

Sustainable Remediation within the MCP Framework

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First- Big Picture

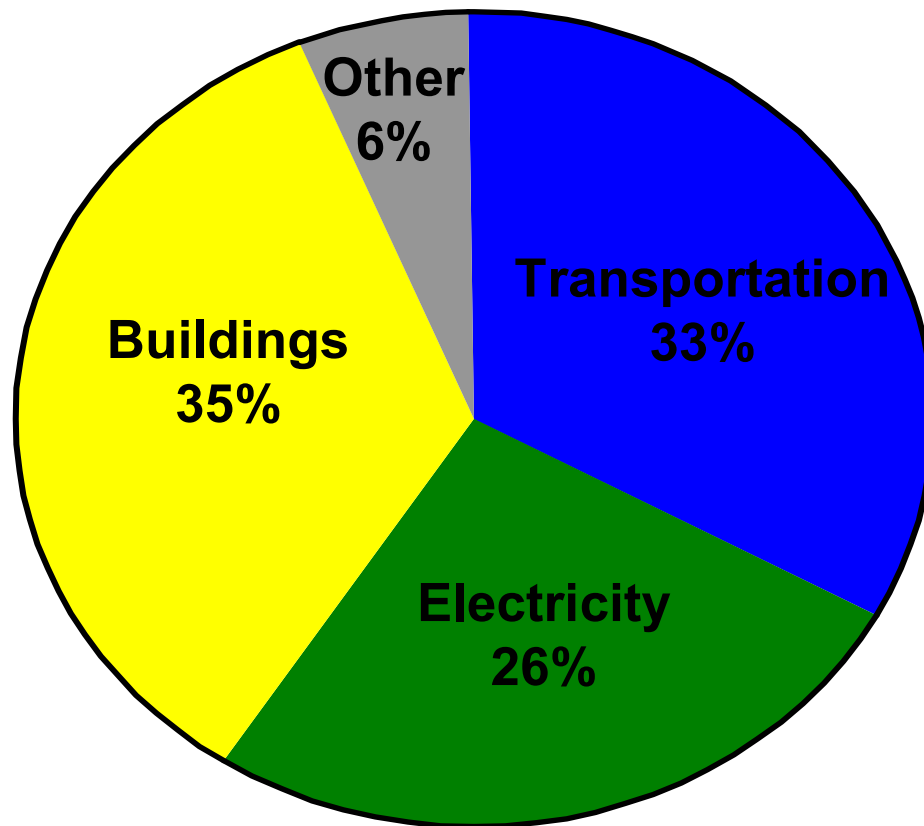
EEA and MassDEP

- Promotion of Sustainable, Green Initiatives across all programs
- Some examples
 - Regional Greenhouse Gas Initiative
 - DOER Green Communities Program
 - Zero Net Energy Buildings
 - Diesel Retrofits for School Buses
 - Pilot projects at municipal water and wastewater treatment facilities

Still Bigger Picture

- EPA, ITRC, ASTWMO ...
 - Developing tools, guidance, training, considering incentives for **sustainable remediation**
- Stimulus money toward green projects

MA GHG Emissions Profile



Data Source:
NESCAUM

Massachusetts Total GHG Emissions
(In Metric Tons of Carbon Dioxide Equivalents)
1990 ~92 | 2003 ~96



Bureau of Waste Site Cleanup

- Promote **Sustainable Remediation**
 - Comprehensive Remedial Action Guidance Development and Training
 - State-funded cleanup projects/contracting
 - NPL pilot
 - Combined Heat and Power Retrofit at Baird and McGuire
- eDEP

Sustainable Remediation- Definition

Implementing remedies that meet cleanup objectives while reducing:

- consumption of non-renewable energy;
- the use of resources such as land and water;
- ecosystem impacts;
- material consumption and waste generation; and
- emissions of green house gases.

Where to Consider Sustainable Remediation

- Remedy Selection (Phase III)
- Remedy Optimization (Phase IV)
- Remedy Operation (Phase V or Phase V/ROS)
- Site/Brownfields Redevelopment Considerations

Current MCP Requirements

Relevant to Sustainability

- Phase III criteria for evaluating remedial alternatives include factors relevant to sustainability.
- 310 CMR 40.0858(4) requires an evaluation of
 - “the **relative consumption of energy resources** in the operation of the alternatives, and the externalities associated with the use of those resources;” and
 - the “**costs of environmental restoration, potential damages to natural resources**, including consideration of impacts to surface waters, wetlands, wildlife, fish and shellfish habitat”.

Limitations on Sustainability Considerations

- Sustainability Considerations do not override requirements for timely action
 - Imminent Hazards
 - Condition of Substantial Release Migration
 - No Substantial Hazard
 - Source elimination or control, to extent feasible

For More Information -

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BWSC Project Lead on Comprehensive
Remedial Action Guidance development that
includes Sustainable Remediation