

The Summit Bechtel Family Scout Reserve Hemlock Protection & Preservation

Fayette County, West Virginia



Careful observation and site-specific invasive species management help protect a keystone species in the headwater ecosystems of the New River Gorge.

While working to develop a greywater reuse and wastewater treatment system for the 10,600-acre Summit Bechtel Family Scout reserve, the new permanent home for the Boy Scouts of America's iconic National Scout Jamboree, Biohabitats discovered the presence of old growth Eastern hemlock trees. These trees, in addition to hundreds of acres of hemlock forest on the site, were subsequently found by Biohabitats to be at risk for catastrophic loss from an invasive insect: the hemlock woolly adelgid.

The majestic Eastern hemlocks at the Summit not only support a thrilling canopy tour adventure, they are a defining characteristic of the forested stream valleys on the property and a keystone species in the ecosystems of the region's headwater stream corridors. A broad range of aquatic and terrestrial organisms depend upon the hemlock canopy for both temperature and moisture regulation. Without these plants, the fundamental ecological composition of the stream corridors would change dramatically.

Unfortunately, the Eastern hemlock is currently under assault from the hemlock woolly adelgid, a tiny, invasive insect from Asia that feeds on—and ultimately kills—entire stands of these plants.

Biohabitats developed a plan to help protect the Summit's Eastern hemlock trees, and the species that depend on its survival. The team began by using aerial reconnaissance and a topographic overlay. The locations of old growth trees and significant stands of Eastern hemlock were identified, assessed, and ultimately prioritized, for preservation and protection.

The protection strategy involves treating the dominant, canopy hemlocks in high priority stream valleys with an

approved, systemic material in order to maintain their ecosystem services and support species regeneration. Until a biological control agent is established and available, soil treatments will be undertaken for dominant hemlocks and trunk injection utilized for canopy trees within 10 feet of a stream. The application is only required once every three to five years.

With this careful and systematic program, the Summit will minimize the loss of a species of critical forest value and maintain the full range of ecosystem services associated with this plant.

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