Quiet Places

by Elizabeth Mylott and Kenya Dubois Williams

How does sound affect the urban experience? Recently, acoustics ecologists who study relationships among human beings, communities, and environments have been drawing attention to the potential adverse and pleasurable effects of aural surroundings on physical and behavioral responses. Such reactions to soundscapes are often unnoticed due to passive hearing versus active listening. Cities are often dismissed as loud areas with noisy and annoying soundscapes. However, some parks and gardens within cities are designed, at least in part, for calm and quiet.

Initially, many of America's urban parks and gardens were created as spaces of retreat. Designed as urban oases, they were places for quiet reflection, spaces of silence where one could avoid urban congestion. Features such as rolling hillsides, wooded paths, and soothing waterfalls were included to enhance quiet contemplation that would refresh people before they had to reenter the noise and confusion of the city. Layout and design encouraged folks to sit quietly on manicured lawns or stroll along garden paths where they could enjoy nature if not actively participate in it.

As public spaces became more equitable, their design was altered to include a wider variety of uses. In many parks, the aristocratic carriage paths envisioned by Fredrick Law Olmsted have been replaced by basketball courts, dog-off-leash areas, and soccer fields. Today urban parks are more likely to be places of active recreation than passive reflection. Those seeking quiet can have difficulty finding it among the playgrounds, picnic shelters, and baseball fields. Residents and visitors to the metroscape are luckier than most, however. The area's urban spaces offer a variety of park spaces, including small neighborhood parks, nature preserves, and densely wooded areas. Portland Parks and Recreation alone has more than 10,000 acres of land at more than 250 locations.

But in the midst of an urban area, how much quiet do our park spaces actually provide? Even as our cities grow larger, our opportunities for quiet reflection grow slimmer. Users of Forest Park, the largest urban park in the United States, know that traffic noise is an ever present companion on even the most solitary strolls.

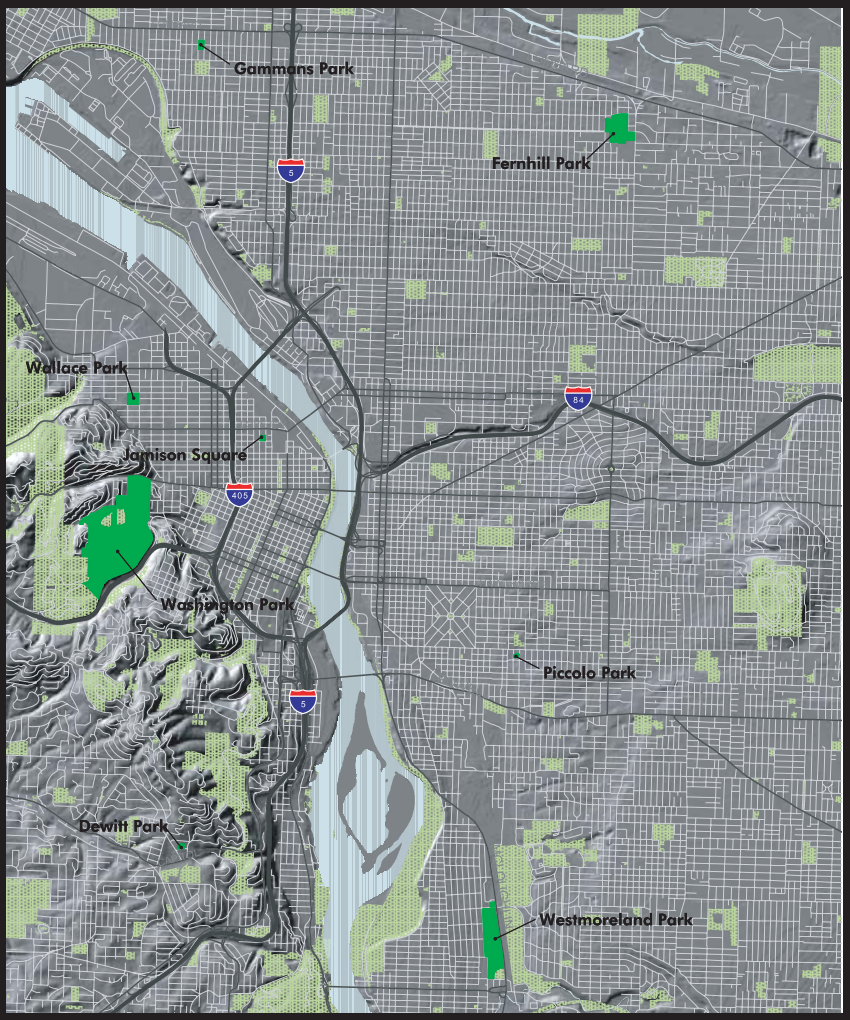
Over the past several months, *Metroscape*® researchers gathered sound pressure measurements and field recordings in eight regional parks. Field recordings were captured via mini-disc and stereo microphone. A decibel meter measured sound pressure levels (SPL) using an "A" weighting that has A-curve frequency characteristics. Using this setting allows the meter to respond mainly to frequencies in the 500-10,000 Hz range, which is the human ear's most sensitive range. Sound measuring abilities were from 50dBA to 126dBA with measurements below 50dBA but above 40dBA equaling an arbitrary base reference level. A slow response setting allowed the meter to revise the readings approximately every 0.5 seconds. A minimum of five events were randomly sampled measuring the minimum, maximum, and average dBA for the duration of at least 120 seconds from various locations within the test site.

So where in the metroscape can one go to find quiet? With an average dBA of 50, Wallace Park has the lowest decibel readings. Fernhill Park seems to be the loudest, receiving an average dBA rating of 67. But keep in mind that smaller parks tend to have slightly lower recordings probably because fewer people visit them. And although they tend to be quieter, smaller parks may not include the intimate spaces that can be carved into the landscape of larger parks.

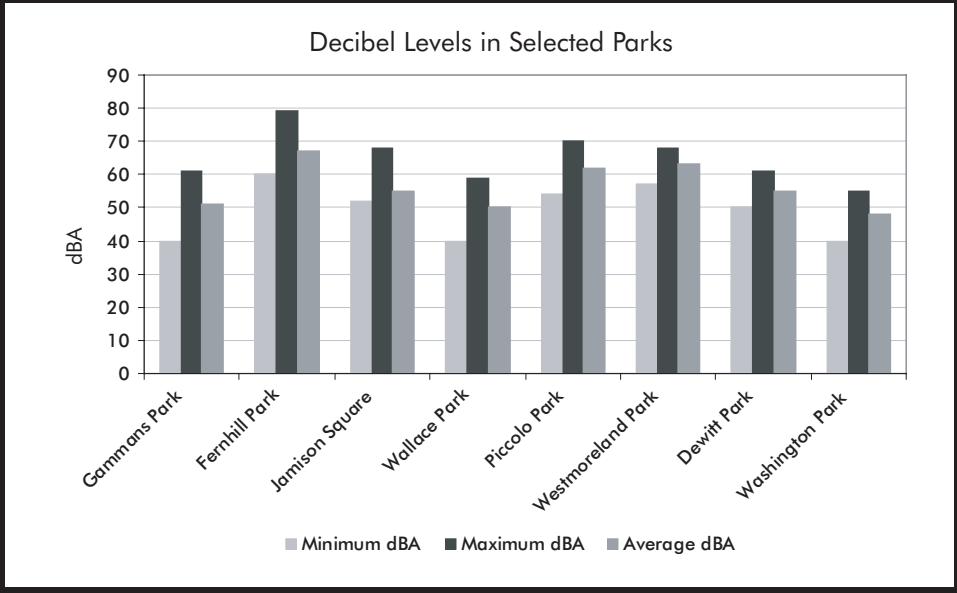
Westmoreland Park

Fernhill Park

Wallace Park



Over the past several months sound pressure measurements and field recordings were recorded in several parks around the Metro area. Field recordings were captured via mini-disc and stereo microphone. A decibel meter was used to measure sound pressure levels (SPL) using an "A" weighting which has A-curve frequency characteristics. Using this setting allows the meter to respond mainly to frequencies in the 500-10,000 Hz range, which is the human ear's most sensitive range. Sound measuring abilities were from 50dBA to 126dBA with measurements below 50dBA but above 40dBA equaling an arbitrary base reference level. A slow response setting was used that allows the meter to revise the readings approximately every 0.5 seconds. A minimum of five events were randomly sampled measuring the minimum, maximum and average dBA for the duration of at least 120 seconds from various locations within the test site.



Source: Kenya Dubois Williams

Activity	Noise Level (dB(A))	Apparent Loudness	Typical Physical Response
Military Jet	130	512 times as loud	Can cause pain and injury
Road construction site	80	16 times as loud	Annoying
Roadside traffic	70	8 times as loud	Telephone use difficult
City or commercial areas	60	4 times as loud	Intrusive
Leaves rustling	40	Arbitrary base reference level	Quiet

Adapted from Josaka, http://www.josaka.com/Content/2000/Decibel-Chart.htm