

LESSONS LEARNED IN REMEDIATION AND RESTORATION IN THE OKLAHOMA PRAIRIE

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For almost a decade the Tallgrass Prairie Preserve in Oklahoma has been used as a field laboratory for the investigation of aspects of the remediation and restoration of oil and brine spills. Objectives of this work have included: 1) simplification of the remediation process and lowering the cost of remediation; 2) the development of methods to accelerate or jump-start the restoration process; and 3) determining appropriate metrics for assessing the status of soil ecosystem recovery. This research has resulted in a number of lessons learned that can be exported to other exploration and production sites, especially sites located in sensitive ecosystems. Key observations have included the role of a fertilizer amendment in linking the remediation and restoration process at an oil-impacted site, the use of nematodes as ecological indicators in the restoration of oil- and brine-impacted sites, and the development of a two-stage process for remediation of brine impacted sites that does not include significant use of gypsum.