



# North Texas Tree Specialists

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Date: August 21, 2019

To: Cinnamon Anderson  
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From: Karen B Smith  
North Texas Tree Specialists

Re: Post Oaks at Steeplechase Ranch  
Hickory Creek, TX 75065

On Aug. 8, 2019, I inspected several mature post oaks that are located on the east side of the larger detention pond that runs along the west side of, and behind, residences on Pimlico Drive.

The following observations were made:

- 1) Several oaks are located within the association property near the detention pond. Several are located further east of the pond, within residential back yards.
- 2) All post oaks observed are in a state of decline. The decline progression being variable among the trees, ranging from moderate to severe to dead. Symptoms of decline include dieback of the outer portion of the crown, death of larger limbs within the crown, loss of inner branches within the crown over the past several years resulting in a proliferation of adventitious shoots along major limbs and trunks, chlorotic and/or stunted foliage, etc.
- 3) Elevation and grade changes made during early stages of the residential development resulted in a large volume of soil deposited over a significant portion of the subject trees' root zones, particularly those within and adjacent to back yards. Subsequent erosion resulted in the deposition of fill soil over root zones within the association property, nearer the pond.
- 4) Evidence of infestation by wood-boring oak bark beetles in the subject trees. Post Oaks under stress are extremely susceptible to borer invasion, which accelerates decline of the tree.
- 5) Lush, well-watered, weed-free turf within the vicinity of oaks in most back yards.
- 6) Comparison of aerial photographs of the area, taken between 1999 and 2017 and current observation of the water level in the detention pond indicate minimal, if any, change in elevation of the detention pond in the last twenty years. This observation excludes a rise of the water table as a likely contributing source of tree stress.

Based on the above observations, it is my conclusion that the subject post oaks are declining and dying mainly due to the excessive amount fill soil (i.e., build up of grade), and soil compaction in the vicinity of the trees. Post oaks are highly sensitive to grade changes and as little as 2 inches of fill soil can trigger decline. Contributing factors of decline include borer insect infestation in trees, and cultural issues such as too much irrigation water and regular use of herbicides within and uphill of root zones.

Recommendations are:

- 1) Treat trees for bark beetle borer infestation. I recommend the use of a soil applied systemic insecticide, such as imidacloprid, to target beetle larvae inside the tree. Also recommended is the use of a protective insecticide, such as permethrin, applied to the outside of the trunk, 3 or 4 times a year.

- 2) Fertilization: If you are fertilizing your turf, then you are also fertilizing your post oaks. The feeder roots of turf and those of mature trees share the same zone in the soil, typically the upper 6 - 8 inches of soil. Post Oaks typically do not require additional fertilizer and excess fertilizer can be harmful. DO NOT USE A WEED-AND-FEED type fertilizer that contains herbicide for weed control around stressed post oaks.
- 3) In general, DO NOT apply herbicides within 10 - 20 feet of the tree's canopy while trees are trying to recover.
- 4) Keep pruning of post oaks to an absolute minimum. Other than for necessary clearance or the removal of dead limbs that might create a hazard, post oaks do not require pruning for health reasons.
- 5) Apply water in the root zones (and uphill of root zones) sparingly. Post oaks are very intolerant of prolonged wet or waterlogged soil. It is generally recommended to apply 1 inch of water, once a week in root zone areas as well uphill of root zones. For irrigation on sloped yards, this might require cycling of the sprinkler system, leaving enough time between each cycle for water to infiltrate the soil before water is reapplied. This should avoid waste of water through run-off. Note: If you are currently watering turf areas more frequently than once a week, gradually decrease frequency of irrigation while increasing amount per watering until you attain 1 inch of water, applied once a week. The gradual change in frequency should allow the turf roots time to adjust to the change in watering patterns and adapt by growing feeder roots to a deeper depth in the soil. If the turf exhibits significant signs of stress during very hot and dry weather, temporarily increase the frequency of irrigation by a day or two until weather conditions are more favorable. Do not irrigate during periods of significant rainfall.
- 6) It is generally beneficial to aerate soils in post oak root zones where there are up to a few inches of fill soil and/or compaction of soil. This can be repeated two or three times each year.
- 7) Inspect post oaks regularly for signs of disease or insect infection of the foliage. Measures to reduce any form of additional stress will give the tree a better chance of recovery.
- 8) Avoid contact of lawn equipment with the lower trunk of the tree. Over time, this can lead significant damage to the tree's vascular system.

Please feel free to contact me if you have questions regarding the health of your post oaks, or further clarification of the above recommendations.

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