RDPO
Regional Disaster Preparedness Organization
Unified. Prepared. Resilient.

Workshop 2

Debris Management Sites

Temporary Debris Storage & Reduction (TDSR) Sites

More thought for Roles and Responsibilities

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Objectives

Provoke thought and discussion about…

1. **What is a Debris Management Site?**
2. **Debris Management Site Planning**
3. **Who has to do what?**
4. **Your Roles and Responsibilities**

(And again, not necessarily in that order)

Sometimes, you are going to deal with debris

What is Debris Management?

Debris Management Sites

Temporary Debris Storage & Reduction (TDSR) Sites

Debris management sites increase your operational flexibility and capacity

RDPO debris management needs may require establishment of debris management sites

They are used to temporarily store, reduce, segregate, and process debris before it is taken to another location for reuse, recycling, or final disposal

Debris Management Sites or TDSRs

Advantages

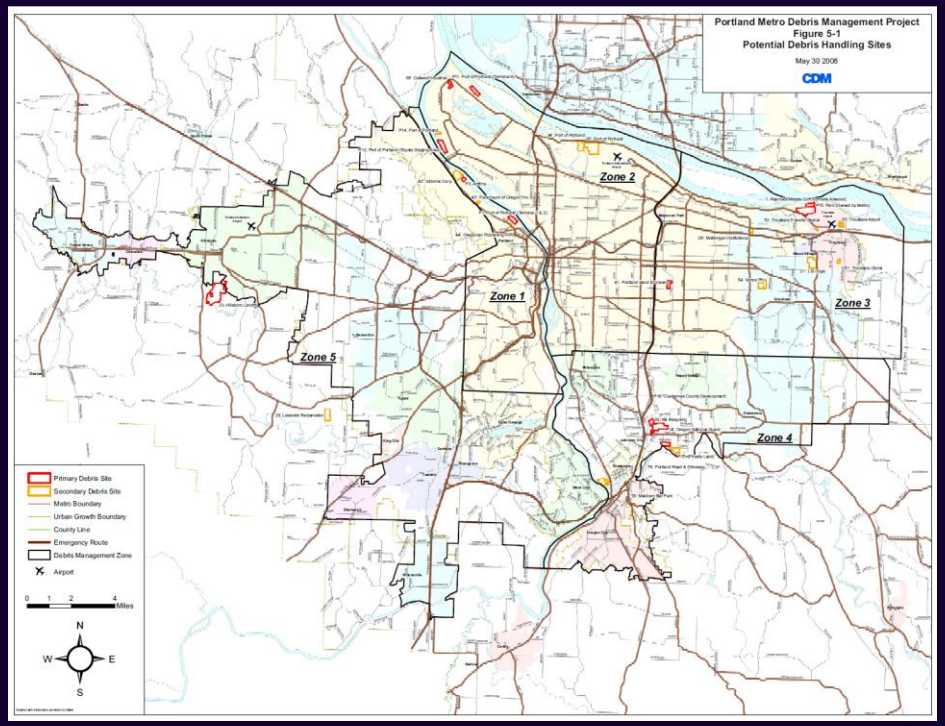
- Flexibility – could provide collection center for the public
- Facilitate recycling, reduction and separation
- Allows time for local landfill preparation
- Can reduce travel time to final disposal site

Disadvantages

- Additional cost in handling, leasing sites, engineering, etc.
- Takes more time for environmental and other reviews
- Potential site cleanup and remediation
- Requires additional staff

Step 1 – Identify your Current Sites

- For non-recyclable debris, identify the locations of landfills and evaluate the debris types each is permitted to accept
- Consider daily, monthly, and overall permitted limits for the landfills
- Consider the capacity impacts resulting from normal disposal by other affected jurisdictions



Step 2 – Estimate How Many More You Will Need

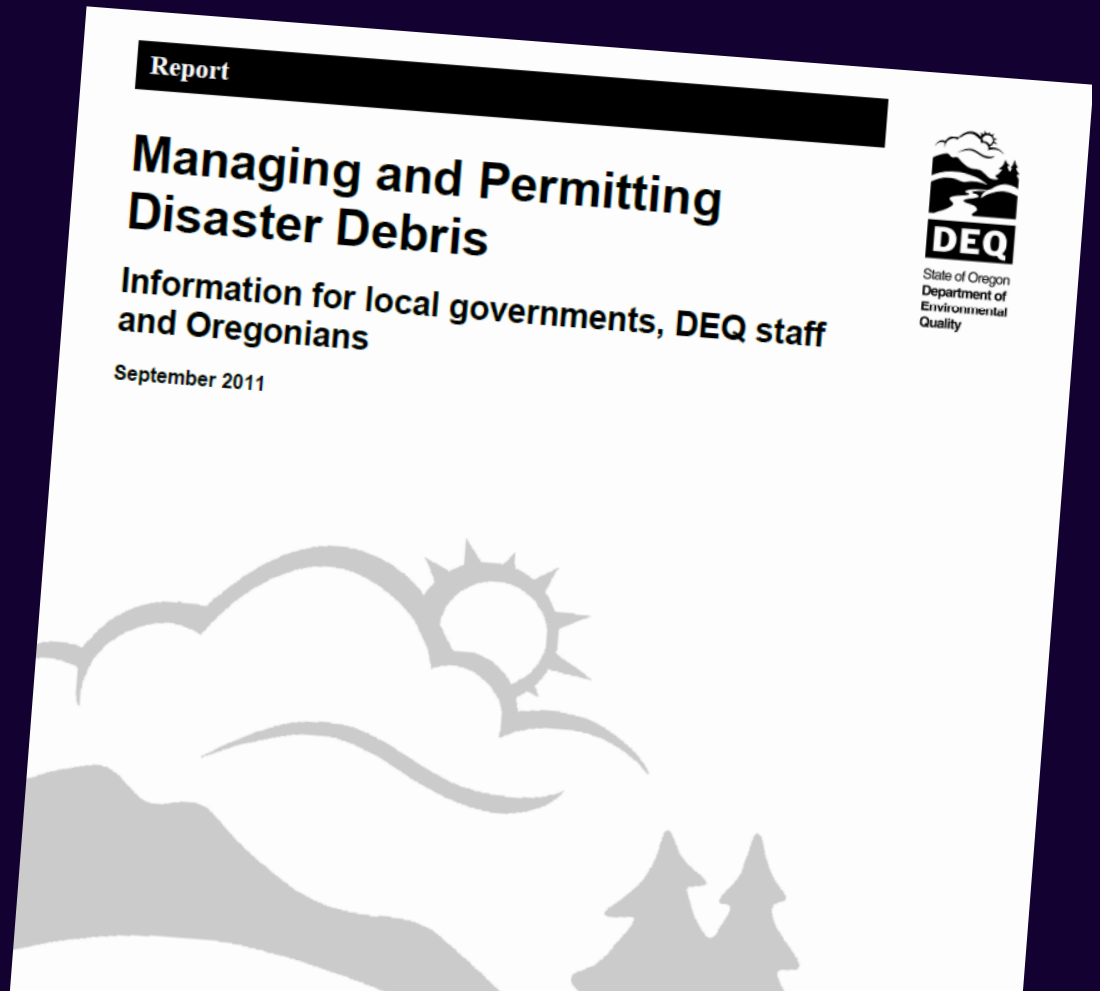
- Based on the forecasted debris types, quantities, and locations, determine the required number and general location of additional debris management sites needed
- Determine the general size and the specific activities which will occur at each site

Table 3-1 Estimated Total Disaster Debris Generated

Zone	Estimated Disaster Debris Generated in Cubic Yards						
	1A	1B	2	3	4	5	Total
0.1g event	1,845,000	984,100	2,139,500	851,500	299,500	562,600	6,682,200
0.2g event	3,270,500	1,917,600	4,365,900	1,742,100	880,600	2,069,120	14,245,820
0.4+g event	16,200,500	9,230,800	16,808,800	6,329,000	4,105,800	10,872,200	63,547,100

Step 3 – Develop Selection Criteria

- Develop evaluation criteria for selecting debris management sites
- Take into account environmental and other regulatory requirements



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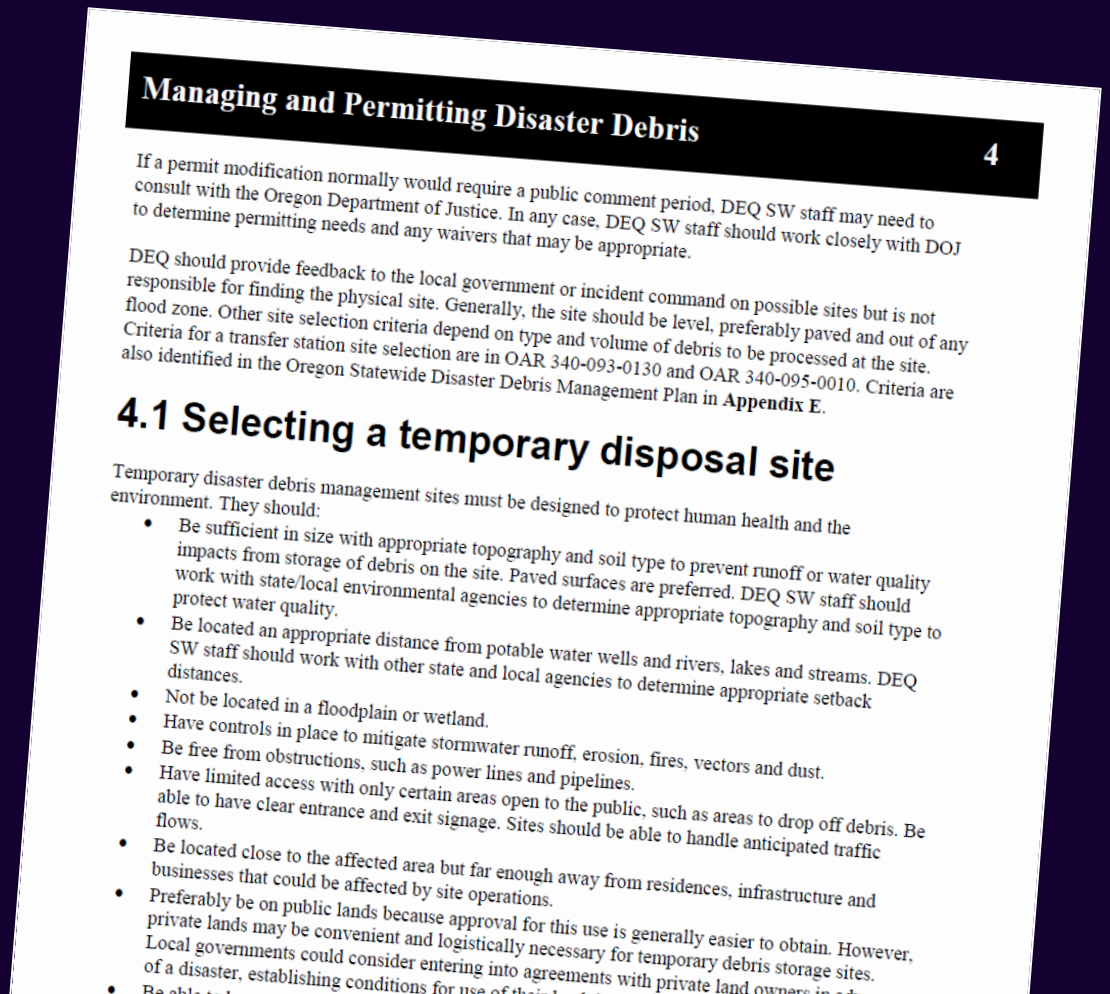


Managing and Permitting Disaster Debris 4

If a permit modification normally would require a public comment period, DEQ SW staff may need to consult with the Oregon Department of Justice. In any case, DEQ SW staff should work closely with DOJ to determine permitting needs and any waivers that may be appropriate.

DEQ should provide feedback to the local government or incident command on possible sites but is not responsible for finding the physical site. Generally, the site should be level, preferably paved and out of any flood zone. Other site selection criteria depend on type and volume of debris to be processed at the site. Criteria for a transfer station site selection are in OAR 340-093-0130 and OAR 340-095-0010. Criteria are also identified in the Oregon Statewide Disaster Debris Management Plan in **Appendix E**.

4.1 Selecting a temporary disposal site

Temporary disaster debris management sites must be designed to protect human health and the environment. They should:

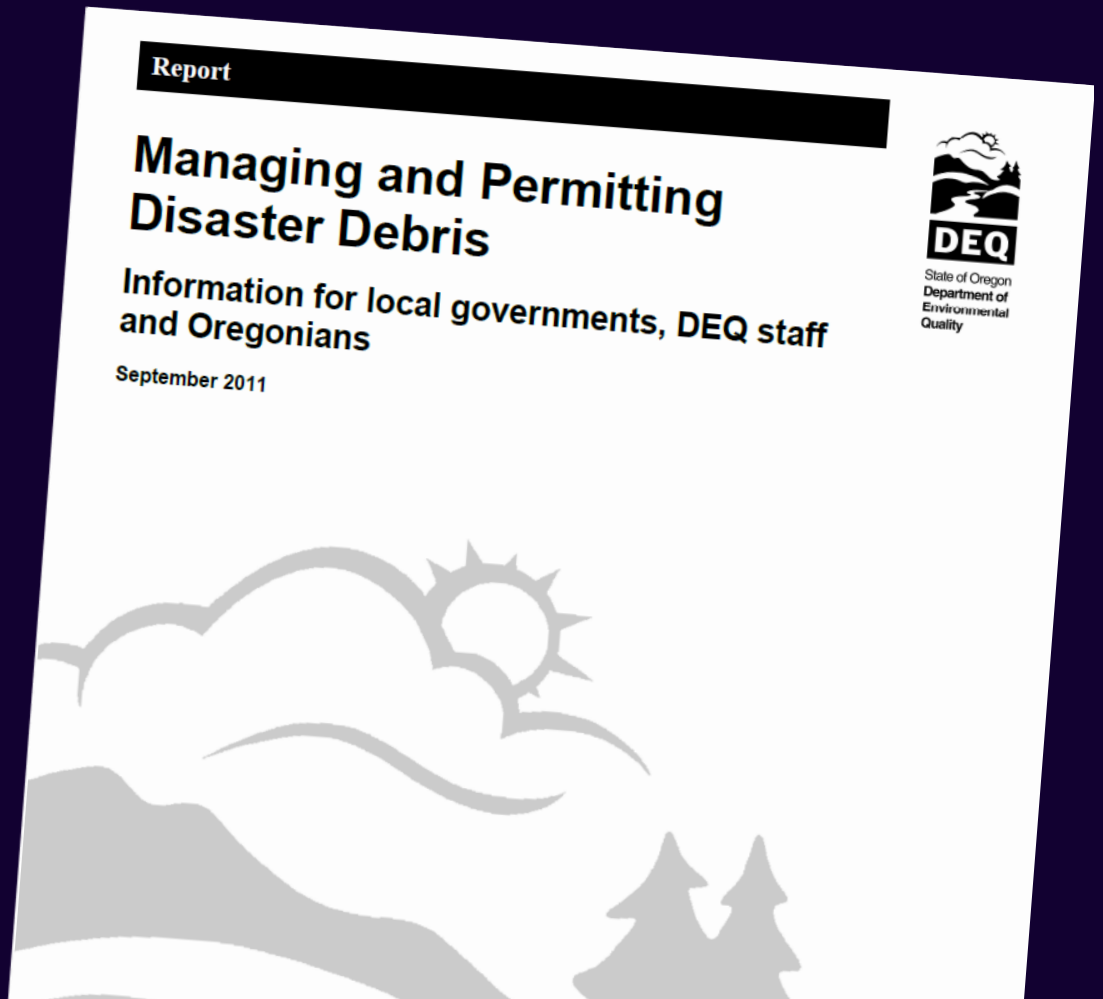
- Be sufficient in size with appropriate topography and soil type to prevent runoff or water quality impacts from storage of debris on the site. Paved surfaces are preferred. DEQ SW staff should work with state/local environmental agencies to determine appropriate topography and soil type to protect water quality.
- Be located an appropriate distance from potable water wells and rivers, lakes and streams. DEQ SW staff should work with other state and local agencies to determine appropriate setback distances.
- Not be located in a floodplain or wetland.
- Have controls in place to mitigate stormwater runoff, erosion, fires, vectors and dust.
- Be free from obstructions, such as power lines and pipelines.
- Have limited access with only certain areas open to the public, such as areas to drop off debris. Be able to have clear entrance and exit signage. Sites should be able to handle anticipated traffic flows.
- Be located close to the affected area but far enough away from residences, infrastructure and businesses that could be affected by site operations.
- Preferably be on public lands because approval for this use is generally easier to obtain. However, private lands may be convenient and logistically necessary for temporary debris storage sites. Local governments could consider entering into agreements with private land owners in advance of a disaster, establishing conditions for use of their land.

Step 3 – Selection Criteria (Con't)

- Consider locating debris management sites on property you own, as opposed to land owned by a private party
- It is best to locate sites on previously developed property, such as vacant lots
- Debris management sites can be located within an existing facility that is used for similar activities, such as an existing permitted landfill
- Check with regulatory agencies – i.e. SHPO for archeological concerns; USCOE for potential wetlands

Step 4 – Complete Appropriate Approvals & Permits

- Identify the approvals and permits required to establish a debris management site
- Including those required for specific debris management activities, such as burning, grinding, recycling, and staging of household hazardous waste



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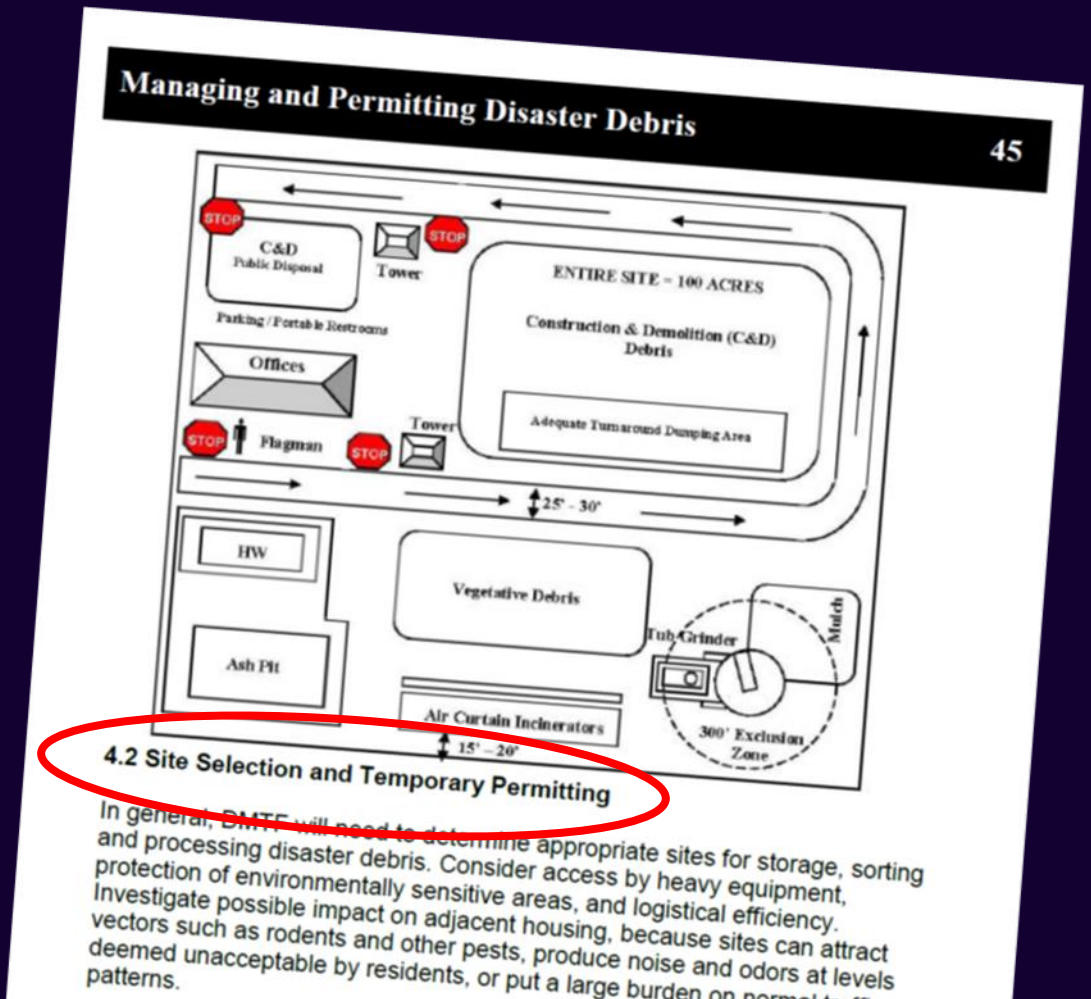


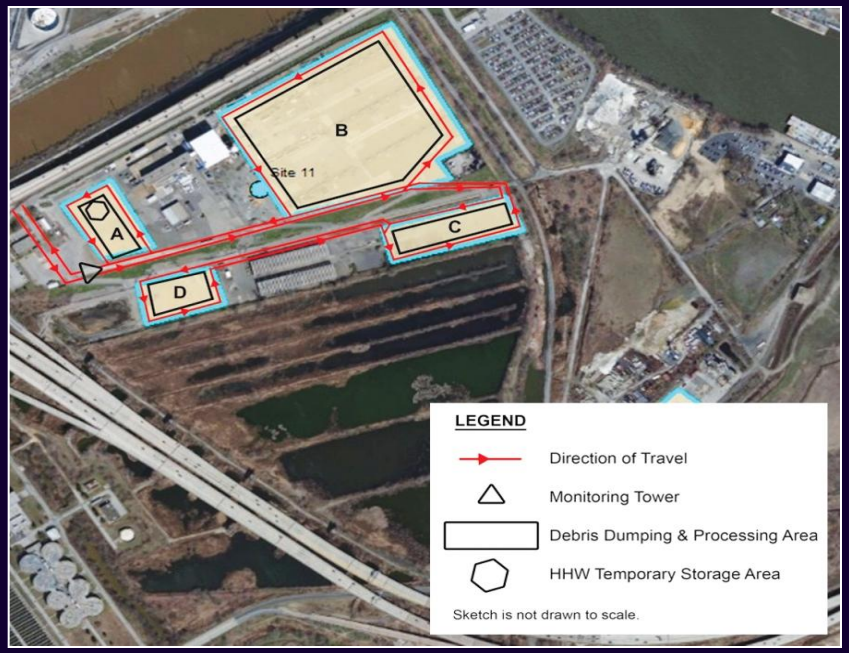
Step 5 – Do Baseline Environmental Information

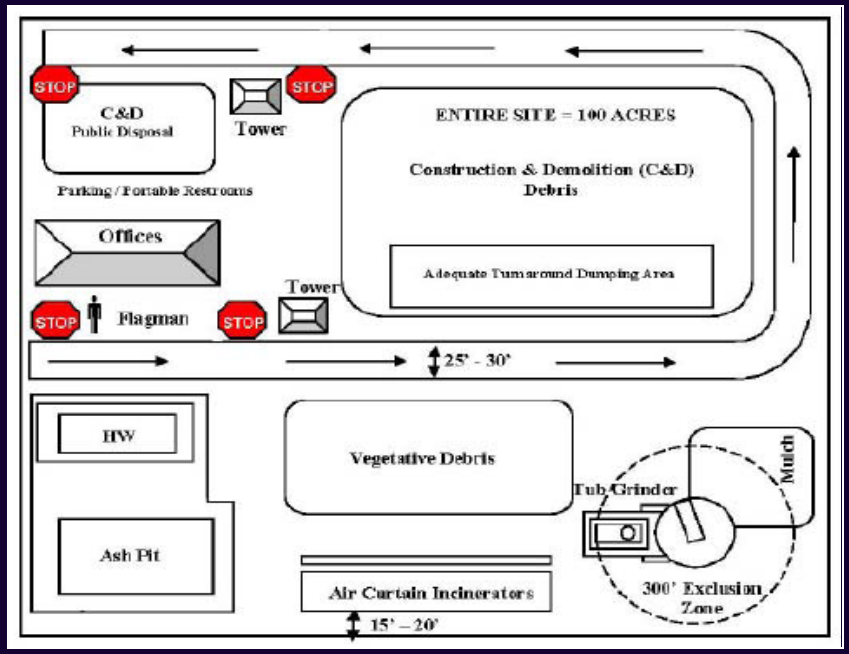
- Before operations begin, develop baseline environmental survey information
- Surveys should be completed for potential sites as part of the planning process

You will need a standard by which to return the site to pre-disaster conditions

Step 6 – Plan Your Site Layout

- Develop layouts for proposed sites addressing such issues as ingress and egress, traffic control, and placement and spacing of anticipated site activities





Step 7 – Plan Personnel & their Responsibilities

- Identify the personnel required to staff the debris management sites and describe their responsibilities
- Site Manager, Debris Monitors and Safety Personnel

Step 8 – Plan for Evaluation & Adjustments

- Develop a process for regularly evaluating the efficiency and effectiveness of debris management sites

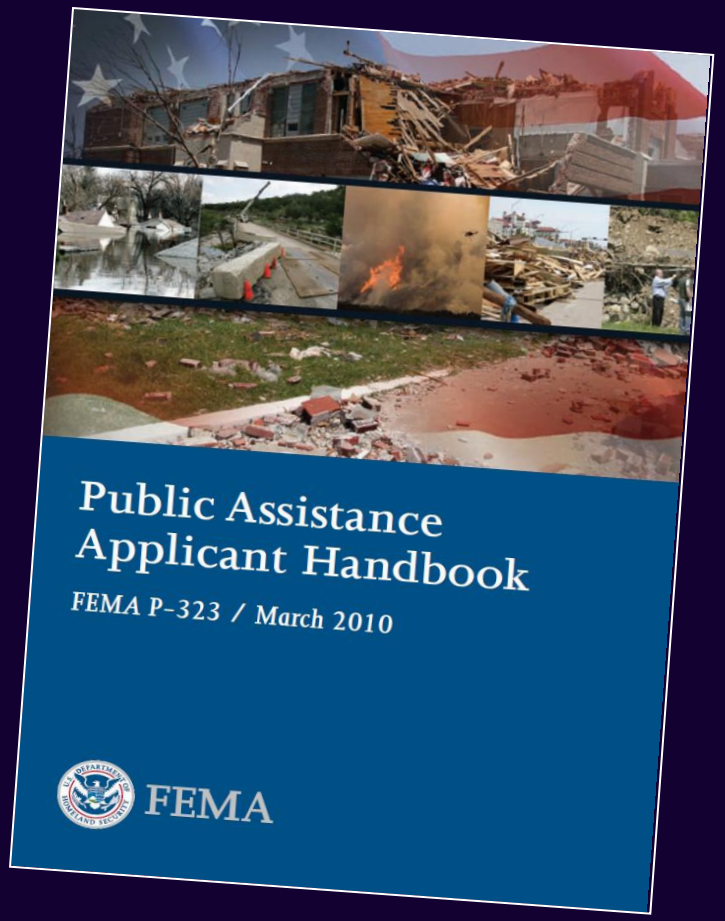
- Include plans for making adjustments in operations and for final disposal

Step 9 – Plan for Environmental Sampling

- Develop procedures for environmental sampling to determine if operations are adversely affecting the site and the surrounding environment
- There is guidance for this (EPA, DEQ, etc.)

Step 10 – Ensure your Work is Eligible

- Develop procedures for monitoring debris management sites and disposal activities to confirm and document completion of required activities
- There is also guidance for this (FEMA, State OEM, etc.)



Step 11 – Plan Closeout of Debris Operations

- Develop procedures for closing down debris management site operations
- Including, but not limited to, remediation activities and documentation of the final condition of the sites

Step 12 – Plan your Private Property Leases

- If land for a debris management site will be leased from private parties, ensure the lease agreement includes a formal process for acceptance of the property by the owner at the conclusion of debris management activities

Step 13 – Debris Reduction and Recycling

- **Incineration of Vegetative Debris** – Has a 95% reduction rate; ash can be used as a soil additive; cannot do it if mixed debris is there; address environmental issues.
- **Chipping and Grinding** – Has a 75% reduction rate; residue can be used as mulch or fuel to offset costs; can remove contaminants by hand; use soil shaker screens.
- **Recycling** – Reduction rate depends; plans should list types and end use products; pre-planning includes end-use products, potential markets and identify buyers

Step 14 – Final Disposition Operations

- Debris Management Plans should identify the final disposition of whole, reduced and recycled debris.
- Most cost effective way is to use your own normally used landfills. If not adequate, what's the next closest?
- Agreements among regional partners may work best. Can fees be waived? Can profits from sales be shared?

Step 14 – Final Disposition Operations

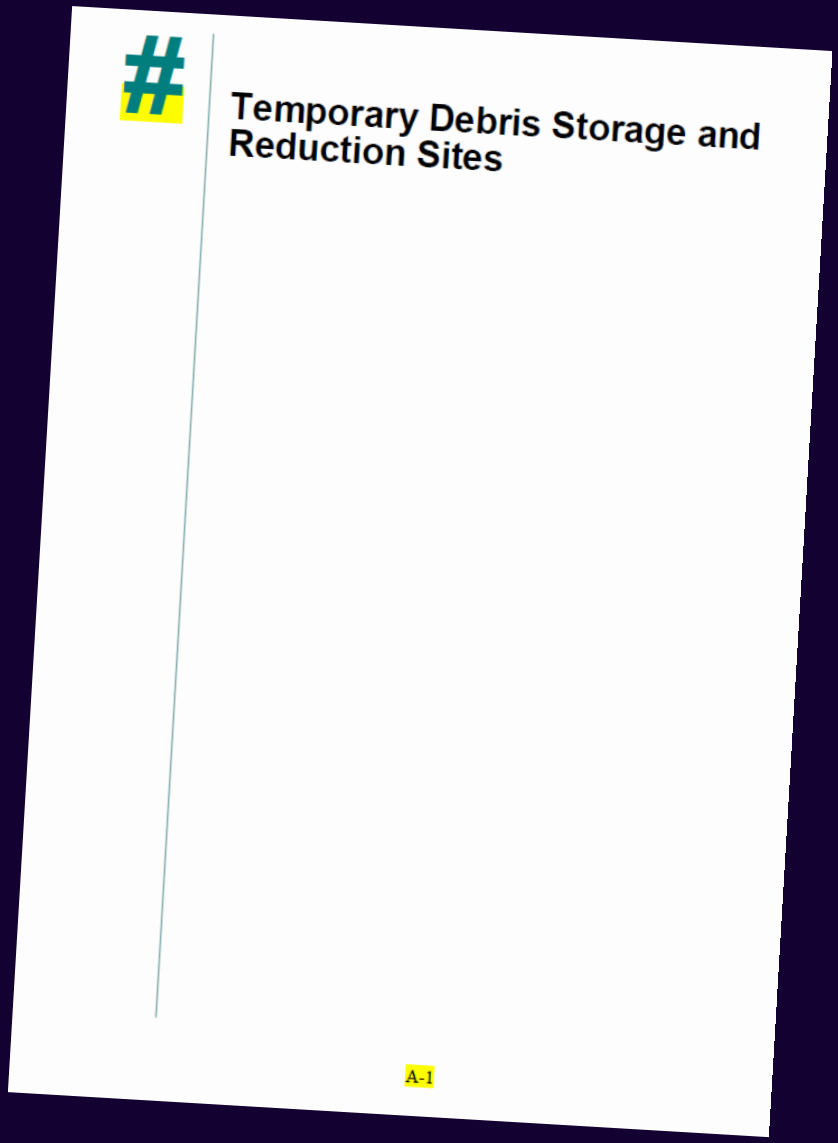
- Debris Management Plans should identify the final disposition of whole, reduced and recycled debris.
- Most cost effective way is to use your own normally used landfills. If not adequate, what's the next closest?
- Agreements among regional partners may work best. Can fees be waived? Can profits from sales be shared?
- **So – What's your plan?**

Questions to Consider

- Who knows the remaining capacities of your landfills?
- Are there restrictions to what that can be taken there?
- Do you have available property that can be used as a TDSR?
- If not, who has the responsibility to locate one?
- Who on your staff is available to work at the TDSR?
- Will contracting additional labor and equipment be necessary?

Guidance from the State OEM is coming!

TDSR Appendix from the Draft State Debris Plan



A Few Things in General to Remember

- There is Federal and State guidance out there – use it!
- FEMA does not "Qualify" contractors – Pre-disaster qualified contractors means they meet your qualifications
- "FEMA-approved contract and rates" – FEMA does not certify, credential, or recommend contractors
- Debris contractors do not have the authority to determine eligibility. Only FEMA determines eligibility
- Pre-event contracts give you flexibility
- Whatever you do, follow your own rules!

Thank You

QUESTIONS?

Activity

Who does what?