Using the MSU Tree Risk Assessment App

This publication supports the MSU Tree Risk Assessment smartphone application, which helps tree workers identify and evaluate hazardous tree conditions. The app has two tools:

- **Quick assessment** for use in non-detailed assessments such as an immediate post-storm inventory.
- **Detailed assessment** for more elaborate basic (level II) risk assessments or advanced risk assessments.

The app user should have some training in tree risk assessment, including knowledge of ANSI A300 (Part 9) Tree Risk Assessment and International Society of Arboriculture Best Management Practices in Tree Risk Assessment.

Disclaimer: All tree risk assessments provided by Mississippi State University Extension will be conducted following current standards and guidelines from *ANSI A300 (Part 9) – 2017 Tree Risk Assessment a. Tree Failure*. The decision to mitigate tree risk through mitigation activities is ultimately determined by the property owner.

Quick Assessment

1. Complete assessor's name, customer's name, address/location of subject tree, land type, and number of trees to be assessed.
2. Complete the form for each inspection tree. Input fields include:
   - Inspection date: Date of tree inspection.
   - Assignment: Name of site visit can be the client's name or some other unique identifier.
   - Observations: Details site history and land use. Leave blank if not applicable.
   - Species: Tree species.
   - DBH: Enter tree diameter at breast height (4.5 feet aboveground).
   - Height: Enter total height of tree, including dieback.
   - Location: Tap to set GPS location or enter manually.

- Condition rating: Select no defects, minor, significant, non-recoverable, or dead.
- Concern: Select the part of concern – crown and branches, trunk, roots and collar, or whole tree.
- Size of part: Indicate size of part of concern.
- Target: Indicate the target of hazard and whether it is movable or not.
- Primary condition of concern: Select the condition (e.g., cavity) that is of primary concern related to the tree part.
- Treatment: Indicate a treatment option.

3. Note any limitations to the inspection such as vines or lack of access.
4. Include any notes for future analysis and referral.
5. Save report to return to later, or generate a report in an email text or CSV file attachment.

Detailed Risk Assessment

Users should have completed the International Society of Arboriculture's Tree Risk Assessment Qualification Course and/or be familiar with tree risk assessment best management practices. These instructions and the MSU Tree Risk Assessment app reflect ISA's Basic Tree Risk Assessment form.

1. Complete **background information** on property ownership and risk assessor. Provide a unique identifier to the subject tree. The time period should be agreed upon by the assessor and the client.
2. Complete **target information**. The risk assessment must include a target. A target can be human, animal, built, or environmental. The target can be stationary or moveable. Note whether or not it would be practical to restrict access to the target zone.
3. Note characteristics related to site factors, tree health and species profile, and load factors.

4. For each tree part, complete the sections under **tree defects** and **conditions affecting the likelihood of failure**. If applicable, note the percent circumference the cavity occupies the tree part.

5. Complete **risk categorization**. There can be multiple **main concerns**, and up to three **main concerns** are automatically transferred to the **conditions of concern** on the **tree risk categorization** section. Each concern should include part size, fall distance, and which target it will impact (from the **target information** section). Note any target protection such as a roof or neighboring tree crown. Select a measure for **failure and impact**. **Failure and impact** will be automatically input (based on the **likelihood matrix** of the **basic risk assessment** form). Select a response to **consequences**. **Risk rating** will be automatically input (based on the **risk rating matrix** of the **basic risk assessment** form).

6. Add any notes or comments.

7. Suggest **mitigation options** for each tree part, including pruning or removal of the tree parts or the whole tree. Note the residual risk remaining after each mitigation activity.

8. Provide an overall **tree risk rating** and **overall residual risk rating**. Assign a **work prioritization** score, with 1 being the highest priority. Add a time period for return inspection, if applicable.

9. Note the type of **data** this inspection reflects: preliminary or final. Also, note if an advanced assessment is needed. Finally, note any inspection limitations.

10. Save report to return to later, or generate a report in an email text or CSV file attachment.

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