



**Welcome to the CLU-IN Internet
Seminar**

**OSC Readiness Presents...Debris Management
Issues during Natural Disasters**

Sponsored by: U.S. EPA, Office of Superfund Remediation and Technology Innovation
Delivered: August 23, 2011, 1:00 PM - 3:00 PM, EDT (17:00-19:00 GMT)

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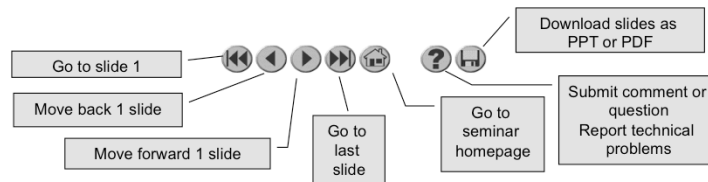
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- Q&A
- Turn off any pop-up blockers
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- This event is being recorded
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Although I'm sure that some of you have these rules memorized from previous CLU-IN events, let's run through them quickly for our new participants.

Please mute your phone lines during the seminar to minimize disruption and background noise. If you do not have a mute button, press *6 to mute #6 to unmute your lines at anytime. Also, please do NOT put this call on hold as this may bring delightful, but unwanted background music over the lines and interrupt the seminar.

You should note that throughout the seminar, we will ask for your feedback. You do not need to wait for Q&A breaks to ask questions or provide comments. To submit comments/questions and report technical problems, please use the ? icon at the top of your screen. You can move forward/backward in the slides by using the single arrow buttons (left moves back 1 slide, right moves advances 1 slide). The double arrowed buttons will take you to 1st and last slides respectively. You may also advance to any slide using the numbered links that appear on the left side of your screen. The button with a house icon will take you back to main seminar page which displays our agenda, speaker information, links to the slides and additional resources. Lastly, the button with a computer disc can be used to download and save today's presentation materials.

With that, please move to slide 3.

Debris Management During Natural Disasters

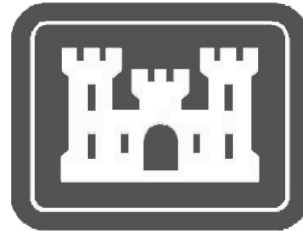


Federal Response

- Stafford Act
- National Incident Management System
- National Response Framework

ESF-3

- USACE's roles
- Types of ESF-3 Assistance
 - Technical Assistance
 - Direct Federal Assistance



ESF-10

- ESF-10 Oil and Hazardous Materials
 - Clean up releases of oil and hazardous materials
 - May include debris that contains or is mixed with oil or hazmat
 - Soil, sediment, air, and water sampling and monitoring
 - Collection/disposal of HHW



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ESF-3 EPA Assistance

- ESF-3 Public Works and Engineering
 - Support to ensure proper management of debris that is hazardous
 - Establish regulatory standards affecting management of hazardous and non-hazardous debris
 - RCRA standards primarily implemented by States

US Coast Guard's Role

- **ESF-3**
 - Coordinates with USACE for the removal of obstructions declared to be a hazard to navigation
 - Assists in vessel salvage and removal of vessel debris

- **ESF-10**
 - Provides expertise on environmental effects of oil discharges or releases of hazardous materials and environmental pollution control techniques
 - Maintains the NRC
 - Maintains continuously staffed facilities that can be used for command, control, and surveillance of oil discharges and hazardous materials releases occurring within its jurisdiction



EPA and USACE Coordination

- EPA, USACE, and DHS met in 10/06 to discuss clarification of roles and duties for debris
- 3 agencies agreed USACE, under ESF-3 would include the following activities in its debris mission and included language in USACE debris mission in most recent version of the NRF
- If USACE not activated under ESF-3, EPA may conduct activities under ESF-10

USACE and HHW

- Collection, segregation, and transport of hazardous materials incidental to USACE management of curb-side debris and building demolition
 - HHW and removal of oil and gas from small motorized equipment not requiring OSHA certified hazmat personnel
 - USACE transports waste to state/local or EPA consolidation area for staging/disposal



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White Goods

- USACE will collect and dispose of white goods
- USACE will conduct Freon removal from white goods and proper recycling / disposal of Freon



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Electronic Waste

- USACE will collect and properly recycle and or dispose of electronic waste



EPA QA/QC



- EPA may provide technical assistance and QA/QC for above activities as needed

Orphan Drums and Containers

- EPA (ESF-10) would maintain removal of hazardous material containers that may have become intermingled with construction debris, such as drums, tanks, and cylinders containing hazardous materials or oil



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FEMA's Role

- Lead federal agency
- Public Assistance grant program
 - State and local governments
 - Tribes
 - Certain nonprofit organizations



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PA Eligibility

- Debris removal work must be necessary to:
 - Eliminate an immediate threat to lives, public health and safety
 - Eliminate immediate threats of significant damage to improved public or private property, or
 - Ensure the economic recovery of the affected community to the benefit of the community at large

Eligible Debris Removal Activities

- Debris removal from a public right-of-way to allow the safe passage of emergency vehicles
- Debris removal from public property to eliminate health and safety hazards



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Ineligible Debris Removal Activities

- Removal of debris, such as tree limbs and trunks, from an applicant's unimproved property or undeveloped land
- Removal of pre-disaster sediment from engineered channels
- Removal of debris from a natural channel unless the debris poses an immediate threat of flooding to improved property
- Removal of debris from federal lands or facilities that are the authority of another federal agency or department, such as federal –aid roads, USACE navigable waterways, and Natural Resources Conservation Service canals

Disaster Debris Disposal Alternatives



- Reuse
- Recycling
- Waste-to-energy

Reuse

- Cylinders and tanks



Recycling

- **Protective of Environment**
 - Less landfills results in less leaching
 - Less leaching preserves groundwater
 - E-waste recycling minimizes source of leachable lead
- **Preserves Resources**
 - Waste converted to energy
 - Scrap steel results in cost recovery
 - Electronics recycling preserves precious metals, plastic and glass

Waste-to-Energy

- Vegetative debris
- Woody biomass
- C & D materials
- Furniture
- Putrescible waste



Disposal Options

- C & D landfills
- MSW landfills
- Non-hazardous solid waste combustor
- Open burning
- Hazardous waste disposal



Open Burning



Hazardous Waste Disposal

- Household hazardous waste
- Orphan drums and tanks



HHW Collection Best Practices

- Coordinate with states in your Region before event to identify possible locations for HHW Collection Site.
- Best locations are usually county or state property
- Coordinate with Regional Council on Access Agreements for sites
- Coordinate with State on obtaining EPA ID numbers once incident has occurred



HHW Collection Best Practices

- Coordinate with States in Region before and beginning of incident to identify any special concerns or requirements State may have.
 - Recycling
 - E-waste
 - Fuel tanks



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HHW Collection Best Practices

- Dissemination of informational flyers to residents on curbside segregation and why it is important to keep these materials out of the landfill
- Outreach to individuals on the streets; in many cases, EPA first federal agency to reach public



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HHW Collection Best Practices

- Mapping and tracking
 - By keeping close tabs on routes driven by every team, Division Supervisor can identify which areas needed more emphasis following days
 - Additionally, Field Observers can be utilized to “scout” areas where new HHW appears and advise Division Supervisors of obstacles they may encounter

HHW Collection Best Practices

- Identify Technical Expert to serve as Debris Coordinator
- Attend debris meetings with USACE, local, state, and FEMA
 - Attending all debris meetings allows valuable input to Operations Section Chief and IC



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HHW Collection Best Practices

- Coordination with USACE
- Daily/weekly coordination with USACE Subject Matter Expert helps resolve and prevent issues in field



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Examples of Poor Segregation



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Examples of Poor Segregation



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HHW Collection Best Practices

- Trucks lined with bins to keep incompatibles segregated.



HHW Collection Best Practices

- Counting Items
 - Locals, FEMA, and EPA HQ find this information valuable for reporting
 - Having this information also helps the Division Supervisor forecast work load
 - This information can be used to reduce crew size, size of pad, disposal frequency, and estimate disposal costs

HHW Collection Best Practices

- Station Personnel at the entry of each HHW collection pad
 - These individuals should look at the materials the drivers bring in
 - Address issues such as collection of non-hazardous materials and incompatibles

HHW Collection Best Practices

- Creating a central segregation point at the pad makes for a more efficient operation
 - Drivers spend less time at the pad
 - Crew can segregate items and move them to the appropriate location on the pad after the driver has left



HHW Collection Best Practices



- Emptying materials from small containers and bulking like materials rather than over packing the containers saves disposal costs and encourages recycling

HHW Collection Best Practices

- Public notices of termination of HHW collection encourage residents to get their material to the curb as well as keep them informed

HHW Collection Best Practices

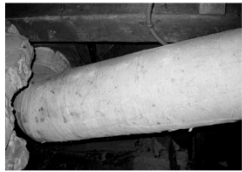
- Maintaining hot line for residents to call with questions about what is eligible or make arrangements to pick up from resident who has unusual material that should be picked up right away
- Provide the individual who mans the hot line with contact numbers to refer to the resident for questions/issues not related to HHW

HHW Collection Best Practices

- Daily safety meetings keep workers informed as to what to do in case of an alarm from the air monitoring equipment

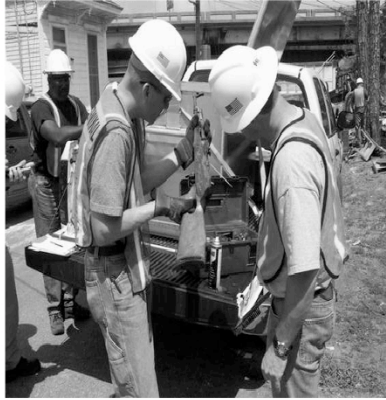
Other Debris Streams Requiring Special Attention

- Asbestos
- PCBs
- Medical bio-waste
- Firearms and ammunition



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Firearms and Ammunition



- EPA under ESF-10 during Katrina and Rita
- Over 2,300 firearms and 96,000 pounds of Ammunition/ Explosives were collected

DHS '07 Appropriations P.L. 109-295
Section 706. Firearms Policies

“(a) PROHIBITION ON CONFISCATION OF FIREARMS

No officer or employee of the United States...while acting in support of relief from a major disaster or emergency, may – (1) temporarily or permanently seize, or authorize seizure of, any firearm the possession of which is not prohibited under Federal, State, or local law, other than for forfeiture in compliance with Federal law or as evidence in a criminal investigation...”

Ammunition

- Ammunition is still okay to collect and can fall under a HHW collection Mission Assignment.

Resources and References

- OSWER's Planning for Natural Disaster Debris Document www.epa.gov/osw/consERVE/rrr/imr/cdm/pubs/pnDD.pdf
- Guidelines for Catastrophic Emergency Situations Involving Asbestos intranet.epa.gov/oeca/oc/campd/inspector/referenc/emergencyasbestosguide.pdf
- National Strategy for Electronic Stewardship www.epa.gov/osw/consERVE/materials/ecycling/taskforce/docs/strategy.pdf
- The Electronics Industries Alliance - database of electronics recyclers www.ecyclingcentral.com/
- EPA website - information on management of PCB wastes and features lists of facilities that can store and dispose of PCBs www.epa.gov/epawaste/hazard/tsd/pcbs/index.htm
- EPA certified refrigerant reclaimers www.epa.gov/ozone/title6/608/reclamation/reclist.html

Resources & Feedback

- To view a complete list of resources for this seminar, please visit the **Additional Resources**
- Please complete the **Feedback Form** to help ensure events like this are offered in the future

EPA United States Environmental Protection Agency Technology Innovation Program

U.S. EPA Technical Support Project Engineering Forum
Green Remediation: Opening the Door to Field Use Session C (Green Remediation Tools and Examples)
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