

Protective Remedies with a Lower Environmental Footprint

Building Sustainability Into Our Core Mission
Through Greener Cleanups

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Carlos S Pachon

Team Lead, Greener Cleanups

US EPA





Forward Momentum: Policy, Tools & Practice

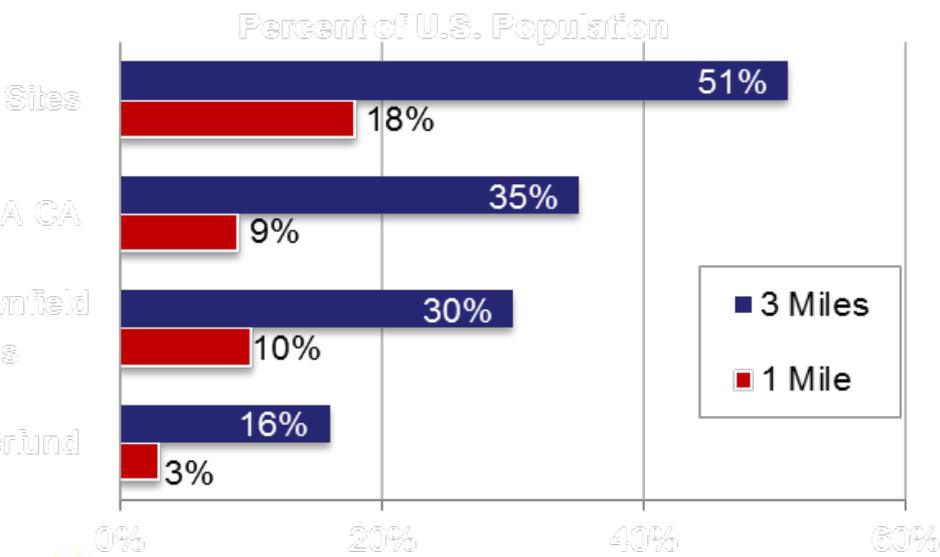
- Greener cleanups are consistent with Agency policy and authorities
- The ASTM Standard Guide for Greener Cleanups is an effective tool for all parties at the project level
- Site cleanup consulting and engineering companies are increasingly incorporating greener cleanup practices into their standard operations



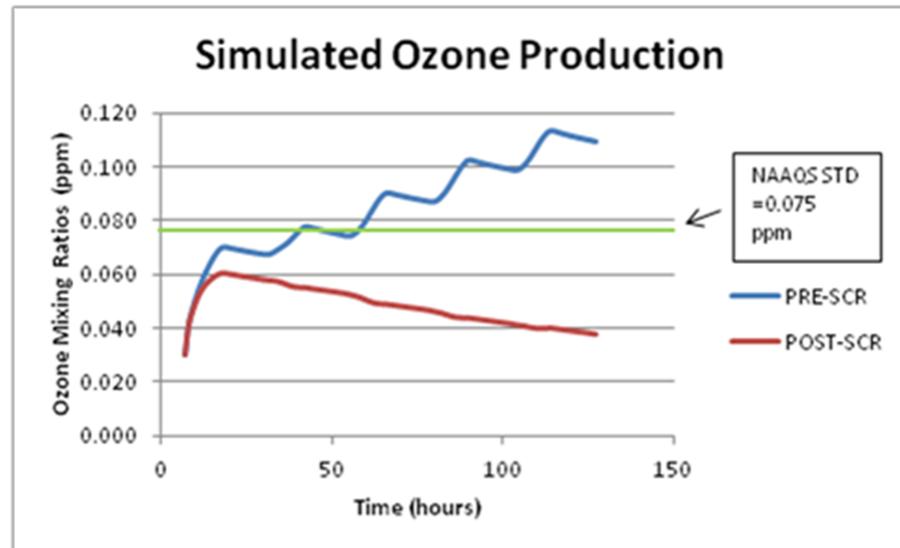


EPA Cleanup Programs Address Contamination at Sites Near 51% of the U.S. Population

Population Within 1 and 3 Miles of RCRA CA, Brownfields, and Superfund Remedial Sites



- It's also a local question



Source: <https://clu-in.org/s.focus/c/pub/i/2545/>



Source: <https://www3.epa.gov/osweraccomplishments/story.html>
<https://clu-in.org/s.focus/c/pub/i/2545/>



Strong Agency Support for Greener Cleanups

- ◆ EPA Strategic Plan (2014-18):
 - » EPA's hazardous waste programs also are working to reduce the energy use and environmental footprint during the investigation and remediation of hazardous waste sites
- ◆ Encouraging Greener Cleanup Practices through Use of ASTM International's Standard Guide for Greener Cleanups (12/2013)
 - » I recommend that regions and OSWER programs facilitate and encourage use of ASTM's Standard Guide for Greener Cleanups in your efforts to implement greener cleanup practices.
- ◆ **New** - Consideration of Greener Cleanup Activities throughout the CERCLA Process (8/2016)





Consideration of Greener Cleanup Activities in The Superfund Cleanup Process (8/2016)

- ◆ Links back to basic CERCLA authorities, but neither modifies nor amends the NCP
- ◆ Includes three main recommendations
 - » Consider greener cleanup measures in the life of a project
 - » Evaluate BMPs or need for Environmental Footprint
 - » Addresses Fund lead and PRP lead sites
- ◆ Provides key definitions & includes seven references to ASTM Standard Guide E2893





Superfund Remedial Acquisition Framework

ASTM Referenced in Published Superfund Sources Sought/
Request for Information*

- ◆ ASTM E2893 Referenced in Two Suites of Contracts:
 - » Remediation Environmental Services Contract (RES)
 - » Environmental Services and Operations (ESO)
- ◆ SOW Requirements under section 1.4 Green Remediation
 - » "...the contractor shall explore and implement green remediation strategies..."
 - » Refers to ASTM International's *Standard Guide for Greener Cleanups* (E2893)

* Published in FedConnect: The reference number is SOL-R1-14-00003 for ESO; SOL-HQ-14-00022 for DES and SOL-HQ-14-00023 for RES (posted 9/16/16)

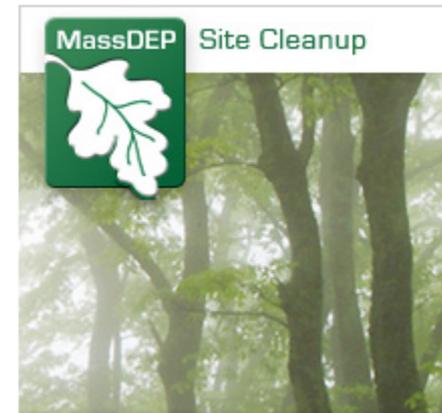
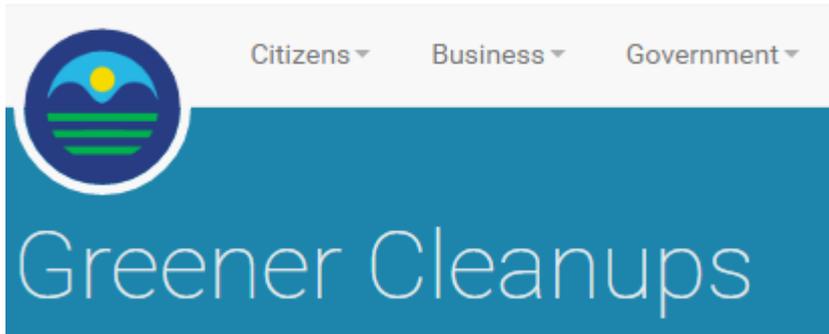




State Partners: Moving Greener Cleanups Forward



Illinois Environmental Protection Agency





ASTM Standard Applied Across the Country: Sample BMPs



Land & Ecosystems: - Choose native vegetation needing little/no irrigation or other maintenance (OR Superfund site)

Water / Land & Ecosystems: Install earthen berms to prevent run-off or run-on in excavation areas (WA TSCA site)



Water / Land & Ecosystems: Construct wetlands for stormwater management and habitat creation (CT RCRA-CA site)

Materials & Waste: Mix reactive agents in situ to minimize material handling and transfer (IL Brownfield)





Green Remediation: A Growing Practice

Examples of companies with green remediation on corporate websites*



* Based on query conducted June 2016



In Closing: At EPA cleanup programs we see greener cleanups as a means to build sustainable practices into our core mission: to protect human health and the environment

Thank You!!

www.epa.gov/greenercleanups

