

Protecting Quiet Soundscapes

A remarkable diversity of natural sounds occur at Point Reyes National Seashore. From the crashing of ocean waves into rocky headlands blending with the call of Common Murres and Oystercatchers to resonance of condensed fog dripping off the branches of Douglas fir trees, the richness of natural soundscapes parallels the Seashore's wealth of habitats. The National Park Service's mandate of preservation extends to soundscapes. Natural and cultural sounds are considered a resource or asset in the same way as the native plants, wildlife, and historic structures. National Park Service policy requires, to the extent possible, the preservation of natural soundscapes. In order to inventory some of the Seashore's soundscapes and develop an understanding of factors affecting the natural acoustic condition, we initiated an acoustic monitoring program.

Detailed acoustic data were collected by an automated monitor at 2 sites in the Seashore's backcountry for several weeks. The highly sensitive monitor captures a 10 second digital recording every two minutes and collects 1 second decibel (Leq) data. In addition to the unattended acoustic data collection, park staff collected audibility data during several one hour long listening sessions. These data were analyzed to determine the percent time each sound source was audible and the time interval free from human-cause sounds. The median sound level

for the entire measurement period at the Meadow Trail backcountry site was 28.2 dBA, the sound level comparable with a quiet library. Sound levels near the Bear Valley Visitor Center averaged about 40dB, comparable to the noise level experienced in a suburban neighborhood at night. The information gathered during 2006 was used to help craft the Seashore's Draft General Management Plan, and will be used in the future to craft soundscape stewardship strategies and as reference information for future comparisons.



Acoustical data collection equipment. Graph below shows percent of monitored time attributed to specific recorded sounds.

Percent time audible (PA) for all sound sources during attended logging at PORE002 Sky Meadow, Point Reyes National Seashore Winter 05/06 (n=5 hour-long sessions, between 10am and 2pm)

