

4.4 Debris and Trash Management

Waste Control

<p>Description: Large volumes of debris and trash are often generated at construction sites, including packaging, pallets, wood waste, personal trash, scrap material, and a variety of other wastes. The objective of debris and trash management is to minimize the potential of stormwater contamination from solid waste through appropriate storage and disposal practices. Recycling of construction debris is encouraged to reduce the volume of material to be disposed of and associated costs of disposal.</p>			
<p style="text-align: center;"><u>KEY CONSIDERATIONS</u></p> <p>DESIGN CRITERIA:</p> <ul style="list-style-type: none"> • Implement a job-site waste handling and disposal education and awareness program • Provide sufficient and appropriate waste storage containers • Provide timely removal of stored solid waste materials • Train workers and monitor compliance <p>LIMITATIONS:</p> <ul style="list-style-type: none"> • Only addresses non-hazardous solid waste • One part of a comprehensive construction site waste management program <p>MAINTENANCE REQUIREMENTS:</p> <ul style="list-style-type: none"> • Inspect regularly • Empty waste containers regularly • Clean up loose trash and debris daily • Verify procedures are being followed • Train new employees and regularly re-train all employees 	<p style="text-align: center;"><u>APPLICATIONS</u></p> <p>Perimeter Control</p> <p>Slope Protection</p> <p>Sediment Barrier</p> <p>Channel Protection</p> <p>Temporary Stabilization</p> <p>Final Stabilization</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Waste Management</td> </tr> <tr> <td style="text-align: center;">Housekeeping Practices</td> </tr> </table>	Waste Management	Housekeeping Practices
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<p style="text-align: center;"><u>TARGETED POLLUTANTS</u></p> <ul style="list-style-type: none"> ○ Sediment ● Nutrients & Toxic Materials ○ Oil & Grease ● Floatable Materials ● Other Construction Wastes 	<p style="text-align: center;"><u>IMPLEMENTATION CONSIDERATIONS</u></p> <ul style="list-style-type: none"> ● Capital Costs ● Maintenance ● Training ○ Suitability for Slopes > 5% <p>Other Considerations:</p> <ul style="list-style-type: none"> • <i>None</i> 		

4.4.1 Primary Use

Debris and trash management is used to minimize floatables and other wastes in stormwater. By controlling the trash and debris onsite, stormwater quality is improved and the need for extensive clean up upon completion of the project is reduced.

4.4.2 Applications

Debris and trash management is applicable on all construction sites where workers are present. Even if the only construction activity is earthwork, workers will still have drink bottles, lunch bags, and other wastes that must be managed.

Solid waste management for construction sites is based on proper storage and disposal practices by construction workers and supervisors. Key elements of the program are education and modification of improper disposal habits. Cooperation and vigilance is required on the part of supervisors and workers to ensure that the procedures are followed.

The following are lists describing the type of targeted materials.

- Construction (and Demolition) Debris:
 - Dimensional lumber
 - Miscellaneous wood (pallets, plywood, etc)
 - Copper (pipe and electrical wiring)
 - Miscellaneous metal (studs, pipe, conduit, sheathing, nails, etc)
 - Insulation
 - Brick and mortar
 - Shingles
 - Roofing materials
 - Gypsum board
- Trash:
 - Paper and cardboard (packaging, containers, wrappers)
 - Plastic (packaging, bottles, containers)
 - Styrofoam (cups, packing, and forms)
 - Food and beverage containers
 - Food waste

4.4.3 Design Criteria

- Construction plan notes shall include proper debris and trash management procedures.
- Show the location of waste storage containers on the drawings, or require the contractor to add this information.
- The contractor should be required to designate a site superintendent, foreman, safety officer, or other senior person who is onsite daily to be responsible for implementing debris and trash management.

Storage Procedures

- All waste sources and storage areas shall be located a minimum of 50 feet away from inlets, swales, drainage ways, channels and other waters, if the site configuration provides sufficient space to do so.

In no case shall material and waste sources be closer than 20 feet from inlets, swales, drainage ways, channels, and other waters.

- Construction waste and trash shall be stored in a manner that minimizes its exposure to precipitation and stormwater runoff.
- Whenever possible, minimize production of debris and trash.
- Instruct construction workers in proper debris and trash storage and handling procedures.
- Segregate potentially hazardous waste from non-hazardous construction site debris. Hazardous waste shall be managed according to the criteria in *Section 4.1 Chemical Management*.
- Segregate recyclable or re-usable construction debris from other waste materials. A goal of re-using or recycling 50 percent of the construction debris and waste is recommended.
- Keep debris and trash under cover in either a closed dumpster or other enclosed trash container that limits contact with rain and runoff and prevents light materials from blowing out.
- Check the municipality's storage requirements. Some municipalities have specific requirements for the size and type of waste containers for construction sites.
- Do not allow trash containers to overflow. Do not allow waste materials to accumulate on the ground.
- Prohibit littering by workers and visitors.
- Police site daily for litter and debris.
- Enforce solid waste handling and storage procedures.

Disposal Procedures

- If feasible, recycle construction and demolition debris such as wood, metal, and concrete.
- Trash and debris shall be removed from the site at regular intervals that are scheduled to empty containers when they are 90 percent full or more frequently.
- General construction debris may be hauled to a licensed construction debris landfill (typically less expensive than a sanitary landfill).
- Use waste and recycling haulers/facilities approved by the local municipality.
- No waste, trash, or debris shall be buried, burned or otherwise disposed of onsite.
- Cleared trees and brush may be burned if authorized by the municipality and proper permits are obtained from the county and/or TCEQ. Chipping of trees and brush for use as mulch is the preferred alternative to burning or offsite disposal.

Education

- Educate all workers on solid waste storage and disposal procedures.
- Instruct workers in identification of solid waste and hazardous waste.
- Have regular meetings to discuss and reinforce disposal procedures (incorporate in regular safety seminars).
- Clearly mark on all debris and trash containers which materials are acceptable.

Quality Control

- Foreman and/or construction supervisor shall monitor onsite solid waste storage and disposal procedures.
- Check the site, particularly areas frequented by workers during lunch and breaks, for loose trash and debris and the end of each work day.

- Discipline workers who repeatedly violate procedures.

4.4.4 Design Guidance and Specifications

No specification for debris and trash management measures is found currently available in the Standard Specifications for Public Works Construction – North Central Texas Council of Governments.

4.4.5 Inspection and Maintenance Requirements

Debris and trash management measures should be inspected regularly (at least as often as required by the TPDES Construction General Permit). If waste containers are overflowing, call the waste hauler immediately for a pick-up. If loose trash and debris are found around the site, reinforce proper waste management procedures through education of workers.

Construction sites must maintain separate waste containers clearly marked for non-hazardous, hazardous and recyclable waste. Check solid waste containers for chemical, special, or hazardous wastes that are improperly placed in them. These wastes shall be removed and handled according to criteria in *Section 4.1 Chemical Management*.

The site should be checked for loose litter and debris at the end of each working day.