



## The City of Bexley

### Tree & Public Garden Commission Fact Sheet

#### Mulch Volcanos

Landscapers often apply a thick layer of mulch around trees in a ring. When this mulch is piled against the trunk, this is called a mulch volcano. Mulch volcanoes can cause several health problems for trees.

1. Mulch volcanoes encourage poor root growth. Roots buried by the mulch volcano die due to lack of oxygen in the water-logged soil. At the same time, growing conditions in the top of the mulch are temporarily favorable for root growth. This causes roots to grow upward instead of downward.
2. Mulch does not hold water as well as soil and eventually dries out. This stresses the tree's roots and puts the tree into severe drought stress.
3. The mulch volcano can also act as an umbrella, shedding water to the surrounding soil while fungal activity in the surface of the mulch volcanoes repels water. Water then runs off the volcano, rather than moving into it. In turn this can keep irrigation and rain from the root ball and lead to severe drought stress even if the tree has a regular water supply. Since new trees have few roots the root ball must be kept moist.
4. Mulch volcanoes encourage fungal canker diseases in that they keep the base of the tree constantly moist. Trees are also stressed because the cells in the bark of the tree cannot get enough oxygen. This can cause bark decay.
5. Volcano mulching harbors termites and rodents that may attack the tree.

There is usually little that can be done to reverse trunk damage once it occurs. In turn simply apply two to three inches of mulch evenly around the tree as needed which will help control weeds, keep soil moist while moderating soil temperatures, and reduce the risk of trunk injury.



Mulch volcano shown in the foreground adjacent to a properly mulched tree.