

SUSTAINABLE ENVIRONMENTAL REMEDIATION

PROJECT HIGHLIGHTS



CDM Smith delivers excellence to our remediation work through the integration of sustainability into project planning, design, execution, and delivery for our clients worldwide. Our commitment to sustainability addresses the three interrelated dimensions of economic growth, social

responsibility, and environmental stewardship. As leaders in sustainable remediation, CDM Smith staff members contribute expertise and guidance to ASTM, Institute for Sustainable Infrastructure (ISI), Interstate Technology and Regulatory Council (ITRC), and the Sustainable Remediation Forum (SURF). We achieved the first ever Platinum Award from ISI for a horizontal infrastructure project, the Snow Creek Stream Environmental Zone Restoration Project in North Lake Tahoe, California, using the new ISI Envision™ tool. For ITRC, CDM Smith staff recently provided internet-based training on four teams, and contributed to the guidance document *Green and Sustainable Remediation: A Practical Framework*. Further, CDM Smith's sustainability specialists helped develop two ASTM standards for environmental cleanup:

- E2876-13 *Standard Guide for Integrating Sustainable Objectives into Cleanup*
- E2893-13 *Standard Guide for Greener Cleanups*



Snow Creek Stream Environmental Zone Restoration Earns Envision™ Platinum Award

CDM Smith provided project planning and design services for the restoration of a brownfield site near Lake Tahoe, historic wetlands, and stream environment zone by removing fill and debris, and reestablishing vegetation and wildlife habitat. The project's low impact stormwater improvements, the reuse of many materials on site, and numerous community benefits helped earn an Envision™ Platinum award—the highest level attainable in the Envision™ rating system.



Before



After

Community Provides Input for Sediment Remediation Design Project

CDM Smith enlisted help from a community working group to develop an innovative sediment remediation plan for a major industrial manufacturer. The plan, which required less dredging at the site, resulted in fewer trucks moving through the community's neighborhoods, and a cost savings to the client of over \$3 million.

Soils Remediation Project Achieves Sustainable Solutions

For a major industrial manufacturer in the Mid-Atlantic region, CDM Smith applied the new ASTM E2893-13 BMPs to its PAH-contaminated soils, leading to a plan to recycle excavated soils and asphalt and return the site to grassland. The project achieved a combined cost savings of approximately \$2 million and reduced long-term liability at area landfills.

These documents will be used world-wide as a framework for addressing the sustainable aspects (environmental, economic and social) of cleanup projects.

In addition, CDM Smith's Melissa Harclerode is conducting innovative research into the social impacts of sustainable remediation. Her recent article in the Winter 2013 issue of *Remediation Journal* presents a methodology for calculating the social cost of sustainability metrics with environmental footprint evaluation tools.

Our firm's scientists and engineers are also experts in applying accepted sustainable remediation tools and practices, including:

- Quantitative footprint analysis (e.g., SiteWise™, SRT™)
- Life cycle assessment (e.g., SimaPro™)
- Best management practices (BMPs)

BENEFITS OF SUSTAINABLE REMEDIATION

CDM Smith has found that considering sustainability in remediation projects often leads to the following benefits:

- Reduced negative and increased positive impacts to the project's local environment, regional economy, and surrounding community
- Increased remediation efficiency, and therefore decreased project costs
- Increased community acceptance
- Implementation of more innovative technologies
- Compliance with sustainability-related regulations and guidelines (federal clients meet Executive Order 13514; many states, such as New York and New Jersey, have additional policies)

One CDM Smith project recently saved over \$600,000 by obtaining consensus to use alternative end points as site cleanup goals.

For more information on CDM Smith's sustainable remediation experience and expertise, please contact:

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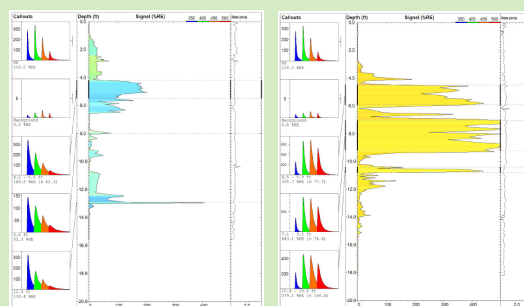


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Optimizing Site Characterization Using a Phased Focused Approach

CDM Smith implemented a phased focused investigation approach during site characterization of an EPA brownfields site to improve efficiency and reduce impacts to the triple bottom line. This approach reduced greenhouse gas emissions by 35 percent, project implementation costs by 38 percent, and costs borne by society by 37 percent by using geophysical methods to identify relict infrastructure and the ultraviolet optical screening tool to delineate light non-aqueous phase liquid distribution.



In situ screening data from the phased focused investigation helped CDM Smith scientists implement sustainable remediation best management practices during site characterization.

Gilbert-Mosley Project, Wichita, Kansas

CDM Smith negotiated a groundbreaking agreement between EPA and local officials that kept the site from the Superfund list and protected property values and the city tax base. Remediation of the 4-mile-long contaminated groundwater plume included low-impact in situ treatment, high efficiency pumping, construction of a city park, and public education on environmental stewardship. In addition to nine other awards, CDM Smith received the Superior Achievement Award in the American Academy of Environmental Engineers' Excellence in Environmental Engineering Awards competition.



This award-winning project features a groundwater treatment system/building, an environmental education center, an extensive plaza area, and various site improvements.