

Mulching Trees and Shrubs in Alaskan Landscapes

Alaska Department of Natural Resources / Division of Forestry / Community Forestry Program
550 W. 7th Ave., Ste. 1450 / Anchorage, AK 99501-3566 / 269-8465/8466 / www.dnr.state.ak.us/forestry



Trees growing in forests or plant communities where organic matter collects on the forest floor and benefit from this natural mulch that nourishes and protects the roots. Tree roots extend out from the trunk a distance of up to twice the height of the tree and most grow in the top 18 inches of soil.

On most urban sites, the soil in the root zone has been disturbed and compacted and the natural mulch layer is missing, often replaced by lawn or pavement. Mulch provides many of the benefits of

natural forest litter and can help trees survive stressful conditions such as drought, injury, disease, and insect attacks.

Mulch is any material, organic or inorganic, placed over soil to cover and protect it. Organic mulch is often preferable to inorganic material. However, rock mulch warms the soil and may be useful for sites and species where this is desirable. Landscape fabric may be used under mulch to further reduce weed growth, however, this limits the benefits provided by decomposing organic mulch.

Benefits of mulch

- improves soil structure
- reduces soil compaction and increases aeration
- conserves moisture by reducing runoff and evaporation, and improving water infiltration
- supports growth of beneficial microorganisms
- moderates soil temperatures
- softens the impact of rain, which reduces erosion and prevents mud splash on plants and buildings
- reduces weed competition
- makes mowing and trimming around trees easier and protects trunks from lawn equipment
- protects roots during construction activities
- improves appearance

Mulching guidelines

- Mulch all trees and shrubs when planted.
- Apply mulch in an area twice as wide as the width of the tree's crown; for example, a tree with a crown three feet wide should be centered in a mulched area at least six feet across.
- Apply mulch two to four inches deep. Mulch applied too deeply lowers soil temperatures and reduces the amount of oxygen available to roots.
- Keep mulch three to four inches away from the trunk. If piled against the trunk, mulch may cause decay and provide favorable conditions for harmful insects, disease, and rodents.
- To eliminate grass around established trees in lawns, cut the grass very short, water, cover with landscape fabric or newspaper (black/white pages) six to seven pages thick, cover with mulch and water again.
- Create mulched beds with groups of trees and shrubs, rather than single plants, when practical.
- Do not plant annuals, bulbs, or other plants requiring cultivation, which can disturb tree roots, in mulched area.
- Use only nonflammable mulch within 30 feet of your home if you live in an area that could be threatened by wildfire.
- Prevent vehicular traffic and limit foot traffic in mulched areas.
- When root zones cannot be avoided during construction activity, apply a six-inch layer of coarse mulch temporarily, to disperse the weight of equipment and people.

continued

Recommended mulch materials

- tree bark — shredded or chipped
- wood chips — aged 8 to 12 months, or until a pile of chips no longer produces heat
- decomposed forest leaf litter
- composted garden and yard materials
- composted seaweed
- pine needles
- water-permeable landscape fabric
- rock or gravel

Materials not recommended

- fresh wood chips, which may reduce nitrogen in the soil as they decompose. If fresh chips are used, do not mix into the soil and watch for signs of nitrogen deficiency in trees.
- fresh grass clippings and leaves, which become matted and reduce movement of water and air. Also, grass clippings decompose at high temperatures and may damage plants.
- sawdust that has not been composted
- crushed limestone, which can raise the pH level of the soil to an undesirable level
- straw or other lightweight or flammable organic matter
- manure that has not been composted. It can burn plants and may contain weed seeds.
- peat moss, because it is flammable and, when dry, does not absorb water well
- non-permeable plastic sheeting or any material that repels water

Maintaining mulch

- As the tree grows, expand the mulched area to the outer edge of the tree crown.
- Add mulch as needed to maintain a depth of two to four inches.
- Lightly rake or fluff fine-textured mulch occasionally to prevent a crust from forming that can repel water.
- Be sure water is soaking through mulch and into the soil.
- Do not incorporate mulch into the soil; let that happen naturally.
- Regularly weed mulched area by hand.
- Do not dig in or cultivate the mulched area.
- Do not use string weed trimmers near tree trunks.

For more information

Please call the Community Forestry Office in Anchorage at 269-8465 or 269-8466 or the Cooperative Extension Service for more information. Or check our website at www.dnr.state.ak.us/forestry.