# CARNELIAN WOODS
## Forest Health



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### Introduction

The following report is based on observations made in the summer of 2020. In June I met with Celia, Ruth and others as we walked around the Carnelian Creek area. We discussed the potential fuel treatment of this area, pending the grant application. In early August I walked around the surrounding forest area to observe conditions there. In general terms, the forest looks good and healthy.

### Existing Conditions

Trees - conifers: The overstory forest (comprised mostly of Jeffrey pine, sugar pine and white fir) appears to be in good health. Very few dead trees were observed and I think that stressed trees would be showing symptoms by now since we are past midsummer.

- Jeffrey pine. These trees are in great shape, showing no disease or insect problems.

- Sugar pine. Most of these pines are in the upper area behind the gate. A few trees show signs of the blister rust but I didn't see any recently killed trees. Several years ago the pine beetle killed many sugar pines on the adjacent USFS land and a few on our property. The few affected trees that I found have slightly yellowing needles in the top half of the tree. I witnessed this in June but they don't look any worse in August. There are two of these trees pictured below.



Faded tops of sugar pines, smaller tree in background.
Upper Silver Pine Dr.

- White fir. I found a couple trees that died this year but nothing like we found three years ago when I marked 25 trees. There still is some mistletoe present but it does not appear to be getting worse or spreading.
- Lodgepole pine & Incense cedar. There are relatively few of these trees on the property, mainly along the creek area and upstream along the dirt road. They appear to be in good shape.
- Douglas fir. The one rare, small fir is still surviving. It is growing under a large Jeffrey, which probably protects it but also slow its growth a little.

Trees – riparian: The Carnelian Creek area extends from the tennis courts upstream to the crossing of the dirt Carnelian Woods Avenue. In this area it is a wide riparian area with a variety of species. Above the crossing the wide area continues a short ways until the creek becomes a more defined channel after is crosses back over the dirt road and heads north off the property. These water requiring species grow along the stream edges and stabilize the banks.

- Aspen. The aspen grove is just upstream from the tennis courts. It appears healthy and seems to be slowly expanding as evidenced by new sprouts becoming established in the adjacent meadows. The presence of new sprouts and saplings indicate a healthy stand.
- Willows. At least three types of willow are present in the wetland. Many are low growing resprouts but there are older trees achieving heights up to twenty-five feet. The decadent

older trees contribute to the dead material that the potential grant work will remove. Other dead wood comes from trees broken by snow. These damaged trees then produce sprouts from the roots and remaining stumps.

- Alder. The alder grows in clumps in and around the willows. In June we witnessed dieback and late leaf production in the area of the road crossing. These trees have leafed out fully by August but don't look as robust as some other trees. Insects have defoliated a small area of alders up from the pool. This seems to be an isolated area and the trees have already begun sprouting from the base.

Regeneration: Conifer regeneration continues to be scattered and light. The soil characteristics are poor for seedling survival in the upland area. Since a few years have gone by since the thinning the small trees are getting larger and more visible. Small white firs are evident at the edges of the stream zone. As noted, the aspens are spreading in the meadow areas.



Small sugar pine seedlings under parent tree. Above Cedar Ct.

Brush:

- Manzanita: Manzanita thrives on the south facing dry aspects that are open and get full sun. This is especially in evidence along Silver Pine Drive and Red Pine Court. Isolated clumps can be retained and are visually attractive.
- Snow brush (*ceanothus*): This shrub is more common along the entrance to the property. Over time it will grow taller than the other forms of brush present. Large examples exist along Carnelian Woods Avenue and by the gate on Silver Pine Drive.
- Huckleberry oak and bush chinquapin: These two species are similar in appearance and generally grow wider than taller. They are relatively slow growing but when mature can grow stout woody branches that are more difficult to remove.
- Squaw carpet: Large amounts of squaw carpet are found in the wooded area in the northwest corner, between Cedar Court and Silver Pine Drive. If there is work to thin the brushy areas, care should be taken to avoid disturbing as many of these clusters as possible.

## Recommendations

- As in the past, treatment of the dead trees is essential for fuel reduction and public safety. Small limbs and tops should be chipped to reduce the flash fuels from building up on the ground.
- The stream zone grant will address a large portion of the riparian area. The insect killed alders and old broken willows will be removed. Some of the logs imbedded in the soil should remain in place. It is best to have a meandering stream, rather than a direct channel to the lake, in order to control sediment travel.
- Along the meadows, some of the small conifer seedlings trying to encroach on the meadows can be cut to avoid future thickets. Elsewhere in the forest any seedlings and small trees should be protected from damage when doing work.
- Brush work will probably be the next priority after the stream zone project. The manzanita areas around the Red Pine Court area should be thinned to reduce fire danger. A mosaic of brush clumps can be left but the spacing in between should be twice the height of the remaining shrubs. Also the area between the old sheriff's office and the clubhouse is becoming dense. Brush removal closer to the residences may be better achieved by hand crews while the other areas the work may be more efficient with a small masticator.