Sound 101

EXPEDITION Generating Station

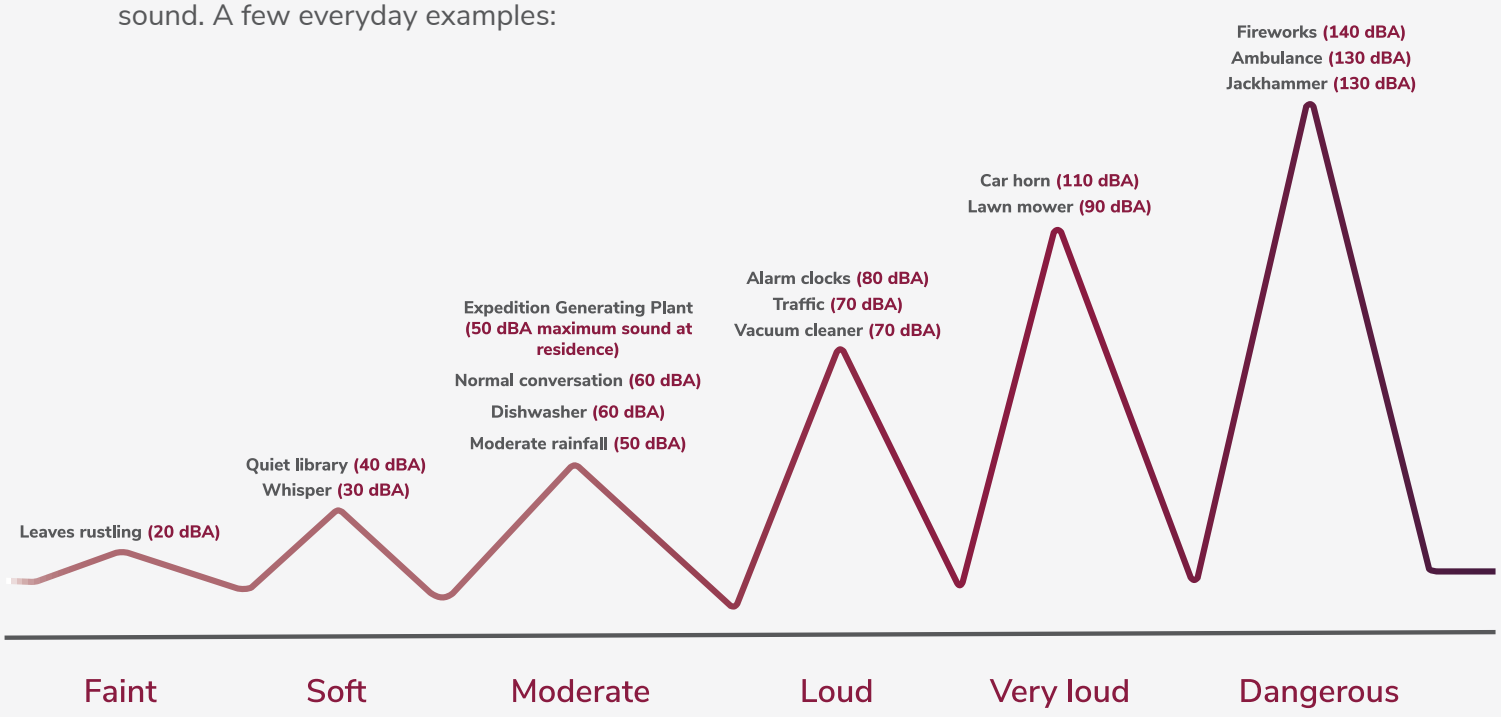
As part of our commitment to transparency, we want to explain some basics about sound—what it is, how it moves and how we design facilities like a natural gas-fueled power plant to manage it effectively.

What Is Sound?

Sound is a natural part of our environment. It's created by vibrations moving through the air as waves. These waves travel outward from a source and gradually fade with distance. Just like ripples on a pond, the farther the wave travels, the gentler it becomes.

What Is a Decibel (dB)?

Sound is measured in decibels, or dB, using a logarithmic scale. An increase of 10 dB means it sounds about twice as loud to the human ear. We use A-weighted decibels (dBA) as this measurement reflects how people actually hear sound and is the standard for evaluating environmental and community sound. A few everyday examples:



How Does Sound Travel and Reduce?

Sound travels in all directions unless it's reflected, absorbed or blocked. The energy of sound diminishes quickly as it moves away from the source. Every time you double the distance, the sound typically decreases by about 6 decibels. For example, if a sound is 80 dB at 100 feet, it will be roughly 74 dB at 200 feet.

How Do We Manage Sound at Power Facilities?

Modern power plants are carefully designed with community sound in mind. Major equipment is housed in acoustically treated enclosures and buildings. Silencers and baffles are used for air inlets and exhausts, and low noise fans are used on heat exchangers. Vegetation and trees help absorb and scatter sound naturally, enhancing acoustic separation between facilities and the community. Lastly, plants are sited with buffer distances to reduce sound at the property boundary.