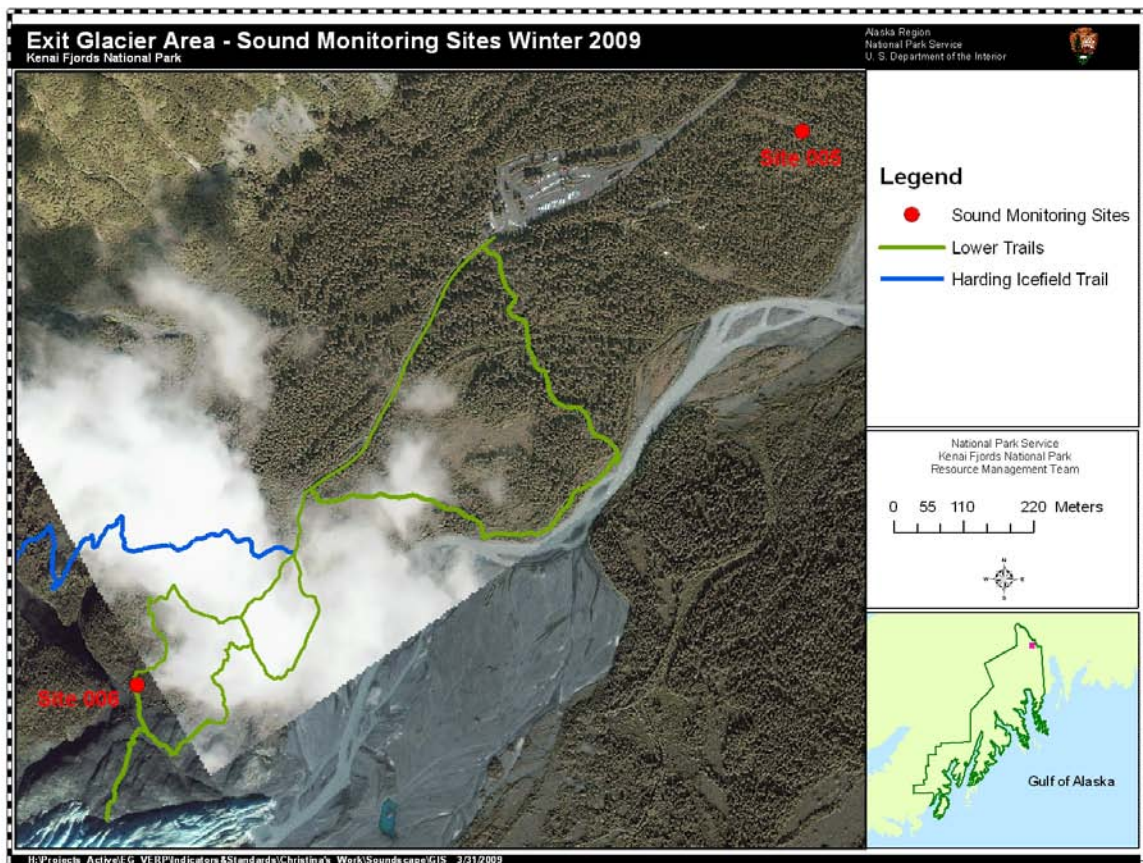
The Natural Sounds program planner Frank Turina spent February 23 and the morning of February 24 working with park staff on creating Indicators and Standards for Soundscape in summer management zones in the Exit Glacier Area. Standards were based on data collected the previous summer and the desired future conditions laid out in the Exit Glacier Area General Plan Amendment. Frank Turina will work on completing the document and send it back to the park for comments.

Sound monitoring equipment was set up in the two winter management zones identified in the Exit Glacier Management Plan Amendment. These included Visitor Facilities, and the

Pedestrian Zones. Monitoring sites were selected to capture sounds representative of the zone. Monitoring sites shown on the map below include:

Site 005 – Visitor Facilities Zone

Site 006 – Pedestrian Zone



Site 005 was located on the edge of the Natural Resource Conservation Service (NRCS) snow course. Site 006 was located on the Upper Loop Trail in the same location as the summer monitoring sight in the Pedestrian Zone.

Snowmachines were used to access the Exit Glacier Area because the Exit Glacier Road is closed and covered in snow during winter months. Equipment was then deployed from sleds pulled by snowmachines to each monitoring site by using small sleds pulled by people using snowshoes.

The Acoustical Technician Ericka Pilcher assisted with the set up of site 005 on February 22, and park Biological Technicians set up site 006 on March 4. Monitoring equipment and batteries were contained inside a cooler with extra foam insulation inside, and placed in a hole dug in the

snow for insulation from the cold temperatures.



Sound monitoring equipment placed inside a cooler for protection against cold temperatures

After monitoring equipment was set up at each site, two on-site listening sessions were conducted for each site. These listening sessions are used to ground truth sounds for technicians who will later be listening to the recordings collected during monitoring. A Personal Digital Assistant (PDA) was used to identify all sounds heard during a 1 hour listening session.



Biological Technician conducting on-site listening.

Monitoring equipment at each site was checked regularly to assess battery levels and make adjustments to equipment. During each visit, a Site Visitor Data Sheet was completed to document any interruption in monitoring and any adjustments made to the equipment.

Equipment at Site 006 was not working properly, so equipment from Site 005 was used to replace the faulty equipment. Site 005 was in place for 43 days and Site 006 was running for only sixteen days. By the time trouble-shooting determined which piece of equipment was faulty and equipment was replaced, the snow was melting and the road into the park was opening up to vehicle traffic. After sound monitoring equipment was removed in late April, equipment was shipped back to the NPS Natural Sounds Program in Ft. Collins. Data will be analyzed and interpreted by Natural Sounds Program staff. Sound data will be used as a baseline for the Soundscape in each zone and used to develop winter indicators and standards based on desired future conditions established in the Exit Glacier Area Plan Amendment.



Biological Technician removing equipment from a monitoring site.