



### City of Greeley Forestry Division

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### IPS ENGRAVER BEETLE

The *Ips* beetle destroys the vascular system of Blue Spruce, Black Hills Spruce, Norway Spruce, Pinyon Pine, Austrian Pine and Ponderosa Pine, typically resulting in death to the trees. The beetles specifically target stressed trees. Those trees include drought-stressed trees, trees that have had significant soil and root disturbance including compaction, and trees that have been stressed by improper chemical applications. A good indication of *Ips* beetle presence is the discoloration of the tree, loss of needles, often starting at the top working its way down. The damage in Pine trees can be inconsistent, not starting at the top of the tree, rather beginning on individual branches scattered in the upper canopy. Usually tiny pin-head-size holes exist on the bark, often accompanied by sawdust. Once the damage is noticeable and evidence of the beetle is present, little can be done to reverse the problem.

Currently there is no effective treatment for an *Ips*-infested tree. Prevention is the only means of control. Prevention includes proper watering regimes **year round**, low soil disturbance or impacts, prompt removal and disposal of declined Spruce and Pine trees, and removal of Spruce and Pine firewood unless the bark has been removed.

Spruce and Pine tree owners should closely inspect their tree(s) every two weeks. Consider having a licensed pesticide applicator begin a preventative spray program. A list of licensed Pesticide Applicators in Greeley can be found on this website.

The beetles range from 1/8 inch to 1/4 inch in length. Most overwinter as larvae or as adult beetles. In mid-spring to early summer, adult beetles emerge, fly about and begin to tunnel into firewood, trunks, and branches of stressed Spruce and Pine trees. Here, the females construct egg galleries. Once the eggs hatch, the larvae begin to feed and the tunneling increases in size as the insect grows into adulthood. The adults emerge from the tree to mate and infest other wood. As many as three to five generations of *Ips* beetles may occur in a single year, depending on climactic factors. These generations overlap and all life stages may be found in a single tree at any one time.

Key Criteria to consider for management of *Ips* engraver beetles:

- Avoid damage to the root system of trees
- Do not cut or damage roots
- Do not add more than 2-3" of fill dirt over roots
- Do not decrease an established watering pattern
- Do not bring Ips-infested wood into Greeley
- Dead or dying Spruce and Pine should be promptly removed
- Dispose of all dead Spruce and Pine wood and firewood
- Water during dry periods, summer or winter
- Over-mature trees are more likely to be targeted by the beetles

Source: Colorado State University Cooperative Extension

