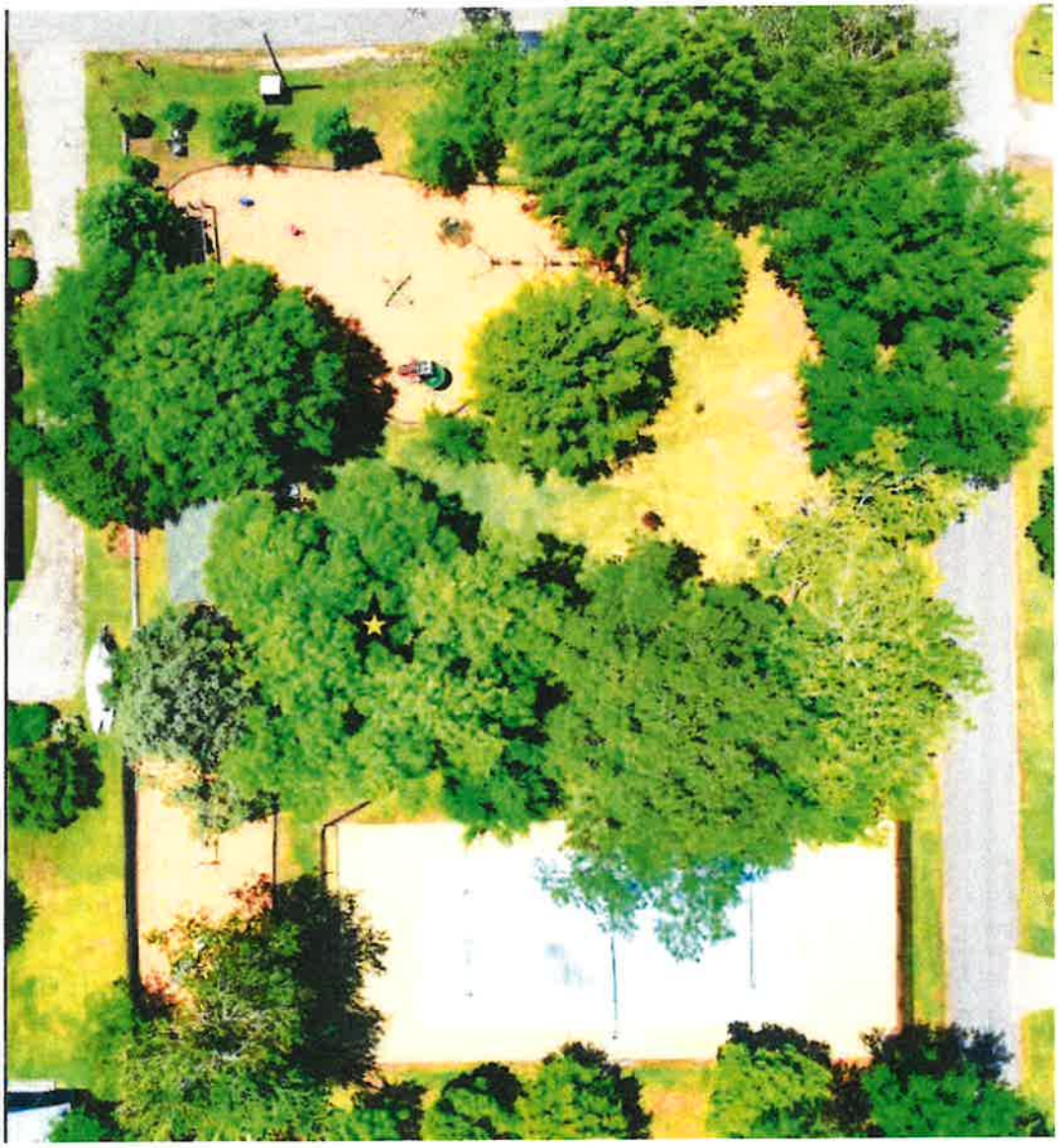
Tab 10

LUPTON PARK TREE RISK ASSESSMENT REPORT

ISA TRAQ Level 2 Basic Visual Risk Assessment

Prepared for: Butch Rasmussen
Prepared by: Brent Toler
Assessment type: ISA Tree Risk Assessment Qualification (TRAQ), Level 2 – Basic Visual Assessment
Assessment date: May 20, 2026



Executive Summary

This report presents a Level 2 Basic Visual Risk Assessment of a mature pecan tree located within a municipal public-use recreation area. Based on observed structural conditions, target occupancy, and site context, the tree is assigned an overall risk rating of **Moderate**. The primary risk factors identified include codominant stem architecture with included bark, overextended scaffold limbs, visible cavity openings and localized decay indicators, and moderate to high occupancy within the potential failure zone. At the time of inspection, no obvious indicators of imminent whole-tree failure were observed; however, continued management is warranted due to the tree's size, structural characteristics, and location near regularly occupied public targets. Recommended actions include ANSI A300-compliant structural pruning, annual monitoring and post-storm reassessment, and improved root zone protection practices. If these ongoing management measures are not feasible, removal may be considered as a future risk mitigation option. Following implementation of the recommended mitigation measures, residual risk is anticipated to remain **Low to Moderate unless the tree is removed.**

Assessment Area	Municipal public-use recreation area
Tree Species	Pecan (*Carya illinoinensis*)
Tree Condition	Fair
Primary Structural Concerns	Codominant stems, included bark unions, overextended scaffold limbs, cavity openings, and localized decay indicators
Occupancy Exposure	Moderate to High
Overall Risk Rating	**Moderate**
Recommended Management	Structural pruning, annual monitoring, post-storm reassessment, and root zone protection
Projected Residual Risk	**Low to Moderate if not removed**

Client Information

Prepared For	Butch Rasmussen
Prepared By	Brent Toler
Assessment Type	ISA Tree Risk Assessment Qualification (TRAQ), Level 2 – Basic Visual Assessment
Assessment Date	May 20, 2026

Purpose of Assessment

This assessment evaluates the structural condition, site context, and associated risk profile of a mature pecan tree located within a municipal public-use recreation area.

- The tree was assessed due to concerns regarding structural integrity,
- canopy architecture,
- occupancy exposure,
- and potential failure impacts within a high-use public setting.
- This report is intended to support municipal decision-making related to public safety,
- risk mitigation,
- maintenance priorities,
- and long-term tree preservation considerations.

Assessment Methodology

This assessment was performed in accordance with the following professional standards and guidance:

- International Society of Arboriculture (ISA) Tree Risk Assessment Best Management Practices,
- ISA Tree Risk Assessment Qualification (TRAQ) methodology,
- ANSI A300 pruning principles where applicable,
- and the ISA Code of Ethics.
- The assessment consisted of a Level 2 Basic Visual Assessment,
- 360-degree ground-based inspection,
- supplemental aerial imagery review,
- visual evaluation of targets, site conditions, and observable defects,
- and review of available soil survey information.
- No invasive testing or advanced diagnostic procedures were performed, including resistance drilling,
- sonic tomography,
- root excavation,
- or laboratory analysis.

Assessment Tools and Methods

The following tools and reference resources were used during the assessment:

- Forestry diameter tape (DBH tape)
- Laser rangefinder for height estimation
- Rubber mallet for sounding and cavity assessment

- Wood probe for evaluating visible cavity depth and decay presence
- Binoculars for upper canopy inspection
- Drone-based aerial imagery for canopy and target analysis
- Pamlico County soil survey data
- Ground-based visual inspection methods consistent with ISA TRAQ Level 2 assessment procedures
- Assessment methods included: visual inspection of stem structure,
- canopy architecture evaluation,
- target occupancy analysis,
- decay indicator observation,
- and site condition assessment.

No invasive or destructive testing procedures were performed during this assessment.

Tree Information

Item	Description
Species	Pecan (*Carya illinoinensis*)
Approximate Height	67 feet
Stem Structure	Codominant stems below 4.5 feet
Trunk 1 Diameter	24 inches
Trunk 2 Diameter	26 inches
Tree Condition	Fair
Assessment Level	Level 2 Basic
Occupancy Rating	Moderate to High

Site Description

The subject tree is located within a municipal recreational area containing:

- playground facilities,
- pedestrian traffic areas,
- gazebo structures,
- and open-use lawn space.

The site experiences regular public use and includes multiple high-value targets within the tree's potential failure zone.

Observed occupancy conditions indicate elevated consequence potential in the event of structural failure.

Soil and Site Conditions

According to available Pamlico County soil survey data, the site is identified as **AaA soil type**, commonly associated with:

- nearly level coastal plain terrain,
- moderately well-drained soils,
- and municipal or recreational land use areas.

While these soil conditions are generally capable of supporting mature hardwood trees, urban site influences may negatively affect long-term root health and anchorage.

Observed site factors included:

- signs of soil compaction,
- turf management impacts near root zones,
- mowing activity occurring near trunk flare areas,
- and limited visible root protection around mature trees.

The assessment area is also located within a coastal environment subject to:

- elevated groundwater influence,
- periodic heavy rainfall events,
- temporary soil saturation,
- and potential storm-related flooding conditions.

Periodic saturated soil conditions may reduce:

- soil shear strength,
- root anchorage,
- and overall structural stability during high wind loading events.

At the time of inspection:

- no active root plate lifting was observed,
- no major basal decay indicators were identified,
- and no immediate evidence of root failure was visible.

Tree Condition and Structural Observations

At the time of inspection, the tree exhibited fair physiological condition with moderate structural concerns requiring ongoing management attention.

The tree exhibits codominant stem development originating below standard DBH measurement height (4.5 feet), requiring separate stem diameter measurements in accordance with accepted arboricultural measurement practices.

Positive Observations

- Full live canopy present
- Moderate canopy vigor retained
- Acceptable foliage coloration
- No obvious active root plate movement observed
- No visible fungal conks identified during inspection
- Root flare generally visible and reasonably developed

Structural Defects Observed

- Multiple codominant stems originating below primary scaffold height
- Included bark present at major stem unions
- Large, overextended scaffold limbs with excessive end weight
- Previous branch failure evidence
- Multiple old pruning wounds
- Visible cavity openings and localized decay indicators
- Minor upper canopy thinning
- Scattered deadwood throughout portions of the crown

The codominant stem configuration and included bark unions represent the principal structural concerns identified during the assessment.

COMPARTMENTALIZATION OF DECAY (CODIT)

Trees respond to injury and decay through a natural biological process commonly referred to as CODIT (Compartmentalization Of Decay In Trees).

Rather than "healing" damaged wood in the same manner as humans or animals, trees attempt to isolate injured or decayed tissue by forming internal chemical and physical barriers that help slow the spread of decay organisms.

The effectiveness of compartmentalization may vary depending on:

- species characteristics,
- tree vigor,
- wound size,
- pruning quality,
- environmental stress,
- and extent of internal deterioration.

Improper pruning practices, large pruning wounds, flush cuts, mechanical injury, and repeated trunk damage may reduce a tree's ability to effectively compartmentalize decay over time.

Observed historic pruning wounds and cavity formation on the subject tree were evaluated with consideration given to potential long-term compartmentalization response and associated structural implications.

While mature pecan trees are capable of compartmentalizing some injuries, large wounds and structural defects may still contribute to progressive internal deterioration over time.

Wildlife and Decay Indicators

During the site inspection, evidence of woodpecker activity was observed extensively on another mature pecan tree within the surrounding park area and, to a lesser extent, on the subject tree.

Woodpecker activity can sometimes be associated with:

- internal decay,
- carpenter ant activity,
- wood-boring insects,
- or deteriorating wood conditions within living or dead portions of trees.

Woodpeckers commonly forage for insects beneath bark and within decayed wood tissues. While woodpecker activity alone does not confirm the presence of significant structural decay, it may serve as a supplemental indicator warranting continued monitoring and periodic reassessment.

Limited woodpecker activity observed on the subject tree was considered in conjunction with:

- cavity openings,
- pruning wound locations,
- visible decay indicators,
- and overall structural condition during the assessment process.

Site Management Observations

Additional observations were noted regarding general tree management practices within the surrounding municipal landscape.

Observed conditions included:

- evidence of previous improper pruning practices on nearby trees,
- mowing and maintenance activity occurring in close proximity to trunk flare areas,
- and limited visible root zone protection measures around mature trees.

Repeated mechanical injury associated with mowing equipment may contribute to:

- bark damage,
- root collar injury,
- decay initiation,
- and long-term structural decline.

Previous construction activity and site disturbance may also have contributed to cumulative root stress conditions affecting tree stability over time.

Failure Potential

Primary Failure Concerns

1. Codominant Stem Union Failure

Included bark and codominant stem architecture increase the likelihood of structural separation under:

- wind loading,

- canopy movement,
- and saturated soil conditions.

2. Scaffold Limb Failure

Large, overextended scaffold limbs exhibit elevated leverage and loading over occupied target areas.

3. Deadwood Failure

Scattered deadwood within the crown presents potential for smaller branch drop events within occupied zones.

Target Analysis

Target Category	Exposure Description
Playground users	Frequent occupancy during normal park operations
Pedestrian circulation	Regular foot traffic within the potential failure zone
Gazebo structures	Fixed improvements within potential impact range
General recreational users	Moderate to high public use across adjacent open areas

Risk Rating

Based on ISA TRAQ risk matrices and the conditions observed during inspection, the overall tree risk rating is as follows:

Overall Tree Risk Rating: Moderate This rating reflects the combination of observable structural defects, elevated target occupancy, a moderate likelihood of impact, and potentially significant consequences in the event of failure.

- observable structural defects,
- elevated target occupancy,
- moderate likelihood of impact,
- and potentially significant consequences should failure occur.

At the time of inspection, no obvious indicators of imminent whole-tree failure were identified.

Recommended Mitigation

Recommendation	Purpose	Priority	Timing
Structural pruning	Reduce end weight, improve crown balance, and lower loading at codominant unions	High	Near term
Monitoring and reassessment	Track structural changes and confirm ongoing risk conditions	High	Annually and after major storms
Root zone protection	Reduce mechanical injury and support long-term root health	Medium	Initiate with next maintenance cycle
Supplemental support systems	Potentially reduce loading stress if future conditions warrant	Conditional	As determined by future reassessment
Removal	Eliminate retained risk if maintenance or monitoring is not feasible	Contingency	If risk conditions increase or management capacity is limited

1. Structural Pruning

Implement ANSI A300-compliant pruning to:

- reduce end weight on overextended scaffold limbs,
- reduce loading at codominant unions,
- remove deadwood,
- improve crown balance,
- and reduce mechanical stress over occupied target areas.

2. Monitoring and Reassessment

Given the tree's size, age, and structural characteristics, continued monitoring is recommended as part of ongoing risk management.

Reassess:

- annually,

- following significant storm events,
- or if visible changes in condition occur.

Monitoring should include observation for:

- cracking or separation at codominant unions,
- increased canopy dieback,
- additional branch failures,
- root plate movement,
- or progression of visible decay.

3. Root Zone Protection and Mulching

Enhanced root zone protection practices are recommended for the subject tree and other mature trees within the park setting.

Recommendations include:

- installation of mulch rings around tree bases,
- minimizing mowing activity near trunk flare areas,
- reducing mechanical injury from maintenance equipment,
- and limiting soil compaction within critical root zones.

Organic mulch may assist with:

- moisture retention,
- temperature moderation,
- reduction of mower damage,
- and overall root health support.

Mulch should be maintained away from direct contact with the trunk flare area.

4. Supplemental Support Systems

Depending on future monitoring observations and municipal management objectives, supplemental cabling or support systems may be considered to reduce loading stress on codominant unions.

5. Tree Removal (Management Option)

If the municipality determines that long-term monitoring, pruning cycles, or ongoing maintenance obligations are not feasible, tree removal may be considered as an alternative risk mitigation measure.

Removal may also be warranted if future inspections identify:

- increased structural deterioration,
- active cracking or separation,
- progressive decay,
- significant canopy decline,
- or elevated risk conditions beyond acceptable management thresholds.

Removal decisions should be considered:

- target occupancy,
- municipal risk tolerance,
- maintenance capability,
- historical and aesthetic value,
- and long-term site management objectives.

At the time of inspection, the tree does not appear to exhibit obvious signs of imminent whole-tree failure; however, risk cannot be fully eliminated while the tree remains in place.

Residual Risk

Following implementation of the recommended mitigation measures, residual risk is expected to remain:

Residual Risk: Low to Moderate

Residual risk remains due to:

- codominant stem architecture,
- included bark,
- mature tree size,
- and potential internal decay is not fully quantifiable during a Level 2 visual assessment.

Information Sources and Reliance

Portions of the site history and management background referenced in this report were based on information provided verbally by site representatives during the assessment.

No independent verification of historical maintenance activities, construction impacts, or prior management records was performed unless otherwise noted.

Conclusions and recommendations contained within this report are based upon:

- visual observations made at the time of inspection,
- aerial imagery review,
- site conditions visible during assessment,
- available soil survey information,
- and information is reasonably available to the assessor.

Limitations of Assessment

Tree risk assessment is inherently probabilistic and does not constitute a guarantee of tree stability or future performance.

Trees are living organisms subject to dynamic environmental conditions including:

- wind,
- saturated soils,
- decay progression,
- lightning,
- construction impacts,
- and other natural or human-related influences.

While this assessment identifies observable defects and associated risk factors, no assessment can guarantee that failure will or will not occur.

Conditions may change over time due to:

- weather events,
- root disturbance,
- soil changes,
- pest activity,
- or natural biological decline.

This report reflects conditions observed only at the time of inspection.

Assessor Qualifications

The assessment was conducted by Brent Toler, drawing on professional forestry and arboricultural experience that includes:

- 16 years of field experience with the North Carolina Forest Service,
- formal education in Forestry,
- and training in ISA Tree Risk Assessment Qualification (TRAQ) methodology.

Professional experience includes:

- tree risk assessment,
- forest management,
- hazard tree evaluation,
- vegetation management,
- and field-based structural tree observations in both urban and natural resource environments.

Professional Ethics Statement

This assessment was conducted in accordance with:

- ISA Tree Risk Assessment Best Management Practices,
- ISA TRAQ methodology,
- ANSI A300 principles where applicable,
- and the ISA Code of Ethics.

The findings and recommendations presented in this report reflect the professional judgment of the assessor based on conditions observed at the time of inspection and within the limitations of a Level 2 Basic Visual Assessment.

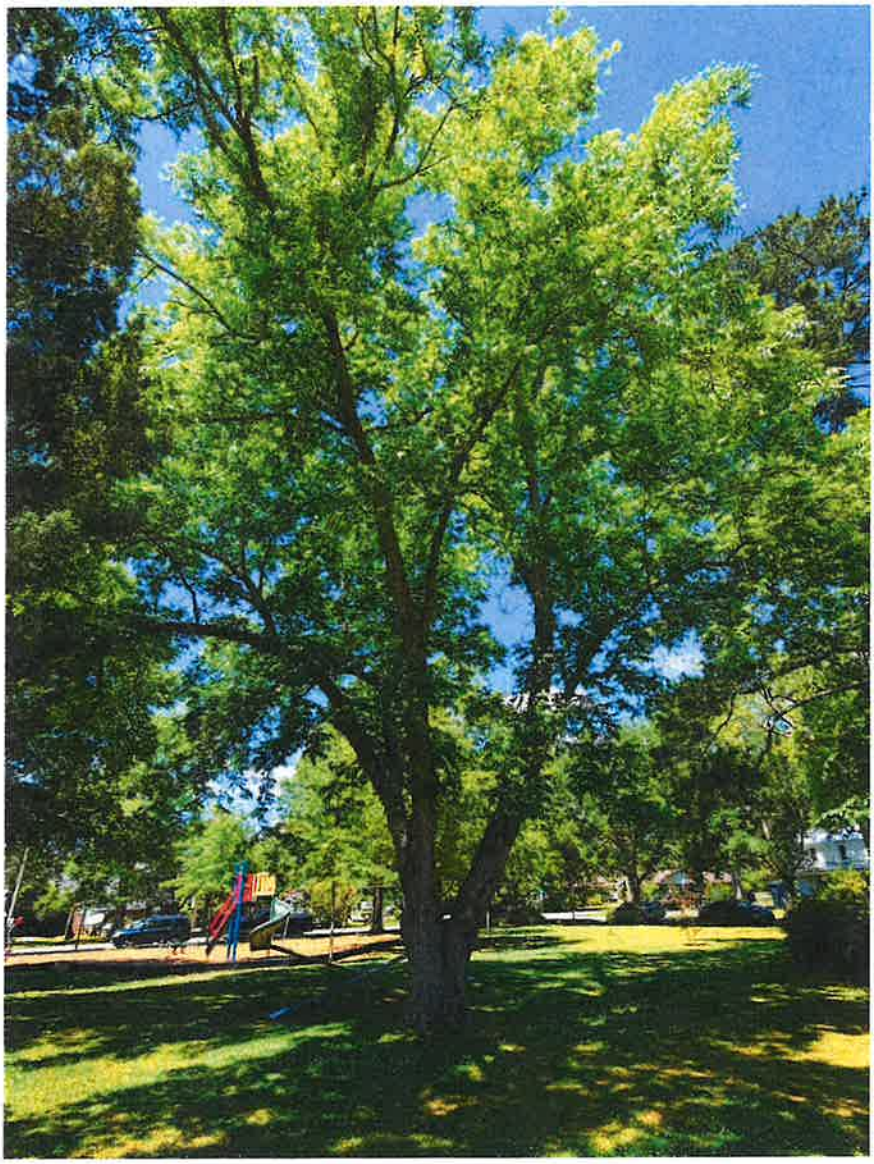
Resources and Supportive Information

Detection of Decay in Trees – CODIT https://auf.isa-arbor.com/content/5/10/226

General Pruning Techniques - NC State https://content.ces.ncsu.edu/general-pruning-techniques

Mulch Matters – NC State https://beaufort.ces.ncsu.edu/news/mulch-matters-how-when-and-why-to-mulch-in-spring/

Additional Photographic Documentation



Protecting the Root Zone -

https://content.ces.ncsu.edu/construction-and-tree-protection

Assessor

Field	Details
Name	**Brent Toler**
Title	ISA Certified Arborist SO-11135A

Credential	ISA Tree Risk Assessment Qualified (TRAQ)
Signature	_____

Date: May 20, 2026

PROFESSIONAL DISCLOSURE AND LIMITATION OF LIABILITY

This assessment was conducted as a Level 2 Basic Visual Tree Risk Assessment in accordance with International Society of Arboriculture (ISA) Tree Risk Assessment Qualification (TRAQ) principles and accepted arboricultural practices.

The assessment is based upon visual observations, and site conditions present at the time of inspection. No invasive testing, laboratory analysis, root excavation, aerial climbing inspection, resistance drilling, sonic tomography, or internal structural testing was performed unless otherwise specifically stated within this report.

Tree risk assessment is inherently probabilistic and cannot predict with certainty whether a tree or tree part will fail. Trees are living organisms subject to changing environmental conditions, including but not limited to wind, storms, saturated soils, hidden decay, root disturbance, pests, disease, lightning, construction impacts, and natural biological processes.

The observations, findings, opinions, and recommendations contained within this report represent the professional judgment of the assessor based upon the information reasonably available at the time of inspection. No warranty or guarantee, expressed or implied, is made regarding the future health, structural condition, or stability of the tree.

Risk mitigation measures may reduce risk but cannot eliminate all risk associated with retaining mature trees within occupied areas.

Implementation of recommendations, continued monitoring, maintenance decisions, and site management responsibilities remain the responsibility of the property owner or managing entity following receipt of this report.

This report is intended solely for the use of the client identified within this document for tree management purposes associated with the assessed site and date of inspection.

Diane Miller

From: Robert Miller <sailingbob.bob@gmail.com>
Sent: Friday, May 29, 2026 9:20 AM
To: John Deaton; Town Manager
Cc: Hollis, Sarah D
Subject: Re: Public tree inspection

Good morning John:
I have reviewed the risk assessment performed on the pecan tree. While the assessor did a reasonably competent job, it is important to remember that tree risk assessment is not as precise as we often hope. Even with the current ISA system, determining whether a risk is low, moderate, or high remains a largely subjective value judgment.

In my twenty years of experience as an expert witness in over twenty lawsuits involving tree failures, I have seen the consequences of these judgments firsthand. In every case, the tree had visible defects prior to the failure, and the responsible parties were found negligent, resulting in serious injuries, fatalities, and significant financial settlements.

While the suggested pruning may temporarily reduce risk, it will likely introduce additional decay. Given that the Tree Board has proactively planted new trees in the park to replace these aging specimens, removal may remain the most prudent course of action to eliminate liability and ensure public safety.

I hope this perspective is helpful.

Bob

On Thu, May 28, 2026 at 4:31 PM John Deaton <jdeaton5543@gmail.com> wrote:
Good afternoon , I hope all is well.

We, the town of Oriental, find ourselves charting new waters with the inspection and possible removal of a public tree and I'm seeking guidance on how best to proceed. A quick outline of the situation is as follows:

- It was pointed out that a large multi-trunk pecan tree in Edward Lupton park located in the town of Oriental, was showing signs of decay.
- I asked Dr Bob Miller to inspect the tree and offer an opinion on the condition of the tree and for a recommendation on how to best proceed.
- Dr Miller was prepared to bore the tree to check for decay but he saw no need to go further as a visual inspection revealed decay into the trunk from multiple large limb removals in the past.
- Dr Miller shared that while there did not appear to be any immediate danger, the tree should be put on the list for removal given its proximity to playground equipment and picnic facilities.
- With that recommendation, the tree was put on my list of trees that need attention and/or removal.
- I contacted a local tree company and got an estimate to have the tree removed.

In response, one local resident hired a TRAQ certified arborist to evaluate the tree. His report, which I'll make available to whomever would like to read it, listed the obvious damage and made specific recommendations to lower the risk to a reduced level of low to moderate, not to eliminate the risk and liability to the town.

Diane Miller

From: Robert Miller <sailingbob.bob@gmail.com>
Sent: Friday, May 29, 2026 11:28 AM
To: John Deaton
Cc: Town Manager; Hollis, Sarah D
Subject: Re: Public tree inspection

We both are in agreement the tree needs to be removed. I'm not sure what additional will accomplish. In the commissioners are reluctant it might help to tell them a jury in a Georgia city awarded a 29 year old single mom 12 million dollars because one leg had to be amputated after a large limb from a city tree fell on her car. Happy to help if needed. Bob

On Fri, May 29, 2026, 9:33 AM John Deaton <jdeaton5543@gmail.com> wrote:
Many thanks for your input!

There's no question as to whether decay is present, it's readily visible in multiple locations. I am in favor of removal to eliminate all possibility of someone being hurt, we can plant trees but can't undo the hurt if someone gets clobbered by a failed limb!
I will jump through the hoops so I can lay out the cost of following the recommendations so the board has a financial picture of the situation. I don't think any actual money will be spent but I do have to collect estimates, do you have a line on anyone doing level 3 inspections?

Again, many thanks for your insight and guidance, John

On Fri, May 29, 2026 at 9:05 AM Robert Miller <sailingbob.bob@gmail.com> wrote:
Good morning John:
I have reviewed the risk assessment performed on the pecan tree. While the assessor did a reasonably competent job, it is important to remember that tree risk assessment is not as precise as we often hope. Even with the current ISA system, determining whether a risk is low, moderate, or high remains a largely subjective value judgment.

In my twenty years of experience as an expert witness in over twenty lawsuits involving tree failures, I have seen the consequences of these judgments firsthand. In every case, the tree had visible defects prior to the failure, and the responsible parties were found negligent, resulting in serious injuries, fatalities, and significant financial settlements.

While the suggested pruning may temporarily reduce risk, it will likely introduce additional decay. Given that the Tree Board has proactively planted new trees in the park to replace these aging specimens, removal may remain the most prudent course of action to eliminate liability and ensure public safety.

I hope this perspective is helpful.

Bob

On Thu, May 28, 2026 at 4:31 PM John Deaton <jdeaton5543@gmail.com> wrote:
Good afternoon , I hope all is well.

Diane Miller

From: Robert Miller <sailingbob.bob@gmail.com>
Sent: Monday, June 1, 2026 10:50 AM
To: John Deaton
Cc: Town Manager
Subject: tree

Hi John. Keep in mind you are a certified arborist and I'm a consulting arborist and we both have recommended the tree be removed. If we do not do it then the town is going to be really hanging out in case of an injury or fatality. My suggestion would be that the citizen who is not happy with the tree being removed pay for the next level assessment, pey for the safety pruning that's been recommended and be held responsible for any damages that the tree does. Bob