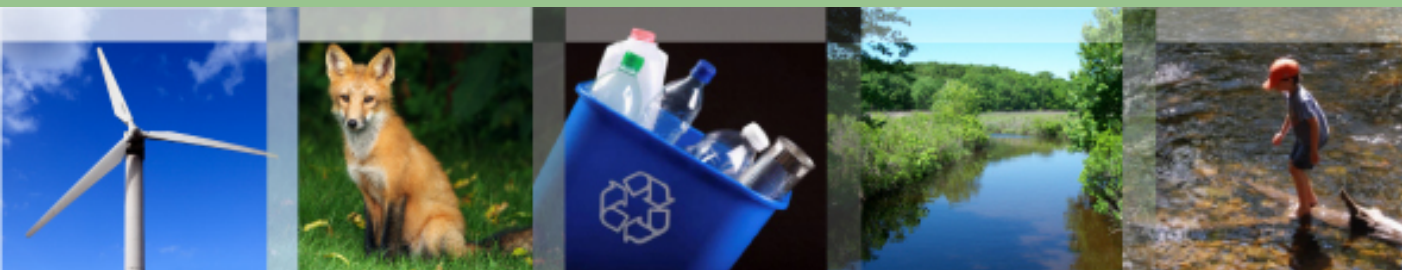




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GREENER CLEANUPS

Integrating More Sustainable Approaches into Site Remediation in Connecticut

AEHS 32nd Annual Conference

Session 3: New England's
Regulatory Perspective on
Greener Cleanups

October 18, 2016

Camille Fontanella
Technical Outreach Coordinator
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Remediation Division

Connecticut Department of Energy & Environmental Protection

What are Greener Cleanups?

Reducing the Environmental Footprint of Cleanups:

- Begin from the perspective of sustainability
- Consider Greener Cleanup Principles during project planning
- Select investigative and remedial options that are greener



EPA's Core Elements



Examples of Best Management Practices

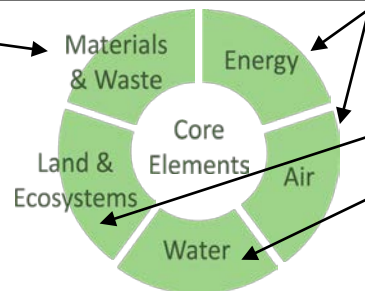
Recycled concrete for erosion control



Mobile solar system to power tools



Wetlands for stormwater & habitat



Green Remediation in Connecticut

- No state regulatory or statutory requirements for regulated community
- DEEP encourages use of the ASTM Standard Guide for Greener Cleanups in site investigation and remediation



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How does Green Remediation Fit In?

- DEEP's Remediation, Brownfields, and Renewable Energy Programs
- Current guidance on conducting greener cleanups in Connecticut



Connecticut's Remediation Programs

- CT part of EPA's Region 1 Green-Clean Energy and Remediation workgroup (since September 2015)
 - Collaboration between EPA and states
 - Information resources
 - Provide sustainable means of remediating sites
 - Tracks locations suitable for renewable energy production
- DEEP and DECD staff training
- Public Outreach
 - Remediation Roundtable
 - Website



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Green Remediation Resources

- Green Remediation webpage
www.ct.gov/deep/greenremediation
 - Resource links and existing guidance
- EPA's Clu-in
www.cluin.org/greenremediation
 - Site profiles, BMP fact sheets, quantitative evaluation
- ASTM Greener Cleanups Standard
www.astm.org/Standards/E2893.htm
 - Complimentary reading www.astm.org/E2893-16



Connecticut's Remediation Programs

- CT Superfund sites
- Property Transfer Program
 - LEP Verification forms for Property Transfer
- Voluntary Remediation Program
- Green Circle and Sustainability Award
- Leading by example
 - Use at state landfills
- Tracking sites which use Green Remediation



Connecticut's Remediation Programs

- Conducting a greener cleanup is a process, not any one technology
- Applied on a phase-by-phase basis throughout investigation and remediation by:
 1. Analyzing several remedial alternatives
 2. Evaluating how greener technologies may apply
 3. Choosing the remedy that optimizes the selected cleanup alternative in minimizing waste and reducing adverse impacts



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Connecticut's Brownfield Program

Developing Brownfields is “ ‘green’ as it saves land, reduces the effect of contamination... and provides redevelopment where existing infrastructure exists.” – Task Force on Brownfields Strategies (February 2009)

– Redevelopment of brownfields with a greener cleanup in mind can provide cost savings and better environmental and societal outcomes

- CT Brownfields webpage

www.ct.gov/deep/brownfields



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Connecticut's Brownfield Program

DECD

- **Sec. 4e-50. Contracts for environmental remediation of brownfields.** Notwithstanding any other provisions of the general statutes, whenever a state agency or quasi-public agency, as defined in section 1-120, solicits bids, makes a request for proposals or negotiates a contract for the environmental remediation of a brownfield property, such bid, proposal or contract shall include a provision whereby the employment and utilization of **green remediation technologies** shall be accorded due consideration.



Renewable Energy in Connecticut

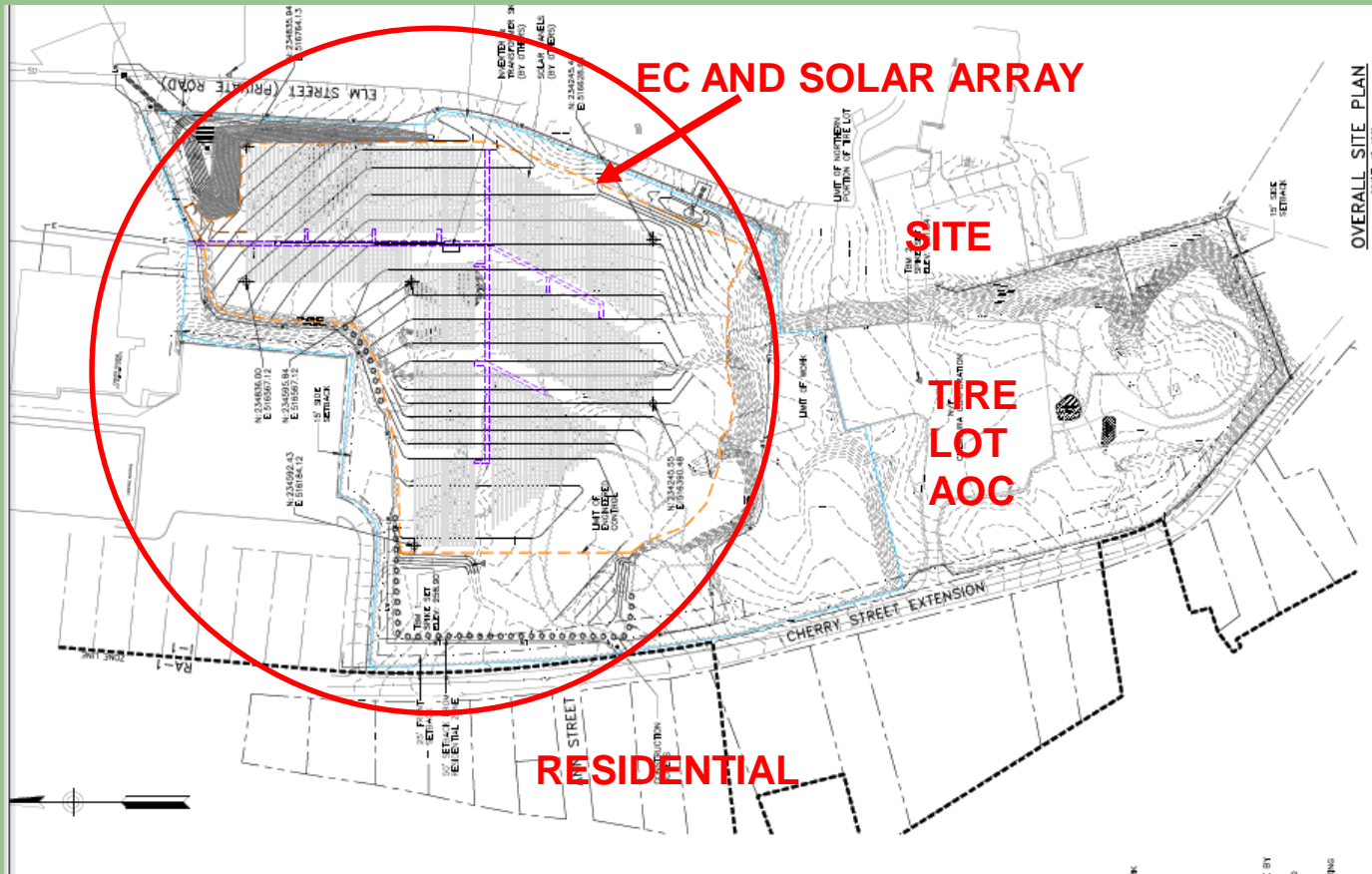
- Achieve greener cleanups through state incentives for renewable energy
 - Database of State Incentives for Renewables & Efficiency www.dsireusa.org lists 79 state and federal policies and incentives in CT
 - Tax credits, loan programs, financial incentives - Renewable Portfolio Standards, Green Buildings Tax Credit Program, ZREC, net metering, PACE, CEFIA
- Tracking sites which use renewable energy on formerly contaminated properties



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Chemtura, Naugatuck



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Renewable Energy in Connecticut

- Siting Clean Energy on Brownfields

www.ct.gov/deep/brownfieldrenewableenergy

- financial incentives for use of renewable energy
- List of Landfills



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Future Outreach

- Remediation Roundtable
 - Survey
 - Presentations on technology, implementation, etc.
- Website
 - Revise guidance to incorporate Green Remediation
 - Add success stories
- EPOC
 - LEP training credits





Supporting greener cleanups results in...

- economic benefit to our state and business/industry through cost savings and job growth
- energy efficiency and conservation through best use of natural resources
- better environmental practices and outcomes



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Take-Aways:

Works at ANY Site

**No Regulatory
Review Needed**

**Better
environmental,
societal, and
economic
outcomes**



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Q & A

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www.ct.gov/deep/remediation

www.ct.gov/deep/remediationroundtable



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