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**Report:** Mendocino County  
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Southern Magnolia Trees located in front of Mendocino County Courthouse

Brief History:

In front of the Mendocino County courthouse are two large Southern Magnolia (*magnolia grandiflora*) trees that garner attention for their beauty and size. These trees, with their large milky white flowers and glossy green leaves, have been determined to be approximately 150-158 years old. The ages of the trees were determined by old photographs and news articles found that depicted the trees throughout the years. The courthouse located in Ukiah, California on Main Street was initially built in 1860, with add-ons finished in 1873. It was demolished and rebuilt to its current building in 1951. In the figure below, figure 1<sup>1</sup>, the young southern magnolias can be seen roughly 20 feet tall. The photograph is dated between 1873 and 1890. The photographs are roughly dated which gives a range of years the trees could have been planted.



Figure 1. Mendocino County Courthouse in 1873 showing the young Southern Magnolia trees.

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<sup>1</sup> This photo can be found at: <https://www.cschs.org/history/california-county-courthouses-alphabetical/mendocino-county/>

Figure 2 below features four more photos of the courthouse and the southern magnolia trees throughout the years.



Figure 2a-d: counterclockwise starting in upper left corner: 2a) the Mendocino Courthouse dated between 1920 and 1930. 2b) Mendocino courthouse dated in 1930's. 2c) Mendocino Courthouse dated in 1950's. 2d) Mendocino Courthouse present day.

These trees have seen stress and gone through bouts of scale and broken limbs. Evidence of this was found in the Ukiah Daily Journal and the Ukiah Republican Press, see figure 3. Two to three years ago mulch was placed around the trees with a drip irrigation system. This system has most likely helped the trees slightly recover from the drought.



Figure 3a (left) Scale, a small insect, attacks the north magnolia tree in front of the courthouse in April, 1951. Figure 3b (right) Both magnolia trees in front of the court house are damaged in storms in January 1916.

Southern magnolia trees are evergreens that typically live between 80-120 years. (Sheahan, 2015) They can thrive in wet-lands and non-wetlands equally but are prone to high moisture environments where water is plentiful. They can survive in shade but have low drought tolerance. They grow in fine-medium, well-drained, textured soils with a pH of 4.5-6.5 and have a good tolerance of soil salinity. Their root system can extend up to 4 times the canopy width. They can grow anywhere between 50-90 feet tall and 2-4 feet in diameter on average.

### Assessment

There are two Southern Magnolia Trees located on the east side of the Mendocino County Courthouse. One is situated on the northern side of the courthouse and the other is on the south side. The diameter at Breast height (DBH) and height of each tree is listed in table 1.

Table 1. The DBH and height of the southern magnolia trees located on the east side of the courthouse

	<i>North-east magnolia tree</i>	<i>South-east magnolia tree</i>
<i>DBH</i>	42 in	57.3 in
<i>Height</i>	50 ft	45 ft

The north-east magnolia tree root flare is visible with no signs of decay or fungus. The trunk has two codominant stems with a healthy union showing no signs of decay or failure. The crown of the tree has good structure with no visible signs of decay, but does show small amounts of die-back. The north-east magnolia tree overall appears to be healthy with die back in the crown which is a possible sign of decline.



The south-east magnolia tree root flare is visible with no signs of decay. The trunk has two co-dominant stems with a healthy union showing no signs of decay or failure. The crown of the tree has one large, 8-inch in diameter limb with large amounts of decay, see figure 4a. Multiple locations in the crown have Wetwood. Wetwood or Slime Flux is the condition when bacteria invade a wound or injury and produces an oozing liquid that can have a foul odor. In most cases these bacteria are not hazardous to the tree's health or structure. See figure 4b for an image of the wetwood on the magnolia tree. There is a large cavity on a 12-inch limb, depth is not available without further investigation, but appears to be healing. The crown has die back.



Figure 4a (left) depicts the 8-inch broken limb. 4b (center) shows the wetwood or slime flux that appears as a black liquid/stain on the tree in multiple locations. 4c (right) depicts the cavity in an approximately 12-inch limb.

### Mitigation

For the overall tree health of the north-east magnolia tree it is recommended to remove deadwood that is 1-inch in diameter and larger from the tree, leaving all green growth. Inspections of the tree should be done once per year for signs of decline and failure.

For the overall tree health of the south-east magnolia tree it is recommended to remove deadwood that is 1-inch diameter and larger from the tree, leaving all green growth. Further inspections of the broken limb, wet wood, and cavity should be performed, see figure 4. Inspections of the tree should be done once per year for signs of decline and failure.

The water system should be maintained during the year. Specifically, during the dry summer months the trees should be watered for 1 hour per day, 3 days per week (the time and duration of watering is subject to change due to weather conditions). The mulch should be kept 3-5 inches thick to help prevent root compaction and maintain soil moisture.

These Southern Magnolia trees are overall healthy, but on the decline due to their age and life expectancy. In order to try and prevent their rapid declination, proper inspections, regular upkeep, deadwood removal, and maintaining of the watering system should be prioritized. The current maintenance on these trees have shown good results thus far in combatting the rate of decline and stress.

All trees have a risk of failure that can result in injury and/or death. To remove all risks, removal of trees is recommended.



### References

Lilly, S. J. (2010). Arborists' Certification Study Guide. In S. J. Lilly, *Arborists' Certification Study Guide* (pp. 232-244). Champaign, IL: Premiere Print Group.

Sheahan, C. (2015). Plant guide for Southern Magnolia (*Magnolia grandiflora*). *USDA - Natural Resources Conservation Service*. Retrieved from <http://plants.usda.gov/>

**<http://courthousehistory.com/gallery/states/california/counties/mendocino>**