



## MAINTENANCE DIVISION

# APRICOT ORCHARD MANAGEMENT & GUIDELINES





**Intent: To describe the necessary maintenance practices to manage the Civic Center apricot orchard to ensure normal, vigorous, healthy and safe growth of the orchard.**

**Orchard maintenance shall consist of mowing, trimming, fertilization, irrigation, pest control, pruning, harvesting and any other procedures consistent with best management horticultural practices.**

**Description of Orchard:** The heritage orchard is located at 1 North San Antonio Road in the Civic Center grounds. It surrounds the City Hall building, and parts of the Library, Youth Center and Police Department.

**Acreage:** 2.84 acres

**Number of tree sites:** 444

**Type of apricot tree:** Blenheim apricot on Nemagard and Lovell rootstock

**Current condition:** Fair/Poor

**Number of trees older than 5 years:** 182

**Number of trees less than 5 years:** 262

**Number of trees that died and were replanted in 2005:** 135

**Number of trees that died and need to be replanted in 2006:** 40

**Diseases and pests affecting orchard:**

1. Ring nematodes in the soil reduce the vigor of the trees by restricting the flow of nutrients in the trees, leading to tree decline and death of the trees. – Severe problem.
2. Associated with the nematodes is a bacterial canker, when the nematodes are reduced the incidence of bacterial canker will be reduced. – Severe problem.
3. Brown rot on the fruit reduces the value of the fruit. Stresses the trees as it invades the young shoots, reducing the vigor and ultimately killing the shoots and parts of the support wood, as seen by gumming of the wood. Severe problem.
4. Eutypa limb die back from soil bacteria entering trimming wounds after late season trimming. Moderate problem.
5. Seasonal aphids suck the juices treated with cultural practices or ladybugs. – Mild problem.

**Current watering practices:**

1. The current use of above ground aluminum agricultural irrigation pipes combined with impact heads results in excessive water use with water runoff and silt flow into storm drains. This method also provides inconsistent watering resulting in drought stressed trees in the summer. It provides excessive water to the cover crop promoting the incidence of ring nematodes and bacterial canker.

## Recommendations:

1. Spray with a pre-emergent under the rows of orchard trees in a strip about 10 feet wide, at the end of the summer to control winter weeds. Spray again in the spring with a pre-emergent to control summer weeds. Spraying should be done in mid October and again in mid April. After each spray if there is no rain then irrigate to set the pre-emergent.
2. Eliminate disking of orchard cover crops. This will minimize the incidence of ring nematodes by not spreading clover that attracts ring nematodes.
3. Plant new single species cover crop. Recommend a rye grass.
4. Mow cover crop seasonally as needed.
5. Update irrigation method by installing a permanent automated drip irrigation system.
  - a. Drip irrigation will reduce non-point source water run off and silting.
  - b. Drip irrigation will reduce the amount of water required to efficiently manage the orchard trees.
  - c. Drip irrigation will allow watering as needed to maintain consistent soil moisture that will reduce water stress and improve growth of the orchard trees.
  - d. Drip irrigation will reduce the incidence of water born bacteria and nematodes in the soil.
6. Adjust pruning time of the orchard trees to the end of July to reduce brown rot caused by late season trimming.
7. Trim to remove excess sucker growth in the interior of each tree. Trim to reduce the fruiting branches. If signs of eutypa limb die back are present, slime on branches, cut back at least one foot from wound. If a large cut is made burn wound to harden it off to lessen the incidence of eutypa.
8. Have a private lab complete a leaf analysis annually to determine nutrient needs of orchard trees.
9. Follow the recommendation of the leaf analysis in applying fertilizer. Adjust the amount and types of fertilizer applied utilizing the drip irrigation injector system.
10. Follow PCA recommendations and the Cities BMP's and IMP policies Clean Crop Spray Oil 415 is currently used to control aphids, fruit tree leaf rollers, mites, scale, and borers. Typically spraying is completed in red bud stage with only one application. Spray Oil 415 does not control brown rot, leaf spot, blossom blight, powdery mildew or shot hole fungus found above ground in apricot trees. Pristine could be used to control brown rot and shot hole, which are found in the orchard on the leaves, fruit, and in the wood. Three spray applications would be beneficial in controlling brown rot and shot hole.
11. As the trees die replacement should be larger established container stock trees. Five gallon cans with a Blenheim apricot and Nemagard or Lovell root stock(Lovell is a peach that suckers at the base).
12. Consider a soil drench of a redox of black walnut tea to reduce ring nematodes.

## Schedules of Tasks and Responsibilities

Task	City	Orchardist	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Replanting of trees	x													x
Post emergent herbicide application														
Pre emergent herbicide application	x					x						x		
Sowing seeds for cover crop		x	x											
Irrigation scheduling	x							x	x	x	x	x		
Irrigation repair and maintenance	x													
Pre-harvest Trimming														
Harvesting		x						x						
Post Harvest trimming		x							x					
Tree Spraying			x	x	x									
Mowing of cover crop	x				x	x	x	x						