

# Green Remediation Focus

Minimizing the environmental footprint of site cleanup

## A Profile in Using Green Remediation Strategies

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**Fort Carson**  
Colorado Springs, CO

*Federal Facility*

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**Cleanup Objectives:** Contain a 15-acre hazardous waste landfill

**Green Remediation Strategy:** Installed a four-foot-thick monolithic evapotranspiration cover in semiarid climate

- Uses treated water from the wastewater plant for onsite irrigation where needed
- Uses biosolids from on-site wastewater treatment plant
- Prevented erosion through use of straw mulch
- Revegetated with native prairie grass resistant to drought and disease
- Provided uncompacted soil more conducive to plant growth than conventional earthen covers

**Results:**

- Reduced potential for desiccation
- Reclaimed sludge otherwise destined for landfill disposal
- Enhances visual aesthetics contrasting to adjacent asphalt cover
- Saved nearly \$1.5 million in construction costs compared to a conventional cover
- Incurs annual O&M costs averaging \$75,000
- Reclaimed the land for immediate re-use in commercial production of electricity from a 2-MW solar field, which is estimated to offset 1.3 million tons of greenhouse gases each year
- Enabled a long-term power purchase agreement, whereby the military base leases property to the utility and receives lower-cost electricity in return
- Reclaimed the land for immediate reuse in commercial production of electricity from a 2-MW solar field, which is estimated to offset 1.3 million tons of greenhouse gases each year

**Property End Use:** Open space

*Point of Contact:* [Vince Guthrie](#), Fort Carson Directorate of Public Works Utilities

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*Evapotranspiration modeling led to a design and construction strategy employing thin (1-foot) lifts to achieve soil texture uniformity and to optimize dry bulk density of the landfill cover.*



*Native plants such as western wheatgrass, galleta, and blue grama were installed on the surface of the 15-acre evapotranspiration cover.*



*More than 27,000 panels comprising flatplate, thin-film solar technology were installed on the cap surface and other areas over several months in 2007.*



*Visionary re-use planning enabled Fort Carson's remediated land to help build Colorado's renewable energy portfolio, which sets a standard of 10% by 2010.*

## **Fort Carson**

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[http://www.cluin.org/greenremediation/profiles/subtab\\_d8.cfm](http://www.cluin.org/greenremediation/profiles/subtab_d8.cfm)



**United States Environmental Protection Agency  
Office of Solid Waste and Emergency Response (5202P)**

### **For more information:**

[www.cluin.org/greenremediation](http://www.cluin.org/greenremediation)  
Carlos Pachon ([pachon.carlos@epa.gov](mailto:pachon.carlos@epa.gov))