

SNOW, SNOW, SNOW
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To plow or not to plow — good question!



By Clay Thompson

Anyone who has experienced a Wyoming winter most likely has used a few expletives when dealing with the wind and snow.

A safe bet is that, right after digging through snowdrifts in a driveway or road, the wind will rise and fill it right back in. Even that lone sagebrush can produce a troublesome drift.

Proper planning and some fall maintenance can significantly reduce problem snowdrifts.

Planning

Before adding buildings or roads on a property, determine the prevailing wind direction – the direction the wind blows from most. Many drifting problems are caused by prevailing winds which in Wyoming typically come from the southwest, west, or northwest.

Place structures and roads far enough from the upwind property boundaries to allow room for adding snow fences. Properly designed snow fences control where drifts form. The rule-of-thumb for determining where snowdrifts will occur downwind of a snow fence is 10 to 15 times the height of the barrier. For example, drifts from an 8-foot high snow fence could occur 80 to 120 feet downwind. Don't place buildings or roads in this area.

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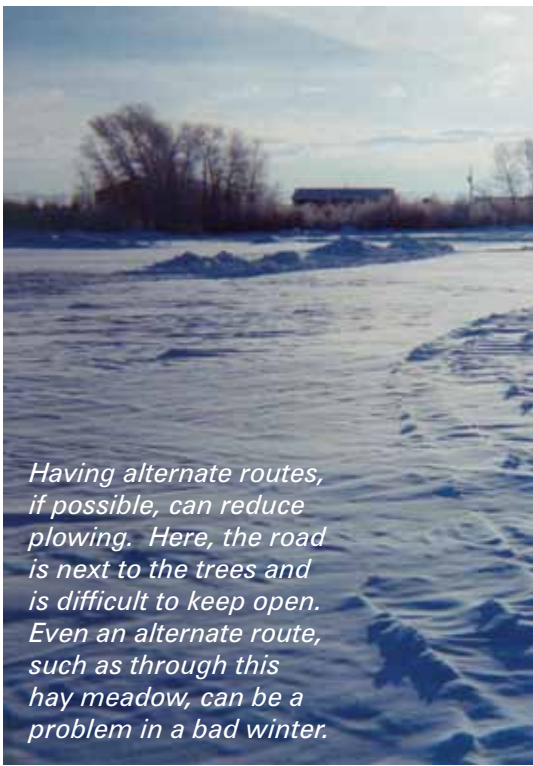
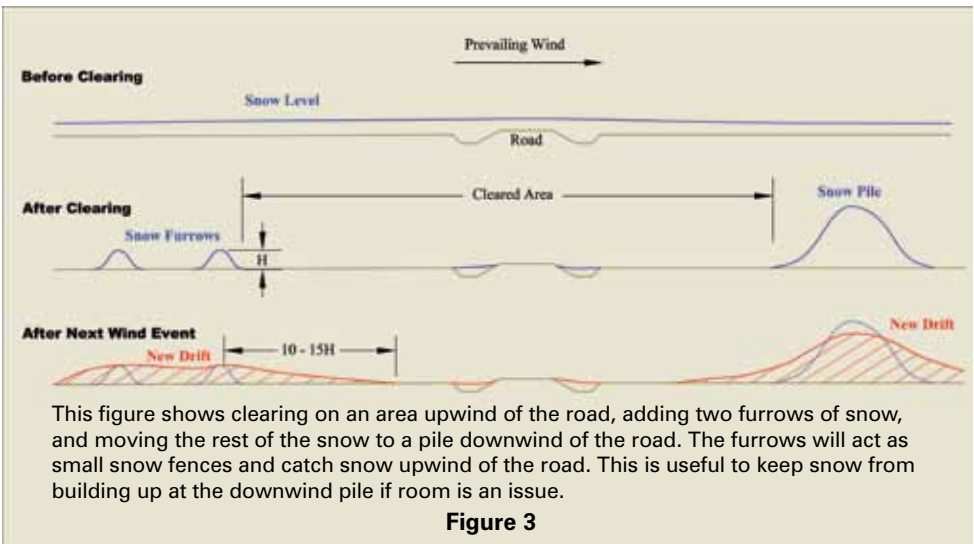
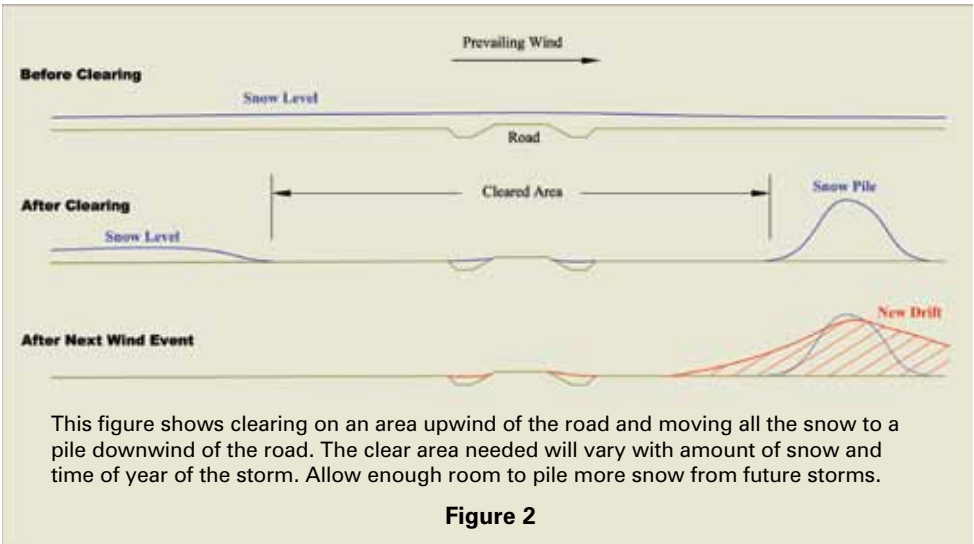
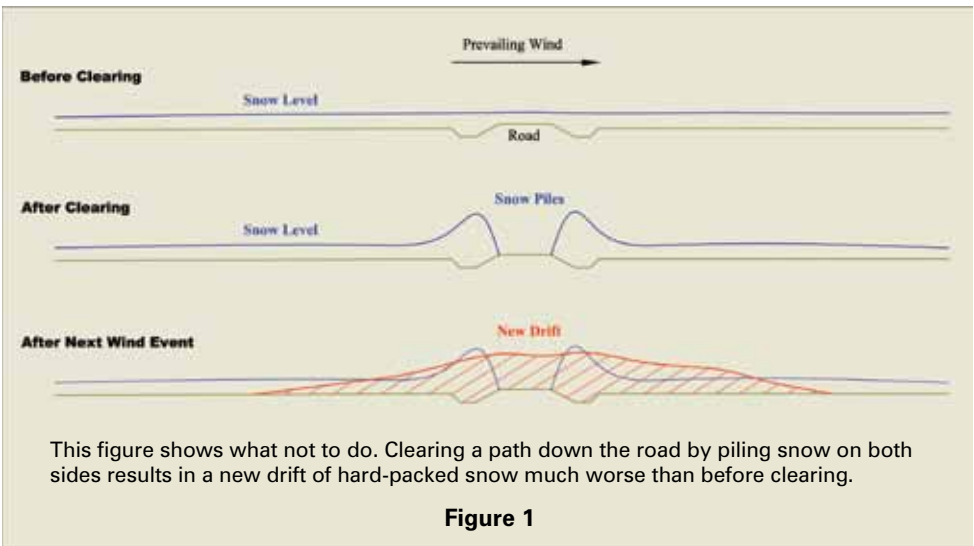
If there is no better option for placing a road, then elevate it and eliminate obstructions upwind. This should help the wind blow snow clear of the road.

Maintenance

Mowing tall grasses and weeds upwind of a road can eliminate or significantly reduce drifting. Remove weeds and/or debris that have collected on wire fences so they won't act as snow fences. Don't park vehicles or store equipment upwind of roads. If there is nothing to stop the wind, the snow will usually keep moving in a windy area.

Plowing or No Plowing

After a snowstorm, avoid driving on the road if possible until the wind has blown it clear. Any tracks in the snow will fill with hard-packed snow and be more difficult to clear. If snow has to be cleared from a road or around buildings, consider: what time of year is it, and what is the weather



Having alternate routes, if possible, can reduce plowing. Here, the road is next to the trees and is difficult to keep open. Even an alternate route, such as through this hay meadow, can be a problem in a bad winter.

forecast? If, for example, there is an early or late season snowstorm, most of the snow may melt and not be a problem. If it is an early winter storm, then the snow may be there until spring.

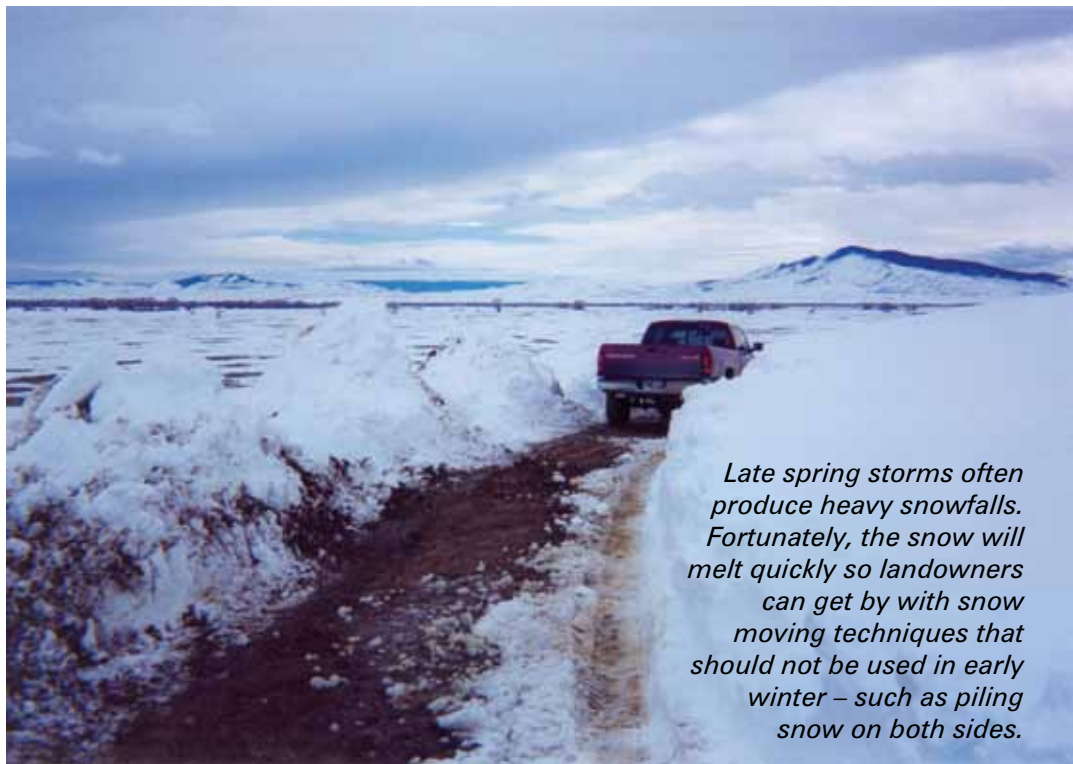
Weather forecasts can help you decide whether to plow or wait for the snow to melt.

If snow will likely stay – where the snow is moved becomes important. If not far enough away, the snow may catch more snow from the next storm and cause drifting that is in the way of future plowings.

Where someone lives in Wyoming will determine how much snow and wind is received and how much of a problem it will be. For example, Albany County’s high elevation and significant wind could mean an October storm might have effects into late spring.

Move Snow Downwind

Make sure snow is moved downwind (from prevailing winds) and far enough to allow room for more snow from future clearings. The most common equipment for moving snow is



Late spring storms often produce heavy snowfalls. Fortunately, the snow will melt quickly so landowners can get by with snow moving techniques that should not be used in early winter – such as piling snow on both sides.

a tractor with a loader and/or rear-mounted blade, a pickup or tractor with a front-mounted snow plow, or a tractor-mounted snow blower. Each of these has advantages and disadvantages based on cost and function.

Whichever type of equipment used, try not to leave any ridges or piles of snow upwind. These will start new drifts. Piling snow on both sides of the road is the worst thing that can be done (Figure 1). The next windstorm will fill this area with hard-packed snow, which will be very difficult to clear.

If possible, clear the area upwind and move snow to where it won't be a future problem (Figure 2). Adding furrows of snow upwind of a road to act as windbreaks can also help. However, placement is extremely important! Make sure these furrows

are far enough upwind so they don't cause drifting on the road – remember the 10 to 15 rule – otherwise, the next windstorm may fill them up (Figure 3). Back-drifting from the pile of snow will occur so allow room. These procedures should be followed around buildings, too.

There are some areas where drifting across a road can't be stopped. In this case, equipment capable of clearing these areas is needed or plan to have an alternate route for the winter. If the alternate route is on a neighbor's property, get permission first. If a neighbor does give permission, take care not to damage their property.

For really bad winters or tough locations, keeping roads open all winter may not be possible. In such cases, a visit to your local snowmobile dealer may be in order!

Clay Thompson works for the USDA Natural Resources Conservation Service as a civil engineering technician. Prior to that, he worked at the Laramie Rivers Conservation District designing living snow fences. He has years of experience dealing with snow. He can be reached at (307) 745-3698 or at clay.thompson@wy.usda.gov.



Drifting snow has made this driveway impassable.