



**Highway Maintenance Manual**  
**Chapter 06 Winter Maintenance**  
**Section 20 Snow Removal Materials**  
**Subject 70 Plows and Blades**

**Bureau of Highway Maintenance**  
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### ***1.0 Plows and Blades***

The preferred and primary method of snow removal is by plowing. Most units today are equipped with a primary plow and a wing plow. Some trucks are equipped with underbody blades for scraping the snow. Underbody blades with double rams have been shown to be very effective at scraping off snow and ice accumulations. The use of underbody blades in many instances may eliminate the need for auxiliary grader units during winter storm events. This may result in lower machinery costs. Some service providers have been able to document that underbody blades reduce the amount of salt needed. Blades should be mounted and operated at the best cutting angle that minimizes the skiing effect.

Wisconsin service providers use many types of plow blades including: flame hardened carbon blades; double blades; high carbon blades; carbide insert blades; rubber coated carbon insert blades (Joma). Many service providers also use cover blades with the different cutting blades. This practice can introduce a skiing effect. The skiing effect may result in increased salt usage as traffic may pack the unplowed snow on the pavement before another plowing round can take place, or more salt is required to clean up the snow and ice. Single blades that are wear resistant and fracture resistant are recommended.

The department recognizes that poor pavements that are tented, rutted, heaved or distorted will affect the efficiency of the plow blades. Salt usage may be higher on pavements with these types of defects.