

Dump Truck Fleet Safety



Table of Contents

Introduction	3
Written Program	3
Program Administration.....	4
Drivers Responsibilities.....	4
Driver hiring and selection.....	5
Evaluation Criteria	5
Driver Training.....	6
Driver Discipline	7
Drug and Alcohol Testing.....	7
Emergency Equipment.....	7
Vehicle Inspection, Maintenance and Recordkeeping.....	7
Safe Maintenance Work Practices	8
Vehicle use Safe Operation.....	8
Vehicle Use Safe Operation Snow Removal	10
Accident Reporting & Analysis	12
Conclusion	13



Introduction

Dump trucks play an integral roll in Public Works Departments. They come in several sizes from single axle to wheelers to tri axel trucks. They are designed for several purposes. They are used to haul aggregate, tow equipment to jobsites and plow. However, if not properly maintained they can be very dangerous to operate. It is very important that drivers do a comprehensive daily pre and post trip inspection to keep vehicles properly maintained and in good operating condition throughout the year. A dump truck in disrepair is an unsafe dump truck.

Operating a dump truck can be very tricky. They are used as a work horse. They do not stop and start and handle like a sports car when loaded, unloaded, towing or plowing. They have blind spots that make them difficult to operate when backing. Always remember when driving a dump truck, your municipalities seal is on the side of the truck which acts as a billboard while being seen driving down the road.

Not only is it important to know the driving, loading / unloading towing and plowing characteristics of a dump truck, it is important for municipalities who have dump trucks in their fleet to have a Fleet Safety Program. In this best practice we will outline what you should consider when creating a comprehensive Fleet Safety Program.

The program should contain the following elements:

- Written Program
- Program Administration
- Driver Selection
- Criteria Evaluation
- Training
- Discipline
- Drug and Alcohol Testing
- Emergency Equipment
- Vehicle Inspection & Vehicle Maintenance & Recordkeeping
- Safe Maintenance Work Practices
- Vehicle Use / Safe Operations
- Vehicle Use / Safe Operations Snow Removal
- Other Driving Conditions
- Accident Reporting & Analysis

Written Program

First your written policy should be department specific with policies for operations and training requirements.

It is a best practice to create a Fleet Safety Program. Your program first should have a Safety Mission Statement that outlines the Public Works Department's commitment to safety. It should outline what is expected of drivers who operate dump trucks in a safe

manner during all working environments and conditions. As part of this program, the department should have a policy of conducting safety committee meetings with drivers on a regular basis as a mechanism to bring any safety concerns to the Public Works Director. During safety committee meetings with drivers, it is a best practice to establish an annual safety goal and a written action plan as to how drivers can obtain the goal. By creating and following the action plan, it will provide drivers with a safety focal point to keep safety on the forefront at all times. Safety goals and action plans should be an agenda item and reviewed at each meeting.

There should be a policy on use of personal vehicles for municipal business there should be guidelines for part time or seasonal drivers your program should outline what is expected during the use of personal vehicle for municipal business and establishes a minimum requirement for insurance coverage. Your program should prohibit of personal use of municipal vehicles by authorized drivers and by family members and others

Program Administration

You should designate a person (department leadership, HR or Safety Manager) who has the overall responsibility for the program administration including:

1. Overseeing development and implementation of a Fleet Safety Program,
 - Obtaining MVRs pre-employment and annually thereafter for all drivers (*Full-time, part-time, and seasonal drivers.*),
 - Compliance with Maine Teen Employment Laws regarding vehicles,
 - Adopting a set of fair and responsible standards for all drivers,
 - Establishing acceptable driving records as a condition of employment,
 - Auditing periodically for department compliance.

Department heads should be responsible for compliance with the program within their Department, including:

- Ensuring that all operators have the required license for the type of vehicle being operated,
- Conducting or providing driver training for all operators,
- Adopting a set of fair and responsible standards for all drivers,
- Maintaining operation and maintenance files for each vehicle and piece of equipment,
- Ensuring that pre-trip and post-trip inspections are being conducted and documented.

Drivers Responsibilities

- Adhering to all policies and procedures governing the operation of their vehicle,
- Maintaining a professional appearance,
- Ensuring safe operation of all vehicles and equipment,

- Conducting and documenting required pre-trip and post-trip inspections, including defect reports,
- Submitting any accident reports,
- Submitting a copy of current driver' license for obtaining Motor Vehicle Record (MVR),
- Keeping the Supervisor or designee advised of changes in license or driving status,
- Prohibiting use of assigned vehicle by anyone not authorized to drive the Municipal vehicle.

Driver hiring and selection

There should be a driver hiring / selection process. Careful attention should be paid during this process. Dump trucks are substantially longer and wider than a car. Requires more space and additional reliance on the side mirrors for changing lanes and they do not respond safely to abrupt steering maneuvers especially when loaded or towing equipment.

Only authorized drivers should be allowed to operate this type of vehicle. The authorization process should include full-time, part-time or seasonal employees.

- When vehicle operation is a required job duty of a position it should be stated clearly in the written job description for the position.
- Authorized drivers must possess a valid driver's license of the proper type and class of vehicle.
- Obtain MVRs on all new employee applicants prior to hiring. If their duties will include driving on behalf of the municipality, they should meet predetermined standards.
- Establish an acceptable driving record as a condition of employment up front.
- Adopt for all drivers a set of standards that is fair and responsible. Include disciplinary procedures that are appropriate for your entity and consistent with disciplinary procedures for other safety processes and labor policies. These must be clearly stated, written and enforced consistently.
- Evaluation of driver qualifications should include annual review of MVRs and may include observation of or demonstration of driver proficiency and job shadowing by an experienced driver.
- The selection process should include initial and periodic review of qualifications, operating records and driving ability.

Evaluation Criteria

Criteria (both on-the-job and off-job violations) that may be used to disqualify a person as an authorized driver include:

- Three (3) or more moving violations in a 36 month period;
- Driving under the influence of alcohol or drugs in the last three years;
- Hit and Run accident;
- Failure to report an accident;

- Operating a vehicle under a suspended or revoked license;
- Homicide, assault or a felony arising from the operation of a motor vehicle;
- Reckless driving or “criminal speeding” violation in the last 3 years (Title 29-A, Sec. 2074);
- Driving without the municipalities consent
- Failure to obey or eluding an officer
- Falsifying an accident report
- Larceny involving a motor vehicle

Driver Training

The best way to train individuals how to safely operate dump trucks is to provide actual behind the wheel training from an experienced driver. Topics that should be addressed during driver training should include most, if not all, of the following topics:

- Driving with your lights on when plowing or not plowing
- Using your mirrors frequently
- Use your turn signals
- Giving other vehicles the right of way
- Not frequently passing other vehicles
- Driving below the speed limit
- Staying primarily in the right lane
- Avoid driving next to ditches when loaded
- Avoiding all aggressive driving maneuvers
- Staying focused / no distractions
- Avoid backing whenever possible
- Use of a spotter when backing if needed
- Knowing where the blind spot is when backing
- Defensive driving techniques
- Cargo handling / loading and unloading
- Securement and safe transport
- Safe Plow Mount and Dismount
- Safe Plowing Techniques
- Speeding
- Intersections
- Improper lane use
- Turning
- Passing & Signaling
- Following distance
- Stopping
- Parking
- Drivers should receive training on your disciplinary procedures
- Use of safety devices
- Equipment familiarization using operators’ manuals that have safe operating procedures.
- Routes & schedules
- Local, State % Federal Regs.

- Vehicle inspection and maintenance
- Distracted driving

All authorized drivers should complete a defensive driving type program within the first two years of employment. All authorized drivers should complete a defensive driving type program at least every five years thereafter.

Driver Discipline

Any driver who does not maintain an acceptable standard should be coached and corrective actions taken as outlined in the municipal employee disciplinary process.

Adherence to the Fleet Safety Policy should be considered in performance reviews and other personnel decisions to hold drivers accountable for their actions. As mentioned earlier, always remember, your municipal seal on your vehicles is a bill board going down the road.

Drug and Alcohol Testing

You should adopt a comprehensive Drug & Alcohol Policy prohibiting the use of such substances while operating a vehicle over 26,000 GVW or a safety sensitive piece of equipment. Both State and Federal Laws have specific requirements for Commercial Driver's License (CDL) drivers. This includes a requirement for random drug use screening.

Emergency Equipment

Drivers should be trained in the proper use of all equipment. Vehicle restraint systems are to be maintained in an operable state and utilized by all drivers and passengers.

First aid kits, emergency signaling device and a fire extinguishers should be inspected daily during pre-trip inspections. First aid kits should be restocked as needed. Fire Extinguishers should be replaced if found defective at any time or during documented monthly inspections.

Vehicle Inspection, Maintenance and Recordkeeping

Things break. Things stop working for no apparent reason. Things occasionally need to be replaced. To do its job, your truck needs to be in good repair, which is why it's important to keep up with regular maintenance of your truck. A dump truck in disrepair is an unsafe dump truck. A complete Preventative Maintenance Program on vehicles and equipment should be developed that includes:

- Vehicle maintenance that is performed to meet manufactures recommendations
- Is completed by qualified persons
- Includes accurate recordkeeping of all service and repairs performed
- Includes pre- and post-trip inspections, conducted and documented, with defects noted and reported to supervisor or mechanic
- Requires inspections that include a review of all safety equipment

- Require Mechanics and/or service providers to document completion of repairs

Not following manufacturer's recommendations when performing regular (scheduled) maintenance may diminish the safety and performance of the vehicle.

Safe Maintenance Work Practices

When working on vehicles the vehicles should be locked out. When working under vehicles there should be two methods used to support the vehicles weight.

It is a best practice to use the redundancy method to support the vehicles weight. If for some reason one method fails, you have a backup to allow you to get out from under the vehicle.

If a situation arises in which you have to work between the dump truck bed and the frame, make sure that you have safely and properly blocked the bed and locked out the vehicle. If the truck bed slips or lowers while someone is tinkering around or working beneath it, they could be seriously injured or even crushed.

When working at heights that exceed 4 feet, fall protection is required. A rolling platform may be used to provide fall protection and can be used to gain access to dump truck bodies for cleaning and unplugging purposes.

Tire pressure is critical. It's important to check as part of the daily pre-trip inspection. If tire pressure is low on one side of the truck a tipping incident could occur when unloading due to the loads center of gravity changing as the dump bed is raised. As a best practice, it is recommended to equip all dump trucks with a tire pressure gauge and make sure drivers check pressure before every use.

Vehicle use Safe Operation

- If trucks are parked outside during the winter months, Make sure outlets used for block heaters are grounded.
- Inspect cords for exposed wiring and for damaged plug ends. Replace if damaged.
- Be cognizant of ground conditions (look for slip, trip and fall hazards) before exiting the vehicle.
- Use three points of contact when getting into and exiting vehicles.
- Never jump from a vehicle under normal operating conditions.
- Always make sure the windshield is clean
- Always check the mirrors to make sure they are properly adjusted.
- If windshield wipers are on, the lights are required to be on.
- Always wear your seat belt when driving.
- Do not drive distracted. This includes the following activities:
 - Talking on cell phone
 - Texting
 - Eating

- Drinking
- Avoid sudden stops. Avoid sudden changes in direction.
- Control speed going into a turn. Reduce speed if necessary.
- Avoid untimely braking. Always be mindful of the load you are carrying or towing.
- Never drive over the speed limit.
- Make sure the backup alarm is working properly and make sure no one or thing is in the back up area if backing is required.

It is very easy to tip over a dump truck that's on uneven ground, particularly during the first initial "hit" from whatever substance is filling it. There is a lot of force behind a flow of soil or gravel! Always double check the ground beneath your dump truck, and don't fill it unless the truck is as level as reasonably possible. Remember, always cover your loads to keep them contained when traveling to a jobsite.

The load that the dump truck is hauling needs to be centered between the rails of the truck bed. This will help improve your balance and help the truck stay as stable as possible. The center of gravity needs to be, well, centered. Make sure to spread the load out evenly throughout the bed. As mentioned earlier, even something as small as low tire pressure or a dip in the ground can upset the truck's balance, so check to make sure that everything's as level as can be before dumping the load.

Balance is the name of the game when it comes to operating a dump truck. Before you unload, make sure that you're on stable ground. The truck will become less stable as the bed is lifted, and this could cause it to tip over. Keep in mind that the longer the truck bed is, the easier it is to tip the truck. So with that being said, give your truck its best chance of staying upright by being on solid, level ground. Firmly packed soil or gravel are ideal for unloading.

Never overload your truck. Your dump truck has a weight rating for a reason. For best long-term care, you should try to avoid even hitting your maximum – but you should never exceed it. You can quickly warp the frame, damage the hydraulics, or cause other harm which manifests as on-road incidents that put yourself and others at risk. When towing, never tow beyond the tow capacity of your truck.

No matter how experienced a dump truck driver is, they should never attempt to operate the truck solo. *Always* have a partner acting as a spotter when maneuvering around a work site and assisting with other procedures like backing and unloading. Anyone working at a sight should be wearing class two division two high visibility vests.

If someone's helping out with navigating or unloading the dump truck, chances are you're going to be communicating with hand signals, not words. Make sure that both of you know exactly what each signal means. Proper signaling can help you avoid accidents, which means avoiding claims.

Obviously, you don't want to run over someone with your dump truck. Before you starting dumping your load, make sure the area is completely clear and free of people and

passers-by. If there are any lingerers, kindly ask them to move to a safe distance before starting to unload.

Another potential hazard is a shear-line hazard, which occurs when a large vehicle (a dump truck or tractor operates near a ditch bank. Large vehicles can place considerable pressure on the banks of ditches and the shoulders of roads. If the soil on the shoulder is weak from freezing and thawing or prolonged wet weather, the weight of a dump truck or tractor could result in soil collapse and a potential tipping incident.

Prior to dumping gravel to build roads at a new jobsite, conduct a pre jobsite hazard analyses to make sure there are no overhead power lines that you may accidentally come into contact with when the bed is in the raised position. The safest method of road building is to dump the load and spread it with a bull dozer not to set the tailgate, raise the bed and drive.

When towing, keep the truck and the trailer aligned so that they're as straight as possible. If they're jackknifed at all, it would be extra dangerous if the trailer tipped. If the loaded trailer tips it could force the truck to tip as well.

Keep your truck clean. Unsecured items can become projectiles that in the event of an accident, can seriously or fatally injure someone.

To avoid road rage:

- Do not cut people off
- Do not tailgate
- Use turn signals
- Do not use inappropriate gestures or verbal taunts
- Use horn sparingly
- Allow other drivers to merge
- Drive courteously

If confronted by an Angry Driver, do not make eye contact, do not engage in the confrontation, if they persist, stop and pull off the road and call for emergency help and drive to a police station

Vehicle Use Safe Operation Snow Removal

Do you drive the same routes? Can you identify special areas where you must employ different tactics for safe operation that may pose a problem for a different driver not familiar with your route? It is important that you have back up drivers trained and are aware of changes or problem areas in the event someone is out sick.

- **Know your route** – due a pre- season drive through
- Note any changes or problem areas
- Are there unusual areas that require special plowing techniques
- Back up drivers should be aware of changes or problem areas

- **Mark your turf** - Before the snow, take a look at the areas you'll be plowing. Keep an eye out for any obstacles that will be easily hidden in snow cover. Typical objects to watch for would include: bumper stops or speed bumps, curbs, sidewalk edges, shrubs, water drains, fire hydrants, fences and pipes that stick out from the ground.
- Always check for vehicle protection around fuel tanks and gas meters. After finding all obstacles in the area you're plowing mark anything that looks easily covered by snowfall with driveway stakes.
- **Make sure you're well rested** - Make sure you're well rested before your shift. Most plowing shifts are done at night or the early hours of the morning.
- When driving for long periods it is important to stop and take a break. When you are sitting, 50% of the load your body generates is put on your spine. It's a best practice to get out and stretch.
- **Cockpit set up**- Ensure there is a bend in the elbow.
- No turtle necks, sit up straight and tall!
- Hands positioned at $\frac{8}{9}$ and $\frac{4}{3}$.
- No gaps between the back and the seat.
- 2-finger gap between the back of the leg and seat.
- Hands in 'Handshake' position
- The cockpit of your workstation is where you drive. Proper set up will permit you to drive in a comfortable position for extended periods of time.
- Check the seat- adjust- is it an air-ride?
- The wallet acts as a pressure point.
- If the knees are higher than your hips, it flattens out the lumbar spine and you lose your natural curve.
- Stretch before you get in the vehicle.
- Stretch when you get out of the vehicle.
- Walk backwards a few steps!-it's correct posture and brings rest to muscles and tendons.
- When operating a vehicle for extended period of time, you generate lactic acids in the joints of your body. The only way to flush the acid out is to stretch. Over time, stretching will aid in preventing arthritis in certain joints.
- **Dress Appropriately** - As a snow plow operator, it's important to make sure you're wearing appropriate clothing. Make sure to dress in layers because doing so will help you stay comfortable in the truck cab and will provide you with the additional insulation needed for when you step outside of your vehicle.
- **Inspect vehicle and plow before plowing** - Before you head out to plow, make sure to inspect your vehicle and equipment. Make sure your defroster, lights, emergency lights and windshield wipers are functioning and that you have your emergency equipment in case of an emergency breakdown.
- It's a best practice to keep an emergency repair kit with basic tools easily accessible while on the road. These will have common replacement parts that may help you get back up and running in a pinch.
- **Watch Your Speed** It might seem like a good idea to try and get the job done faster, but it is not worth the injuries to your body, plow, or possible injuries to someone else. Don't drive faster than road conditions dictate.

- What area of your truck do you have the most control for “cushion of safety”? – the front.
- How far should you scan down the road in town and on the outer roads? Scan- 1 – 1 ½ city blocks, ¼ mile. Remember, it’s not as far as you can see, it’s being aware of what is around you too.
- What are the four parts of your total stopping distance? Total Stopping Distance: Perception, Reaction, Brake Lag, and Braking distance.
- Because of the weight of your truck, you should treat a yellow light the same as you would a green light? True or False
- Yellow light: NO! Never drive through a light that is changing from green to yellow to red. You do not have the time! Remember to ‘cover the brake’ when approaching a light to reduce your reaction time, and allow you to be ready to apply the brake.
- **Know your blind spots**
- Where are the blind spots in the vehicle/ equipment you operate?
- *Front, Sides, Rear?*
- How much distance is there before you can ‘see’ someone?
- Does fatigue affects your ability to ‘see’ someone or something?
- How can you reduce the blind spot?
- **Backing** - By far, the most common snow plow accident is a backing accident, and the cost of these accidents combined can be staggering.
- Have backing technologies been considered? Cameras, radar sensors and more can all be helpful in eliminating that big blind spot behind the plow truck, effectively improving the driver’s chance of seeing what may be lurking off the back bumper that they may not otherwise see.
- **Fleet Monitoring Systems**
- Have you considered purchasing systems that monitor speed, harsh driving conditions, distracted driving and can provide useful information in the event someone is trying to make a claim against you?

Accident Reporting & Analysis

- In the event of an accident, all representatives of the municipality should be guided by the following:
- First and foremost call 911
- Provide the dispatcher with as much information as possible so that the appropriate response to the situation can be made
- Be the last to hang up to make sure all dispatch questions are answered.

The driver should also request that all parties and property concerned remain at the scene of the accident until the accident investigation is completed by law enforcement. The involved employee(s) should refrain from making statements regarding the accident with anyone other than the investigating officer, municipal officials or municipal insurance company representatives. Statements should be confined to factual observations.

The involved employee(s) should follow guidelines established by the municipality for accident reporting and investigation. All collisions should be immediately reported to the

supervisor and insurance contact person. The Maine Department of Labor (623-7900) must be notified within eight hours of a fatality and within twenty-four hours for a serious injury requiring overnight hospitalization.

Conclusion

As you can see there is a lot to take in to consideration when developing a Public Works Fleet Safety Program. One of the best resources municipalities have is the highly qualified drivers who can assist you with creating policies and standard operating procedures. By using your highly skilled drivers as a resource in the development of your program, you are more likely to get buy-in after you roll out and implement your program.

Other resources that may be used are safe operating procedures found in vehicle Operator's Manuals. These safe operating procedures are from the manufacturer and are there for a reason. The overall goal is to create a Fleet Safety Program that is designed to prevent bodily injuries, or property and casualty damage claims. By preventing claims it leads to higher morale and productivity of the department.

This information is intended to assist you in your loss control efforts. "Best Practices" are developed from available current information but may not address every possible cause of loss. We do not assume responsibility for the elimination of all hazards that could possibly cause accidents or losses. Adherence to these recommendations does not guarantee the fulfillment of your obligation under local, state, or federal laws.