



# Laboratory's environmental sampling supports a healthy ecosystem

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## Environmental sampling

The open space in and around Los Alamos National Laboratory is home to hundreds of animal species. Many of these areas and species are monitored by the Lab's Environmental Stewardship Group.

"Keeping an eye on the ecosystem through routine sampling projects is the best way to ensure its health," says scientist Shannon Gaukler. "The health of the wildlife and their habitat, along with the public's safety and awareness, is a major priority at Los Alamos."

Sampling of soil, vegetation, and small mammals is routinely performed at or near high-interest areas at the Laboratory. For example, sediment retention structures in Los Alamos and Pajarito canyons, which were constructed after the 2000 Cerro Grande fire to keep potentially contaminated sediment and water from flowing downstream to off-site locations, are sampled annually to determine if small mammals or vegetation are contaminated.

Areas outside of the Lab with similar geographical qualities to on-site sampling locations are also sampled to determine how many of the on-site results are from naturally occurring materials.

After samples are collected, processed, and labeled, they are sent to an independent laboratory. Small mammal and bird samples are submitted as a whole-body samples, while roadkill (such as deer and elk) are submitted as tissue and bone samples. Soils and vegetation are collected in a bag and submitted as is.

Each sample is tested for inorganic elements (such as metals), polychlorinated biphenyls (PCBs), and radionuclides. Some soils are additionally tested for high explosives and chemicals such as dioxins and furans, which tend to occur around firing and explosive sites.

In 2016, contaminants were either not detected, similar to background levels, or below screening levels in samples of soils, vegetation, small mammals, avian species, and roadkill. Results that are below screening levels have little to no adverse effects on the environment.

Because the health of the ecosystem will always be a high priority, the Laboratory will continue to sample soils and biota to ensure pollutants from Los Alamos don't harm our environment.

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