

Storm Damage Assessment of Trees

Output Desired to Cities

Upon the completion of the tree assessment in any municipality, the following should be available:

- A prioritized listing of every tree by maintenance recommendation (e.g. corrective pruning, removal, stabilization, cabling, soil replacement, etc.); this will generated by zone (possibly) and/or street.
- The GIS layer with these points and attributes (i.e. the data) to go to City's GIS
- Optional (desirable): A report that estimates the cost of performing the maintenance recommended (by priority); this can be done post-processing from the database based on species, size, part size (i.e. part size in hazard), recommendation, and accessibility.
- County (Parish)/State/Regionally: [can be selected spatially using the GIS]
 - Common, regionally valid base map (e.g. enhanced TIGER; not each City's desired base map); once completed, they'll move the data to their own system and coordinate system)
 - Maps (and data) showing the overall scope and status of completion of the project
 - Areas & cities completed (in progress); by damage zone (e.g. in MS)
 - Lists (summary by maintenance, species and diameter classes)
 - Totals by maintenance recommendation with estimated cost (see optional that follows)
 - Optional (desirable): A report that estimates the cost of performing the maintenance recommended (see discussion under city relative to post-processing).

Data Requirements

Tree Location:

- City
- Street
- Address [If known]
- Lat/Long (Decimal Degrees) [GPS recorded]
- Public Tree (Y/N) [use ROW width from City, or other common indicators of the public area; your best "guess"]

Tree Description:

- Species
- Diameter

Site Description:

- Above Ground Utilities (enter height to line)
- Potential Rooting Area (e.g. Tree Lawn <3', Tree Lawn <5', Open)
- Suspected underground utilities (type: electric, sewer, water, gas); this might actually come from a city's GIS layer
- Predominant ground cover in CRZ (e.g. impervious, turf, natural, gravel, sand, etc.)
- % of Predominant ground cover (enter an estimate of the CRZ)
- Accessibility (Y/N) (i.e. Can a bucket truck get to it?)

Tree Condition:

- ISA Structure (Roots, Stem, Structural Limbs)
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Tree Hazard:

- Matheny & Clark (Target, Size of Part, Probability of Failure)

Tree Maintenance (Storm Related): [This should somehow be prioritized; possibly use condition & hazard]

- Pruning (priority based on condition and/or hazard)
- Stabilization (staking)
- Root Treatment (return eroded soil and/or mulch); Record area in ft² & average depth in feet
- Removal (priority based on condition and/or hazard)

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- Planting (potential planting site)
- Replacement (replant a tree site where it is obvious that a tree existed pre-storm)

Tree Maintenance (Non-Storm Related): [?? I'm not certain we need to be recoding these]

- Pruning (priority based on condition and/or hazard)
- Removals
- Other

Evaluation:

- Date/Time
- Arborist
- Crew (this may be from a related table from Arborist)
- Owner Contact Made (Y/N) (i.e. did you talk with the owner?)

This data collection inventory can be created in ArcPad or through Trimble's (or equivalent) Pathfinder software (i.e. data dictionary).

Data collectors should have GPS units to collect lat/long within 2-3 meters.

Other issues:

1. Should have a unit for each team (e.g. 10) and one additional "floater" unit for crew supervisor to be used for data collection but most likely to replace units with temporary problems.