



## Storage of Softwood Logs



Deterioration affects the value of softwood logs for uses ranging from lumber to pulp chips. Logs should be processed as soon as possible after felling, especially during warm weather. Until they are processed, measures must be taken to maintain log quality. Logs should be brought to a log yard as soon as possible. Storing logs in the forest or on the landing for long periods attracts wood-boring insects and can encourage insect outbreaks.

Logs must be stored under conditions that minimize defects associated with shrinkage, end checking, and attacks by fungi, bacteria, and insects. Shrinkage defects are minimal during periods of cloudy, wet weather and low temperatures. Fungi and insects are inactive at temperatures less than 32°F or under conditions of wet storage with low levels of oxygen. However, bacteria can grow in wood under wet, anaerobic conditions, except at subfreezing temperatures.

### Dry Land Storage

Logs stored on a landing or dry land log yard are subject to end checking, blue stain, and ambrosia beetle attack. Storage during warm weather quickly degrades pine logs; ponderosa pine can develop blue stain within just a few days of felling. Dry land storage is recommended only for short periods from late spring to late fall. If temperatures are less than 32°F, logs can be stored for longer periods.

High-quality logs (such as peelers and high-quality sawlogs) can be protected by brushing or spraying an end coating—a wax-based sealer—on the ends of logs. Treating the ends of higher quality logs with a chemical fungicide before applying an end coating helps prevent sap staining.

If logs are to be sawn into lumber, store the logs with the bark intact to reduce checking and blue stain. However, even logs with the bark intact can become infected because many wood-boring insects often carry spores. Logs for posts, poles, and pulpwood are often debarked soon after felling to reduce loss from insect borers and decay and to decrease sapwood moisture content. The disadvantages of early debarking are extensive surface checking and end splitting. Sapwood staining can also be substantial. All logs should be placed on skids, keeping them above the ground, and the log yard should be kept free of vegetation.

### Wet Storage

When logs must be stored for long periods at temperatures above freezing, it is best to keep logs soaking wet. Storing logs under sprinklers or in a log pond helps prevent end checking and slows deterioration caused by insects, fungal stain, and decay. However, chemical staining can occur under wet conditions.

Today, softwood logs decked in the log yard are typically protected by water sprinkling during warm weather. Sprinkling provides an effective method of reducing checking, sapwood stain, and decay. Sprinkling will not prevent certain insect attack, although it tends to be more effective than dry land storage. To be effective, the ends of logs and exposed wood must be kept wet continuously during the entire storage period. Sprinkling reduces available oxygen, thereby deterring sapwood staining and decay.

Pond storage includes logs that are stored in mill ponds, lakes, rivers, and saltwater estuaries. Although pond storage was once common practice, it is seldom used today except in British Columbia and southeastern Alaska. Defects such as honeycomb, collapse, and ring failure can result when logs are stored in water for more than a year.