

QUICK REFERENCE GUIDE: Greener Site Investigation Techniques

This quick reference guide is intended to supplement Wisconsin DNR's Green & Sustainable Remediation Manual (PUB-RR-911). For more information about greener site investigations, see U.S. EPA's Green Remediation (GR) Best Management Practices (BMPs) Site Investigation fact sheet (EPA 542-F-09-004, December 2009), available at clu.in.org/greenremediation.

BMPs for all Site Investigations

- Evaluate feasibility of mobile lab, field analytical methods or direct sensing tools
- Schedule activities for appropriate seasons to reduce weather delays and heating and cooling
- Identify local sources of energy efficient machinery, vehicles, and alternative fuels
- Establish electronic data transfers and document preparation
- Select accommodation facilities with green policies
- Identify options for integrating renewable energy resources throughout the project
- Incorporate green specifications into solicitations and contracts
- Select local service providers, product suppliers, and analytical labs
- Specify lab analytical methods that generate less waste and solvents

Energy
Reduce total usage & increase renewables

Materials & Waste
Improve waste management & reduction efforts

Land & Ecosystems
Enhance land management & ecosystem protection

CORE ELEMENTS

Air
Reduce pollutants & greenhouse gas emissions

Water
Reduce usage & negative impacts on water quality

CORE ELEMENT	GREENER SITE INVESTIGATION TECHNIQUES	CORE ELEMENT	GREENER SITE INVESTIGATION TECHNIQUES
Energy	<ul style="list-style-type: none"> Use real-time data collection technologies to reduce the number of field mobilizations needed to complete the site investigation Limit the number of vehicles deployed to the site; Rent electric, hybrid, or hydrogen fuel cell vehicles Institute idle reduction plans Use in situ data loggers to monitor water levels and water quality parameters Use solar-powered telemetry systems to remotely transmit logging data Use rechargeable batteries for handheld field instruments Use direct-push technology for well drilling and soil sampling Dispose of investigative-derived waste (IDW) at the nearest permitted facility 	Water	<ul style="list-style-type: none"> Use waterless drilling techniques (such as direct-push technology) Reuse operations graywater and capture rainwater for irrigation or dust control Return unused clean water to surface water bodies or groundwater vs. discharge to public sewer system Use low-flow sampling equipment Use steam-cleaning or phosphate-free detergents for equipment decontamination Quickly restore disrupted vegetated areas to control stormwater runoff and prevent soil erosion
	Air		<ul style="list-style-type: none"> Reduce air pollutants and Greenhouse Gas (GHG) emissions by <ul style="list-style-type: none"> Installing diesel emission control filters on equipment Using ultralow-sulfur fuels Reducing duration of drilling by employing sonic drilling techniques Reducing duration of groundwater pumping by using passive sampling devices
			Land & Ecosystems
		Materials & Waste	



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This document contains information about certain state statutes and administrative rules, but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20204. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.

