



SAFETY DIRECTOR BULLETIN



BRUSH COLLECTION OPERATIONS BEST PRACTICES

Springtime means spring cleaning and many agencies begin with branch and brush clean-up operations. Now is a good time to review your policies and practices for collecting brush along public roads.

There are two common practices for collecting brush; chippers and front-end loaders with a claw attachment. Each presents hazards. Some hazards are common to both operations, such as working on streets that are open to traffic. Other hazards are specific to the equipment being used.

Traffic Hazards

Collecting brush is considered a Mobile Work Zone. The minimum requirements are high-intensity amber warning lights that can be seen by vehicles approaching from either the front or rear of the crew and workers wearing ANSI Class 2 high-visibility outerwear. Be alert for obstructions to the amber lights being visible due to conditions such as raised truck beds, equipment, or damage to the lights. Also, due to the changing weather, retro-reflective outerwear can be a challenge. The changes in temperature between mornings and afternoons can mean three levels of outwear during the day. Make sure employees leave with and use high-visibility options that meet MUTCD requirements.

New Jersey has the most congested roads in the nation. Look for opportunities to go above the minimum safety requirements for crews working on the street.

- If crews are collecting brush in a development with one or two entrances, consider placing warning signs at the entrance(s).
- While most brush piles can safely be collected with the crew assigned, consider adding a trailing vehicle or flaggers for difficult locations.
- Schedule collections for areas around schools when school is in session and bus/pick-up/drop-off traffic is minimal. Likewise, schedule collections along commuter routes before or after times of heaviest traffic.

New Jersey public agencies have experienced a significant number of fatalities, injuries, and near misses when a vehicle approaching from behind the crew has been distracted or blinded by the sun and ran into the work vehicle. Workers must be aware that motorists are distracted, blinded, rushed, or inexperienced and the workers must watch their backs and the backs of each other.

Do not forget the hazard of the work vehicles arriving and leaving the operation, or moving from brush pile to brush pile. Nationally, half of work zone fatalities are from workers being struck by their work vehicles. There is a simple rule to avoid these incidents: **Drivers must not move a vehicle unless every worker on foot can be seen, either directly or in mirrors.**

Ergonomic Hazards

Regardless of the method of collecting branches and brush, workers will need to handle the vegetation to some extent. Whether with rakes or bending over to pick up branches, workers will need to be reminded to protect their backs, shoulders, and knees. Sprains and strains are the most common injuries to employees

- Evaluate rake handles. Are they the right length and diameter for workers? Are they in good condition?
- Observe workers as they rake, lift, and carry vegetation. Are they using the proper body mechanics? Take pictures and discuss footing, erect body position when using a rake, locking the lower back in the natural S-curve when lifting, and other concerns.

Chipper

Review these additional safeguards with crews who will be using chippers:



- Review the Owner's Manual and the safety warnings. Make sure a copy is available for reference.
- Review the pre-use inspection procedure. The best practice is to use a form from the manufacturer. Take the crew outside and go through the inspection process with the chipper. Explain the criteria for taking the unit out-of-service for deficiencies.
- Review the proper personal protective equipment that is needed. This should include hard hats, face/eye protection, hearing protection, and foot protection.

Operational best practices include:

- Do not wear loose-fitting clothing or gloves.
- Feed branches with the cut end first. Stand to the side and walk away when the branches catch.
- Use a tool or other branches to feed small brush into the chipper – never your hands. Very small branches and vegetation can be thrown directly onto the pile of chipped material.
- Follow guidelines for clearing jams. Be aware that knives can free-spin for minutes after the machine is turned off. Review Lock Out / Tag Out procedures for various maintenance operations.

Front-End Loader & Claw

For crews using front-end loaders, review the following safeguards:



- There are two significant **Crush Zones** for workers to be aware of:
 1. Between the truck/container and the loader, and
 2. Under the raised claw. It is not enough just for workers on foot to make eye contact with the loader operator. There must be a means, such as hand signals, for more definitive communication on the intent of the worker and operator.
- The operation entails a lot of movement within the work zone by the loader. This places a great responsibility on the operator to check behind, to the sides, and front of the loader before EVERY move, checking for people and cars.

Dump-Site

Crews must unload the collected vegetation at the end of their assignment. A dump site can be a dangerous place. There are typically no designated traffic patterns, multiple vehicles at any one time, and workers on foot. Discuss site safety, working around raised containers, and the requirement for high-visibility apparel.