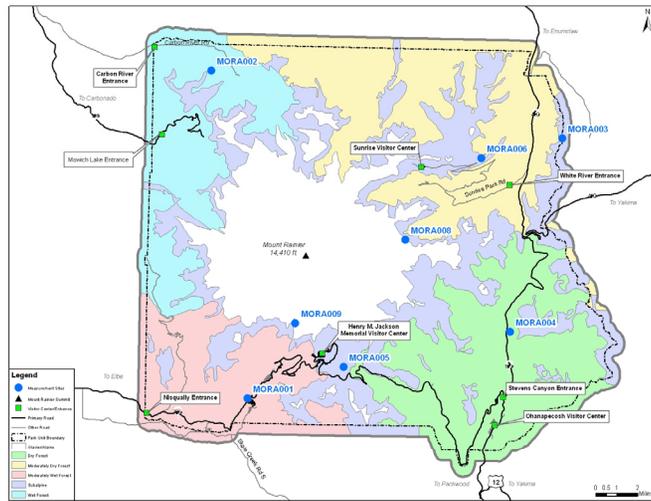




Mount Rainier Soundscape



Acoustic Zones in the Park



Areas of like vegetation, topography, elevation, and climate were grouped into “*acoustic zones*,” with the assumption that similar wildlife, physical processes, and other sources of natural sounds occur in similar areas with similar attributes. Measurement sites are selected to encompass as many of acoustic zones as possible.

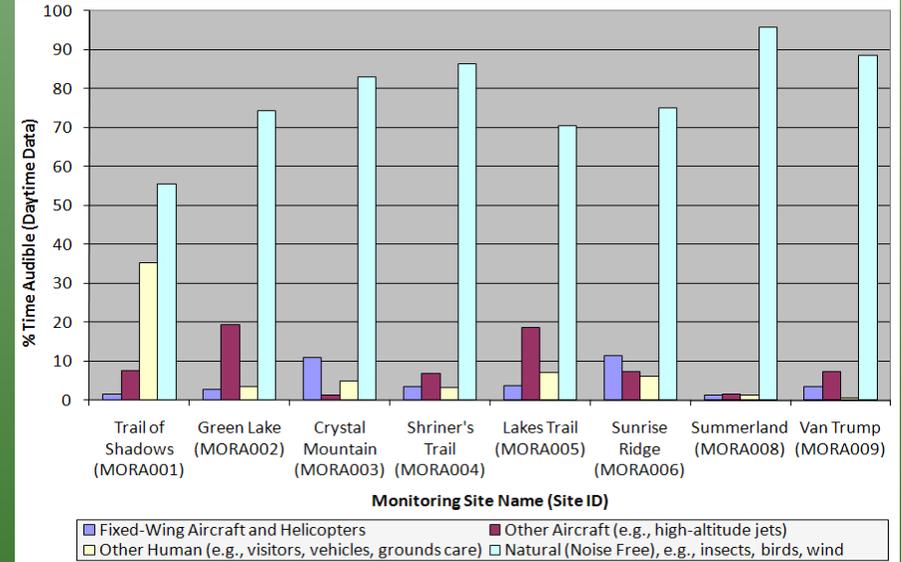


Audibility refers to the capacity of a human with normal hearing to detect the presence of sound. In characterizing natural and non-natural acoustic conditions in a park, knowledge of the intensity, duration, and distribution of the sound sources is essential.

Range of Human Hearing:

An average healthy young person can hear frequencies from about 20 Hz to 20,000 Hz and amplitude levels from 0 dBA to 130 dBA or more.

Different types of sounds may be heard in different areas of the Park



A 10 dB increase in sound level sounds like a doubling in loudness!



Sound Levels in Mount Rainier National Park

Monitoring sites in Mount Rainier National Park	Existing sound level (dBA)	Natural sound level (dBA)
Trail of Shadows (MORA001)	37	34
Green Lake (MORA002)	37	37
Crystal Mountain (MORA003)	23	23
Shriner's Trail (MORA004)	35	34
Lakes Trail (MORA005)	26	25
Sunrise Ridge (MORA006)	23	22
Summerland (MORA008)	43	43
Van Trump (MORA009)	50	49



Existing sound level include all sounds, both natural and non-natural.

Natural sound level include only natural sounds.

Examples of sound levels in National Parks

Activity	Sound level (dBA)
Threshold of human hearing	0
Haleakala National Park, Volcano crater (probably occurs in many parks, need sensitive microphones)	10
Canyonlands National Park, Leaves rustling	20
Grand Canyon High Altitude Airline Overflight	30
Zion National Park, Crickets (5 m)	40
Grand Canyon Air Tour Aircraft Overflight	50
Whitman Mission, Speech (3 m)	60
Yellowstone National Park, Snowcoach (30 m)	80
Arches National Park, Thunder	100