

# Executive Order 13423 Technical Guidance - Stormwater Run-Off Mitigation

## General Principles and Commitments

Employ design and construction strategies that reduce storm water runoff and polluted site water runoff.

## Technical Guidance

### Introduction

According to the U.S. Department of Agriculture, the United States loses more than 2 billion tons of topsoil each year to erosion. Erosion removes fertile soil rich in nutrients and organic matter, which reduces the ability of plants to establish, grow and remain healthy in the soil. A reduction in plant growth and subsequent plant residue causes less soil cover, allowing the erosion process to perpetuate and become worse.

Erosion not only causes loss of soil productivity but also creates water quality problems once the sediment leaves the site and enters surface waters. The U.S. EPA has declared that sediment contamination of our surface waterways is the biggest threat to our nation's water resources.

Construction and development projects, where soil is excavated or moved around, are particularly subject to erosion problems. In addition, heavy machinery and constant traffic can compact the soil creating a "hard pan" that repels water, increases runoff, and prevents plant growth.

Compost-based erosion and sediment control systems have several advantages over more traditional storm water best management practices (BMPs) such as geotextile blankets, including:

- increasing water holding capacity of soil which reduces runoff.
- buffering rainfall energy, which prevents soil compaction.
- facilitating plant growth by capturing and retaining moisture and providing a suitable microclimate and nutrients for seed germination.
- stimulating microbial activity and improves the soil structure.
- buffering soil pH which can increase vegetation establishment and growth.

# Major Resources

## WBDG

### DESIGN OBJECTIVES

[Achieving Sustainable Site Design through Low Impact Development Practices, Extensive Green Roofs](#)

### Model Contract and Specification Language

- [31 25 73 \(02635\) - Stormwater Management by Compost](#)
- [32 71 00 \(02670\) - Constructed Wetlands](#)
- [32 12 43 \(02795\) - Porous Paving](#)
- [07 33 63 \(02930\) - Vegetated Roof Covering](#)
- [33 16 20 \(11201\) - Rainwater Harvesting](#)

### Publications

- [DOD Unified Facility Criteria \(UFC\) 3-210-10, Low Impact Development](#), Oct 25, 2004
- [Green Roofs Federal Technology Alert](#), FEMP
- [Storm Water Technology Fact Sheet - Porous Pavement](#), EPA 832-F-99-023

### Other

- [EPA GreenScapes program](#)
- [EPA National Pollutant Discharge Elimination System \(NPDES\) - Post-Construction Stormwater Management in New Development & Redevelopment](#)
- [International Storm Water Best Management Practices \(BMP\) Database](#)
- [LEED™ for New Construction](#)