Transporting Landscape Materials

Note: This safety sheet does not address transporting chemicals, which will be covered further in a future issue. For more on safely operating trucks and trailers, see the sheets on Properly Towing Trailers and Safely Driving Trucks with Trailers.

Key Points

- If landscape materials are not properly loaded, secured, covered and unloaded during the transportation process, serious incidents can occur – everything from traffic accidents caused by a tree falling off a trailer or a truck losing a wheel or blowing a tire because it’s overloaded to a jobsite accident involving equipment used for unloading.
- Due to the diverse array of materials our industry uses (soil, compost, mulch, sand, gravel, sod, grass clippings, plants, water, salt, pavers, bricks, stone, timbers, retaining-wall systems, fencing and other hardscape elements) and the fact different items should be handled in different ways, safely hauling them can be particularly challenging. Some of the most common mistakes are neglecting to place/secure materials properly and overloading.
- Putting a clear material-transport plan in place and following this plan will not only reduce the risk of injuries and fatalities, but also lower insurance premiums, prevent costly lawsuits and help preserve a company’s reputation.

Employers’ and Supervisors’ Checklist

✓ Remember that if something falls off your truck – even a piece of gravel escaped from an untarped load – in addition to safety being compromised, there will likely be damage costs, and your public relations will take a hit because your company’s name is on its trucks.
✓ Create a written policy regarding properly placing materials on trucks and trailers and securing, covering and unloading them and make this part of your company’s overall safety program. Ensure every employee receives a copy.
✓ Train employees in the areas noted above as well as in proper lifting techniques using their bodies and equipment. Remember, employees must be trained to safely use each particular machine you require them to operate, and you must make sure they fully understand this training.
✓ Emphasize the importance of always using a spotter when backing a truck, trailer or any equipment. For many companies, the majority of accidents that occur during loading and unloading stem from drivers and equipment operators backing up without a spotter.
✓ Make sure employees wear necessary personal protective equipment.
✓ Ensure employees cover with a tarp all loads containing landscape materials. Laws regarding tarping vary from state to state (check with your state DOT to learn your state rules), with some requiring tarps for all loads and others not. Even if a tarp isn’t required, covering every load is a good idea.
✓ If your company transports liquid loads, consider using tanks with baffles that can prevent the front-to-back and side-to-side movement of the liquid that can push a vehicle forward or contribute to it overturning.
✓ Choose the right trucks and trailers for your operation based on the types and quantities of materials you’ll carry and your company’s loading/unloading methods. Choices in the landscape industry range from small pickup trucks to truck/trailer combinations that can haul up to 80,000 pounds. Roll-off systems, which allow truck beds
to be changed to transport different items, and stake-side beds, which can offer side loading/unloading, are popular with some companies.

✔ Consider adding some truck/trailer customizations that will improve safety. Tarps, for instance, should be secured on all sides. This is much easier to do if your trucks and trailers have permanent hooks spaced appropriately or tie-down rails. Standard models don’t always have these, but equipment manufacturers can add them as well as grab handles and steps, which can prevent injuries.

✔ Pick the right tarps for your applications. Many types of fabric are available, from polyvinyl to canvas (which keeps moisture out of bulk materials) to woven cloths that allow plant material to “breathe,” preventing damage. Many companies prefer flow-through tarps, which allow air to flow through the fabric and reduce the wind flapping that can cause tarps to rip, come loose or blow off.

✔ Provide the right equipment for loading/unloading and material handling. For handling bulk materials, this could be a skid-steer loader or front-end loader with a bucket. For material on pallets or in bags, a forklift, front-end loader or skid-steer loader with a fork attachment might be appropriate. Equipment that has the ability to reach to the middle of the truck bed or trailer is best. If your company is small and can’t justify purchasing loading/unloading equipment because it doesn’t often perform jobs in which it would be used, rent the equipment when it’s needed.

✔ Be sure to consider the moisture content that might be present in various materials when you choose loading equipment and when you train employees. For example, a skid-steer or tractor loader that can handle a pallet of dry sod could tip forward when raising a pallet of wet sod.

✔ Provide barriers such as plywood or 2x6s to box in bulk material in truck beds or on trailers when multiple types of materials are being hauled.

✔ Supply all items, tools, equipment and training needed to properly stabilize and secure materials for transport. For example, bagged products and pallets of material can be stabilized with shrink warp and tied down with fabric cargo straps tightened with a ratcheting mechanism.

✔ Adhere to all highway safety regulations. Know which local, state, and/or federal regulations apply to your vehicles and/or drivers.

✔ Ensure your company’s trucks and trailers do not exceed gross vehicle weight limits. This creates numerous safety hazards and leads to significant fines. In addition to the immediate safety concerns, repeated overloading causes excessive wear and tear to multiple truck/trailer components. An axle could break, studs holding tires on could crack, etc., causing accidents.

✔ Know that overloading is particularly easy to do in our industry because the need for large quantities of light bulk material such as mulch often leads companies to spec oversized truck beds, and people tend to think it’s okay to load a bed until it’s physically full. While this might be fine when the material is grass clippings, it could spell disaster when employees load the same truck with soil or sand.

✔ Know – and make sure employees know – how to calculate the weight of the materials you haul, taking into account their moisture content (which can increase weight up to 30 percent). Correlations between yardage and pounds can be found on the Internet. Some things you can do to help employees with this include: providing information on the weights of each bucketful (based on the machines/buckets your company uses for loading) or wheelbarrow full of the types of material your company typically hauls and how many buckets full or wheelbarrows full of material can be put in particular truck beds or on specific trailers; and calculating the heights on truck beds and trailer sides to which various bulk materials can be loaded if they are evenly distributed. Remember, this requires knowing material weight, moisture content and truck/trailer capabilities, and you should regularly verify your calculations using certified scales.

✔ Be aware many towing regulations are governed by state vehicle codes and vary widely from state to state. Make sure you know and follow the requirements for all states in which your trucks and trailers operate.

✔ Randomly observe/inspect each crew’s material-transport practices on at least a monthly basis.

✔ Take seriously and follow up on any complaints regarding the ways in which your company transports materials.
Employee Dos and Don’ts

Do:
- Follow your company’s policy regarding properly placing materials on trucks and trailers and securing, covering and unloading them.
- Wear all needed PPE. This includes gloves, pants (material will get in your shoes and wear on your feet if you wear shorts), boots that will protect your feet if you drop something, eye protection, ear plugs if you’re working around equipment and a dust mask if you’re dealing with dusty materials.
- Only load or unload trucks and trailers in clear, open areas with good visibility.
- Use equipment such as skid-steer loaders and devices such as wheelbarrows and hand trucks as much as possible when loading/unloading materials from trucks and trailers and transporting material at jobsites.
- Know how to calculate the weight of the materials being transported, taking into account their moisture content. You also need to know the weight of each bucketful of material you move with equipment (to prevent overloading the machine) or wheelbarrow full of material. Ask your supervisor for guidance regarding this.
- Ensure loads are properly distributed and balanced in truck beds and on trailers.
- With trailers, place heavier cargo toward the front, ahead of the axle, and center it left-to-right. This will reduce trailer sway. With trucks, place heavier materials as far forward as possible and center it side-to-side.
- Distribute the weight of bulk materials as evenly as possible in truck beds and on trailers.
- When stacking materials, put the heaviest items at the bottom and the lightest ones on top.
- Properly stabilize, tie down and cover all loads.
- During the pre-trip inspection you do before hauling any load, check lug nuts on all truck/trailer tires to make sure they are tight and damage free.
- When possible, unload all items from trucks and trailers in one stretch. Reducing the amount of time spent climbing on and off trucks and trailers reduces chances for injuries.
- Work together when loading or unloading manually. One person should hand down items to another standing on the ground.

Don’t:
- Perform any task if you are uncomfortable from a safety standpoint, don’t think you have been adequately trained or feel you didn’t fully understand training. No job is worth injuring yourself. Talk to your crew leader or a supervisor about your concerns.
- Operate any vehicle or piece of equipment until you have been trained in its operation, understand this training and are comfortable with your skills.
- Load a truck or trailer to the point it’s physically full, regardless of weight. Just because material fits in a truck or on a trailer doesn’t mean it should be there. Know gross vehicle weight ratings and don’t exceed them.
- Back a truck or trailer or use equipment to load/unload trucks and trailers without a spotter.
- Be hasty when securing tarps. Tarps should be secured on the front and back and both sides. Secure mounted tarps in at least three places on both sides. Secure tarps that aren’t mounted in the front and back and at least three places on both sides.
- Be a cowboy when handling materials. Examples of this behavior include competing to see who can shovel mulch the fastest, overloading wheelbarrows, lifting materials weighing more than 50 pounds by yourself and otherwise overworking to show off or impress the boss.
- Dump material from a truck or trailer that isn’t on level, stable ground. When a bed rises during a dump, weight is concentrated on the rear axle, and this can cause the truck or trailer to tilt or tip.
- Jump out of truck beds or trailers. Use steps and handholds where they are available. Where they aren’t, sit on the lowest edge, then lower yourself carefully to the ground.
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