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## Forest Health Protection and State Forestry Organizations

# Management Guide for Spring Freeze Injury

**Management**  
In forest and landscape setting,  
plant cold hardy stock.

**Host:**  
**All trees species**

### Topics

Damage 1

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### *Damage*

Freeze injury occurs during severe cold periods after tree growth has started in the spring. Most trees can withstand 1° or 2° below freezing even during shoot elongation, but if temperatures drop 2° to 5° below freezing, or more, during shoot elongation, damage can occur.

Young branch tips droop and turn brown on various woody and herbaceous species in an area after

temperatures drop several degrees below freezing during shoot elongation.

Tips of new growth are killed by extreme cold. Death of new shoots or needles is sometimes accompanied by discoloration of older needles. Dieback, stunted growth, and abnormal tree form may be caused by terminal bud death.

### *Other Reading*

Hiratsuka, Y. 1987. Forest Tree Diseases of the Prairie Provinces. Canadian Forest Service Information Report NOR-X-286. Northern Forestry Centre, Edmonton, Alberta. pp. 114-117.

Miller, P. R. 1993. Abiotic Diseases. *In* Diseases of Pacific Coast Conifers. USDA For. Serv. Ag. Handbook 521. Pacific Southwest Research Station. Albany, CA. pp. 1-32.

### Forest Health Protection and State Forestry Organizations

#### Assistance on State And Private Lands

Montana: (406) 542-4300

Idaho: (208) 769-1525

Utah: (801) 538-5211

Nevada: (775) 684-2513

Wyoming: (307) 777-5659

N. Dakota: (701) 228-5422

#### Assistance on Federal Lands

US Forest Service  
Region One

Missoula: (406) 329-3605  
Coeur d'Alene: (208) 765-7342

US Forest Service  
Region Four

Ogden: (801) 476-9720  
Boise: (208) 373-4227

