



Case Study 25

Joliet Army Ammunition Plant	
Name and Location	<p>Site Name: Joliet Army Ammunition Plant (JOAAP)</p> <p>Site Location: Joliet Illinois</p>
Ecological Enhancement	Establishment of the Midewin National Tall Grass Prairie (MNTP)
Site Description	<p>The JOAAP is a former U.S. Army munitions production facility located on approximately 36 square miles (23,542) acres of land in Will County, Illinois. JOAAP was constructed during World War II for the purposes of manufacturing, loading, assembling, packing, and shipping bombs, projectiles, fuses, and supplementary charges. JOAAP is divided into two main functional areas; the Load-Assemble-Pack (LAP) area and the Manufacturing Area (MFG). The LAP area is where munitions were loaded, assembled, and packaged for shipping. This area of JOAAP contains munitions filling and assembly lines, storage areas, and a demilitarization area. The MFG area is where the chemical constituents of munitions, propellants and explosives, were manufactured. The production facilities are located in the northern portion of the MFG. The southern portion of the MFG there is an extensive explosives storage facility. The MNTP will be located, primarily, on areas that were once part of the LAP facility.</p>
Site Reuse Description	<p>Approximately 19,100 acres of JOAAP was transferred to the U.S. Department of Agriculture (USDA) for establishing the MNTP. This transfer was mandated by Congress in the Illinois Land Conservation Act of 1995, P.L. 104-106. The Illinois Land Conservation act established MNTP to be managed for National Forest System purposes. Specifically, the purposes of MNTP include the following:</p> <ol style="list-style-type: none"> 1) To manage the land and water resources of Midewin in a manner that will conserve and enhance the native populations and habitats of fish, wildlife and plants. 2) To provide opportunities for scientific, environmental, and land use education and research. 3) To allow the continuation of agricultural uses of lands within Midewin consistent with section 2916 (b). 4) To provide a variety of recreation opportunities that are not inconsistent with the preceding purposes.



<p>Stakeholder Involvement</p>	<p>Stakeholders at the site are the US Army, US EPA, Illinois EPA, the Illinois Department of Natural Resources, the US Fish and Wildlife Service, the US Department of Agriculture, the US Forest Service and the public. In accordance with CERCLA, the Army began a series of field evaluation studies of JOAAP to assess the risk to human health and the environment from the past release of hazardous substances. The Army, EPA and IEPA signed a Record of Decision (ROD) in 1998, which called for the removal and treatment of soils contaminated, primarily, with explosives constituents and metals. At the time the ROD was signed, there was disagreement as to whether the Remediation Goals (RGs) specified in the ROD were protective of ecological resources of the MNTP. As a result, the RGs were designated “Interim” for the acreage that would be transferred to the USDA. Since 1998, a management group, comprised of representatives of the Army, EPA, IEPA, USDA, USFS, USFWS, and IDNR, has been working to establish RGs that are protective of the MNTP and consider the Army’s fiscal responsibilities.</p>
<p>Site Assessment Approach and Cleanup</p>	<p>The contamination at JOAAP consists primarily of explosives constituents including trinitrotoluene, dinitrotoluene, trinitrobenzene, RDX and HMX and metals including lead, arsenic, cadmium, zinc, and chromium. JOAAP is an NPL site. The cleanup is, therefore, being performed under CERCLA.</p> <p>Remedial actions for the site include excavation of contaminated soil followed by onsite bioremediation of explosives contaminated soils and excavation and offsite disposal of soil contaminated with metals.</p> <p>There are not expected to be any long-term institutional controls required for the site.</p> <p>The interim ROD is expected to become final in FY04. Once remedial activities are complete, the site will be proposed for delisting from the NPL.</p>
<p>Reuse</p>	<p>The end use of the site will be the MNTP. The prairie is expected to provide recreational, educational, and agricultural benefits to the public and to enhance and preserve native populations and habitats of fish, wildlife and plants.</p>
<p>Obstacles</p>	<p>The primary obstacle associated with this project was a disagreement between stakeholders over appropriate cleanup goals. Debate continued for years over balancing uncertainty management and fiscal responsibility.</p>
<p>Costs and Funding</p>	<p>This project is being funded by the Defense Environmental Restoration Account.</p> <p>The final costs for this project are still being determined but costs are expected to be approximately \$15,000,000 from investigation through</p>



	remediation. There were no ecological enhancements used in the remediation.
Economic and Other Incentives	The primary incentive for this project was the Illinois Land Conservation of 1995, P.L. 104-106, Div. B, Title 2901-2932.
Time	Work has been ongoing at JOAAP since 1986. Remediation of contaminated soils is expected to last until 2010.
Other	Uncertainty about the risk posed by chemical constituents to wildlife, plants and habitat was the most difficult problem to overcome when making cleanup decisions. Uncertainty about risk tends to result in very low cleanup goals which can significantly increase the cost of remediation. Responsible parties will likely be hesitant to spend a significant amount of money to pursue stringent cleanup goals if an option is available to clean a site up to a level that would be protective of a less stringent use (i.e. an industrial use).
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