

Mowing for Safety, Safely

Mowing is a straightforward method of controlling vegetation on rights-of-way. It is nevertheless important to safety, by allowing drivers to see the contours of any clear zone you have created beyond the shoulders of your roadways.

While keeping the clear zone discernible is a major reason for mowing, the practice also maintains the visibility of post-mounted delineators and hazard markers, which 3-foot-high grass can obscure. Labor-intensive trimming may be needed, too, where the mowers can't reach the grass immediately around delineators and markers.

Trimming of branches and cooperation with landowners are primary methods of controlling vegetation that limits driver sight distance to critical signs, such as STOP signs, and along intersecting roadways at STOP signs. However, mowing also serves in these situations, particularly the latter. On through roads, high grass can prevent the driver from gauging the potential for conflict at driveways and intersections and limit estimation of curve severity. Here are some mowing tips:

Time your mowing to growth cycles and weather. In hot, dry weather, grass will grow more slowly, and cutting it too short and too often exposes roots and soil to direct sun, causing them to dry out. Don't mow in wet conditions either. It's hard on equipment, as well as on the grass where the tractor bogs down.

Mow consistently the areas that you have designated for mowing. Drivers watch the patterns of mowed areas to evaluate the safety of the roadside.

Be alert for signs marking areas where mowing and vegetation control are limited for preservation of wildlife habitat or plant species. If you think these "no-mow" areas are becoming a safety problem, report them to your supervisor for review.

Where the roadside permits, on slopes that rise or fall 1 foot or less in 2.5 feet of horizontal distance, consider mowing 15 feet beyond the pavement edge. Mow farther if the slope remains gentle enough for you to reach the fore slope and one pass on the back slope of a ditch. Also mow farther to blend the maintained roadside with natural or planted vegetation beyond, such as wildflower beds.

On slopes that rise or fall more steeply, mow with a side-mounted unit or one swath past the point where the slope becomes steeper than 1 foot in 2.5 feet. Mow 2, 4, 5, or 8 feet behind guiderail, according to PennDOT Chart A, Minimum Unobstructed Distance behind Guiderail. The distances are based on how far the different guiderail types should deflect upon impact. A tree greater than 4 inches in diameter will impede deflection. Use a boom unit, if necessary, or selective herbicide application.

MOWING SAFELY

While this tech sheet has stressed the safety benefits that mowing affords drivers, don't forget your own safety.

Avoid mowing with a regular unit on slopes that rise or fall away more than 1 foot in 2.5 feet of horizontal distance. Use a side-mounted mower or a boom, and keep the tractor unit on the gently sloped surface.

Operate side-mounted or boom mower units on the uphill side of the tractor, where possible, to further diminish the possibility of overturning the tractor.

Before starting any mower, check the chain guard and other mower covers intended to keep debris from being thrown. Replace broken or missing debris guards immediately; don't operate a mower without them. A small rock or piece of a can or bottle becomes a dangerous projectile when launched by a mower. Cover all v-belts, drive chains, and power take-off shafts.

Raise mowers when crossing driveways and roadways.

Shut off power before checking any mower unit. Block the mower before changing or sharpening a blade. Any blade being reinstalled should be checked for cracks or damage that will lead to failure.

Place a Slow Moving Vehicle sign (reflective triangle) on the rear of tractors. Use rotating yellow beacons on the tractors, and install yellow flashers on the roll bar or top of the tractor cab. Operate these at all times. Install an orange pennant on a whip to show the location of the tractor over the edge of slopes. Use the tractor's headlights at all times.

Face oncoming traffic as much as possible when mowing around hazard markers, signs and guiderail near the edge of the roadway to watch for out-of-control vehicles.

Wear hearing protection and a safety vest. Wear a hard hat and safety goggles to protect yourself from branches and flying debris. Wear leather gloves and boots that have hard toes and soles.

TRAFFIC CONTROL

Mowing is a moving operation that typically takes place off the roadway, although sometimes the tractor must use the shoulder or even part of the travel lane as a side unit mows a narrow turf shoulder. Progress is not always steady in one direction, as a mower must sometimes double back to complete wide areas. Therefore, mowing requires traffic control different from other maintenance operations.

The most important traffic control (and safety) tactic is to make the mower unit highly visible to drivers, as noted in the previous section. Making the mower visible should not include use of a flashing arrow panel on the back of the tractor, unless operated in the caution mode, in which the flashing lights do not

form an arrow. On a tractor that must encroach on a travel lane, an arrow might suggest to motorists that they are being signaled to pass the tractor, a dangerous maneuver that could result in a conflict with oncoming traffic on a two-lane road.

Publication 212 section 212.402 exempt work (7) mowing operations on road with less than 10,000 vehicles per day and where equipment does not encroach on the roadway. However, it is safer to use a sign as well, even if you simply place a ROAD WORK AHEAD (W20-1) sign.

Establish work zone traffic control according to the applicable figures in Publication 213. For operations that do not use travel lane, figure 6 applies. It calls for use of the ROAD WORK NEXT ____ MILES (G20-1) sign. As work progresses, move the sign so there are no more than 3 miles between the sign and the location of the work. If the mowing takes place behind guiderail, more than 2 feet beyond a curb, or 15 feet or more from the edge of the roadway, the sign is not needed. If the mowing continues at a speed of more than 1 mph, the sign isn't needed if the mower is equipped with an activated, flashing or revolving yellow light. However, it is safer to use a sign as well. Remove the sign when work is not in progress, but do not remove the sign if the mower is stopped for repairs or adjustments.

Crews must follow all requirements of Publication 213 for mowing operations. For example, use a shadow vehicle whenever the mowing equipment is operating on the travel portion of the highway and the sight distance (in feet) to the equipment from behind is less than ten times the speed limit (in miles per hour). However, mowing operations on roadways with less than 10,000 ADT (average daily traffic) are exempt from the MUTCD and Publication 213 if the equipment does not encroach on the roadway.