Vibrant utilities: how utilities can contribute to and benefit from resilient landscapes

Matthew Thompson, PhD, matt.thompson@vibrantplanet.net, Vice President of Wildfire Risk Analytics, Vibrant Planet

Katharyn Duffy, PhD, katharyn@vibrantplanet.net, Senior Scientist, Vibrant Planet,

Utilities have a risk management problem – even leveraging the entire ignition prevention toolkit, some ignitions will inevitably occur. When they do, landscape fuel conditions beyond the right-of-way are a key driver of wildfire extent and intensity, and are one of the few variables that we can control in advance. Reliance on reactive detection and suppression can impose unacceptable safety risks and be ineffective after fires escape initial attack. To expand the scope of mitigation and provide layered protection with prevention efforts, utilities require capabilities to co-design optimized forest management interventions, grounded in empirical efficacy, across boundaries and at scale.

The evidence is clear that fuel reduction and forest restoration treatments can, when strategically sited and scaled, reduce wildfire intensity and severity, support safer and more effective suppression, and generate positive ROI. And evidence is emerging that utility partnerships to manage fuels beyond the right-of-way can jointly protect communities and landscapes while reducing liability risk. The crux is to prospectively evaluate likely treatment effectiveness for prioritizing limited resources using best available data, science, and risk analysis. Our proposal is that utilities of all sizes and geographies contemplate participating in cross-boundary, collaborative forest management planning to reduce wildfire risk. And our objective in this white paper is to illustrate how novel data-driven approaches can provide actionable insights for treatment design and implementation to enhance wildfire resiliency.