The Nature of Sound

National Park Service

United States Department of the Interior
“All the sounds of the earth are like music.”

Oscar Hammerstein II
the Nature of Sound
The national parks were established “to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations…”

NPS Organic Act
August 25, 1916
Importance of National Parks

How important do you think these reasons are for having national parks?

- Providing recreational opportunities.
- Protecting wildlife habitat.
- Preserving natural ecosystems.
- Providing income for the tourist industry.
- Providing opportunities to experience natural peace and the sounds of nature.
- Protecting air and water quality.
- Preserving America’s most significant places for future generations.
Importance of National Parks

To Americans surveyed in 1998, some of the most important reasons for having national parks are:

- **88%** Preserving America’s most significant places for future generations.
- **78%** Protecting wildlife habitat.
- **73%** Preserving natural ecosystems.
- **73%** Protecting air and water quality.
- **72%** Providing opportunities to experience natural peace and the sounds of nature.
The American public clearly identified natural sound environments as a very important reason for having national parks:

72% Providing opportunities to experience natural peace and the sounds of nature.

“Natural sounds are part of the special places we preserve. Rustling winds in the canyons and the rush of waters in the rivers are the heartbeat and breath of some of our most valuable resources.”

NPS Director Robert Stanton
What is Natural Quiet?

It’s not so quiet after all. . .

Natural quiet describes the natural sound conditions found in national parks when people with normal hearing can perceive nothing but the sounds produced by the natural and cultural components of the parks.

These soundscapes may include wildlife calls, low-level background sounds or even silence.
“Silence must be comprehended as not solely the absence of sound. It is the natural environment for serenity and contemplation.”

— Norman Cousins, author
What Are Soundscapes?

NPS Sound Environments

National Park soundscapes are sound environments which may include natural and cultural components ranging from the chirping of birds to sounds associated with specific cultural events or periods.

Sound environments contribute to important intangible qualities in the parks that have received congressional recognition such as: natural quiet, solitude, space, scenery, and a sense of history.
Natural Soundscapes

Listen to the Everglades

© Pat Holleran photo of Everglades
National Park Soundscapes

NPS Policy

The National Park Service strives to preserve resources and values such as natural quiet and natural sounds associated with the physical and biological resources of the parks (the sounds of wind in the trees or of the waves breaking on the shore, the howl of the wolf, or the call of a loon).
“People talk about the silence of nature, but of course there is no such thing. What they mean is that our voices are still, our noises are absent.

Sue Halpern, author
Noise Sources in NPS Areas

What noises do you hear in national parks?

Cars, buses, other vehicles

Airplanes and Helicopters

Snowmobiles

NPS Maintenance Equipment

Watercraft
Noise Sources in NPS Areas

NPS Managers Rating of Sound Problems
(Reports from 91 NPS units affected by overflights)

## Sound Level Comparisons

### Ranges for Some Park and Non-Park Settings

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<tbody>
<tr>
<td>80</td>
<td>Noisy Urban (daytime)</td>
<td>NON-PARK</td>
</tr>
<tr>
<td>70</td>
<td>Commercial Retail Area</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Suburban (daytime)</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Suburban (nighttime)</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Grand Canyon (along river)</td>
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<tr>
<td>30</td>
<td>Hawaii Volcanoes (crater overlook)</td>
<td>PARK</td>
</tr>
<tr>
<td>20</td>
<td>Grand Canyon (remote trail)</td>
<td></td>
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<tr>
<td>10</td>
<td>Haleakala (in crater, no wind)</td>
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Sound Level Comparisons

Park Setting: Listen to the Southwest Desert
Sound Level Comparisons

Non-Park Setting: Listen to the sounds of a city
Park managers are working to develop and implement plans to minimize NPS intrusive noise generation. Changes in use will be considered for various areas of park operations: aviation, vehicles, maintenance equipment, sirens, generators, and other practices.
Grand Canyon National Park is reducing noise from NPS aviation use by flying an MD-900 Explorer NOTAR (No TAxil Rotor) helicopter for park operations. In addition, area tour operators are joining NPS efforts to implement quiet technology and restore natural quiet.
Planning is underway for a valley shuttle system to reduce congestion and restore natural areas.

Awahnee Meadow - present conditions
NPS Resources Management

Yosemite National Park

Awahnee Meadow - desired conditions
Grand Canyon National Park

A new light rail combined with an alternative fuel bus system will transport visitors to and within the South Rim.

Reduction of traffic and a better quality visitor experience will result.
Cooperation

Formed by the NPS and the Federal Aviation Administration, a National Parks Overflights Working Group addressed the problems associated specifically with impacts of commercial air tourism.

Comprised of aviation and environmental interests, the NPOWG recommended a process for addressing how commercial air tourism will be managed over individual national parks.
Recommendations by the National Parks Overflights Working Group are being incorporated into the Federal Aviation Administration regulatory process. Recommendations by the group may also be implemented through legislation.

Results Include:
" Air Tour Management Plans for Individual Parks.
" Improved Cooperation with the FAA.
" Increased Opportunities for Public Input.
" Increased Protection of Park Visitors & Resources.
The NPS is working to manage where and when use of personal watercraft is appropriate in the parks. Public input has a key role in the planning process.

Results will include increased protection of park visitors and resources as well as better service to the public.
NPS Sites and Sounds

Stop and Listen

Complete park experiences feature sights and sounds.

Find a place to appreciate the sounds of nature on your next park visit and try to understand how your own presence affects natural sound environments.
NPS Sites and Sounds

Enjoy Quiet Campgrounds

Be aware of campground quiet hours provided in park information. Keep voices low and vehicle engines turned off to hear and enjoy the sounds of the natural world.
NPS Sites and Sounds

Watch Out for Wildlife

Speak quietly and turn vehicle engines off to observe wildlife. Human-made sounds can disrupt wildlife behavior.
Minimize Human Noise

Be considerate of other park visitors when talking, starting vehicle engines, or using audio devices. Many people visit national parks to escape the sounds of civilization.
NPS Sites and Sounds

Make Transportation Choices

Use alternate methods of transportation (such as park shuttles) where available. Choose transportation that minimally impacts natural quiet.
What will your next national park visit sound like?
NPS Sites and Sounds

What will your next national park visit sound like?
NPS Sites and Sounds

What will your next national park visit sound like?
NPS Sites and Sounds

Discover a Heritage of Sounds in Any National Park

- Biscayne National Park
- Cape Cod National Seashore
- Ford’s Theater National Historic Site
- Gettysburg National Memorial Park
- Glacier Bay National Park
- Hawaii Volcanoes National Park
- Isle Royale National Park
- Navajo National Monument
- New Orleans Jazz National Historical Park
- Padre Island National Seashore
- Wolf Trap Farm Park for the Performing Arts
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National Park Service, 1999

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