Accessible Adaptive Management: An Introduction to the Land Treatment Exploration Tool

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Each year, public land managers make decisions regarding reclamation, rehabilitation, and restoration actions that influence landscapes and ecosystems. Many of these decisions involve soil and vegetation manipulations, often known as land treatments. These treatments were historically planned on a case by case basis with decisions about implementation, methods, and operations derived from personal experience of past successes or failures. Modern adaptive management strategies strive to capture this local knowledge through time, to create a comprehensive picture of effective treatment strategies both locally and regionally. In 2017, the U.S. Geological Survey partnered with the Bureau of Land Management (BLM) to create the Land Treatment Exploration Tool to facilitate adaptive management of land treatments. The Exploration Tool taps into a wealth of information about past treatments in the Land Treatment Digital Library (LTDL), a catalog of information about all known treatments on public lands administered by the BLM in the Western United States. The Exploration Tool is designed for resource managers to use when planning land treatments. The tool provides useful summaries of environmental characteristics of planned treatment areas and facilitates adaptive management practices by comparing those characteristics to other similar treatments within a specified distance or area of interest. The tool also integrates long-lead, multi-month weather forecasts, ecosystem water balance models, and information about environmental requirements for plant establishment to produce forecasts for recruitment and establishment that inform restoration seeding decisions. This presentation will provide an overview of the functionality of the tool, highlight newly released features, and run through real world examples of how the tool is currently being utilized.

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