

Barriers to Greener Cleanups

**Association of State and Territorial
Solid Waste Management Officials
2009 MID-YEAR MEETING**

April 15, 2009

ASTSWMO Greener Cleanups Task Force

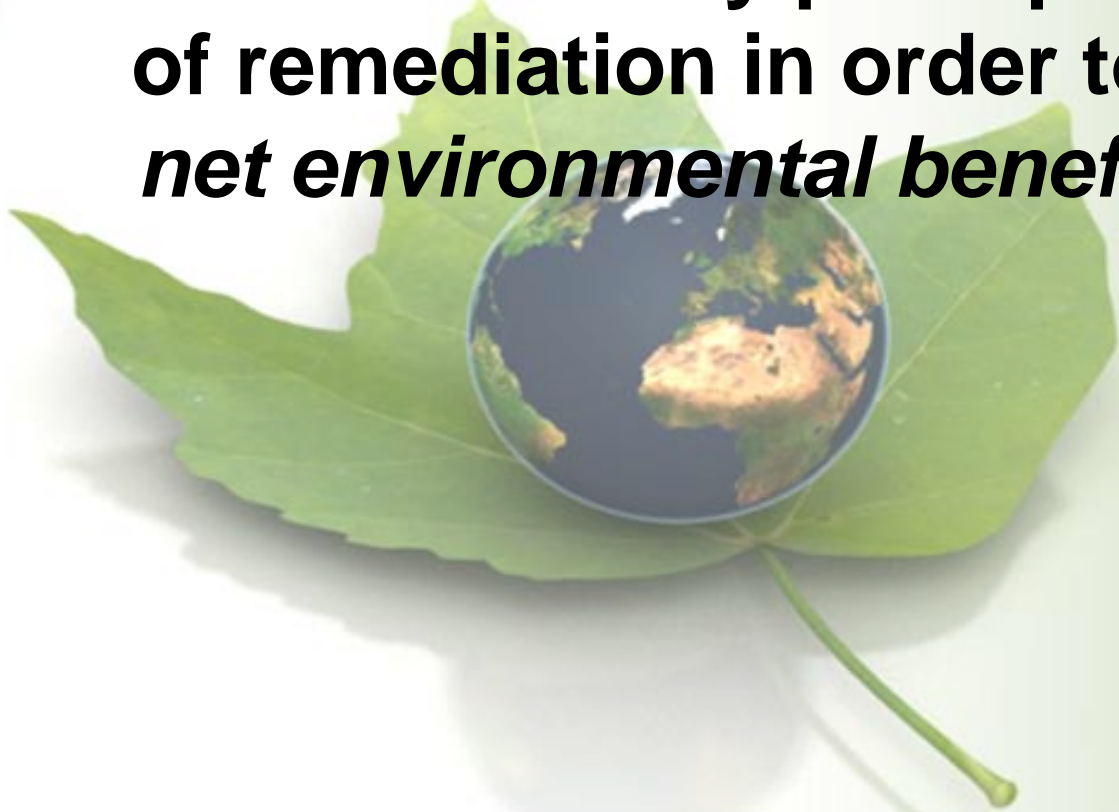
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What is a Greener Cleanup?

Green Remediation is the consideration of sustainability principles in all phases of remediation in order to *maximize the net environmental benefit* of a cleanup.



Barriers to Greener Cleanups



Types of Barriers

- **Regulatory**
- **Technical**
- **Industry/Market**
- **Societal**



Regulatory Barriers

- **Potential Regulatory Authorities**
 - **CERCLA**
 - **RCRA**
 - **State Programs**
 - **Voluntary Cleanup Programs**
 - **Brownfields**
 - **Tanks**



Regulatory Barriers (cont'd)

- **Varying degrees of understanding**
- **Not explicitly included in existing regulations/lack of authority**
- **Established process of remedy selection threshold criteria**
- **Acceptance of remedial methods**
- **Inflexible cleanup standards or requirements**

Regulatory Barriers (cont'd)

- Areas to integrate greener cleanups
- Lack of ability to offer incentives
- Beneficial reuse/permitting issues
- Fear that it supports the “do nothing” option



Technical Barriers

- **No universal definition**
- **Lack of guidance**
- **Metrics not established**
- **Validation of green remedies are few**
- **Availability of resources varies**

Industry/Market Barriers

- **Economics – may be more upfront costs**
- **Funding sources**
- **Cost/benefit**
- **Lack of incentives**
- **Need certainty in the process**
- **Timeframes to completion**



Industry/Market Barriers (cont'd)

- **Additional requirement may lengthen process**
- **Mandates/goals of industry vs. government**
- **Goals vs. mission**
- **Materials reuse/recycling markets not available**

Societal Barriers



- **Lack of knowledge/awareness of greener cleanup practices**
- **Current acceptance/comfort with conventional practices**
- **Little knowledge of reliability of green remedies**
- **Lack of understanding of cost/benefit**
- **Impacts not quantifiable**
- **Resistance to risk-based cleanups**

Greener Cleanups Task Force Survey

- 10 questions on greener cleanups
- 44 responses; 27 states
- Respondents asked to select top three barriers:
 - What are the biggest barriers to implementing greener cleanups?
 - Which barriers do you think can be most easily overcome?



Survey Results

- **Top barriers to greener cleanups:**
 - **Lack of knowledge/awareness of greener cleanup practices (53%)**
 - **Economics – may be more upfront costs (53%)**
 - **Not explicitly included in existing regulations/lack of authority (49%)**
 - **Lack of ability to offer incentives (49%)**

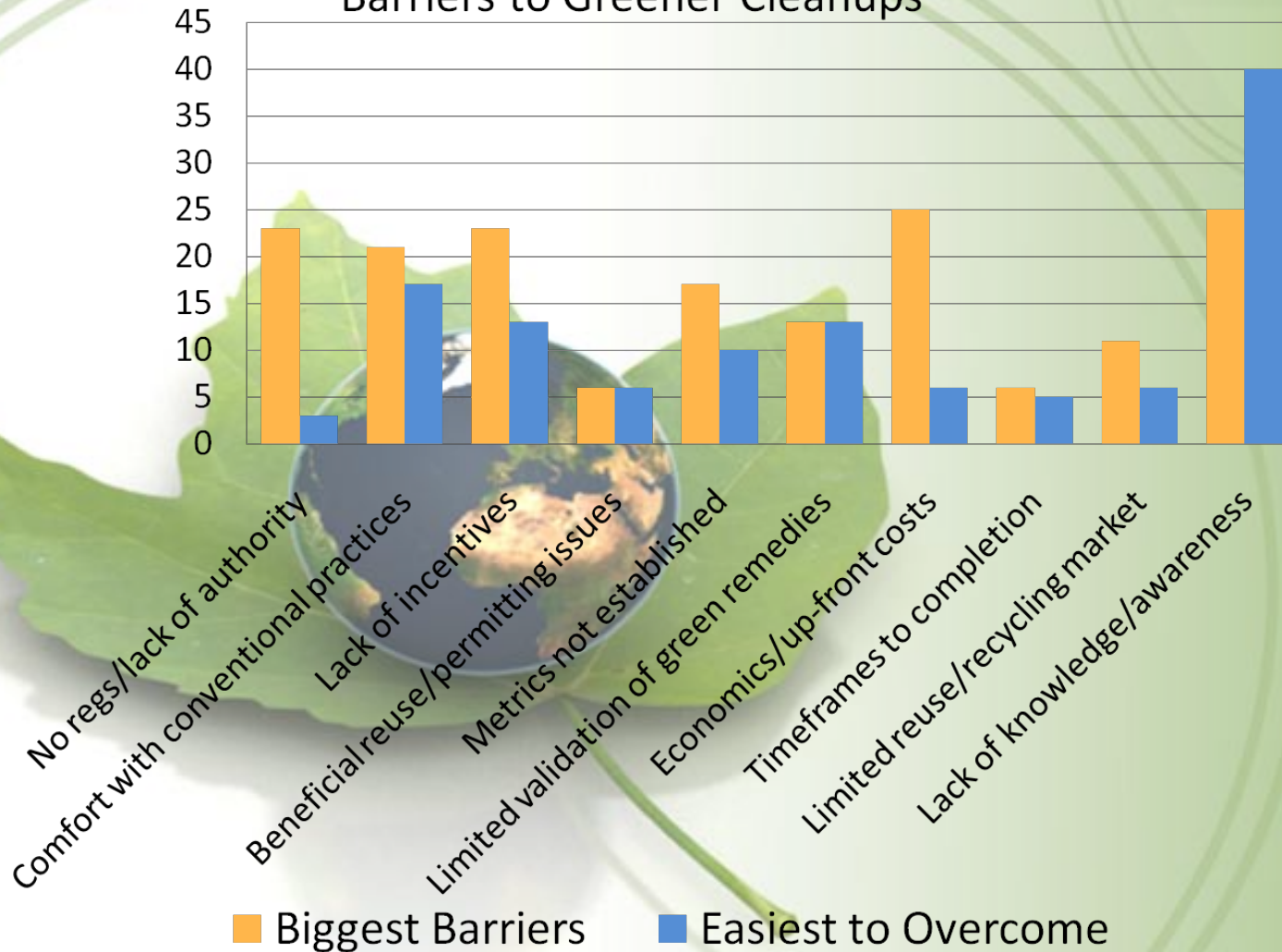
Survey Results

- **Barriers most easily overcome:**
 - **Lack of knowledge/awareness of greener cleanup practices (85%)**
 - **Current acceptance/comfort with conventional practices (36%)**



Survey Results

Barriers to Greener Cleanups



Survey Results

- **Incorporating greener cleanup concepts into regulatory framework and projects:**
 - **Staff training/awareness (83%)**
- **Resources to encourage/implement greener cleanups:**
 - **Training (84%)**

Overcoming the Barriers

- **Education of Regulators, Consultants, Industry, Public**
- **Role of Task Force: strategy papers, outreach, partnerships and tracking**
- **Task Force strategy papers**
 - **Implementing Greener Cleanups in the States**
 - **Barriers to Greener Cleanups**
 - **Incentives for Greener Cleanups**
 - **Incorporating Greener Cleanups into Remedy Reviews**



Thank You!

