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Arborist Report

September 8, 2023

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City of Santa Rosa
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Definition of assignment:

Review tree risk assessment prepared on August 24, 2023 by James MacNair. Provide feedback on methodology employed in the report and offer any additional input regarding the risk assessment. Risk rating in MacNair report to be evaluated by utilizing the Tree Risk Assessment Qualification (TRAQ) matrices.

Observations:

I read Mr. MacNair's report ("the report") regarding risk assessment of the Bunya Pine. The report concluded that the likelihood of impact of a cone to a pedestrian is "medium" to "high". The report shows a likelihood for failure of the cones over a three year period as probable. The combined likelihood of failure and impact is noted as "somewhat likely" to "high". The report holds an observation that five pedestrians were witnessed beneath the tree in a 45 minute time frame (average of one person every nine minutes).

Interpretations and Recommendations:

It should be noted that tree risk assessment is a very subjective process and slight variations in interpretation are not uncommon among Arborists. It is with this subjectivity in mind that the following interpretations/recommendations are made.

One input that generates the likelihood of impact rating, is the occupancy rate of the target zone for a perceived threat for failure. In the report, use of the sidewalk is observed at a rate of an average of one person every nine minutes. I would classify this as "occasional" occupancy, based on the description given in the Tree Risk Assessment Manual (Dunster, J, Smiley, T.E., Matheny, N., Lily, S., *Tree Risk Assessment Manual, Second Edition*, International Society of Arboriculture, 2017). By inputting "occasional" occupancy into the matrices, and providing all other inputs utilized in the report, I arrive



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at a risk rating of “low”, instead of the “moderate” to “high” arrived at in the report. My assumption is the report concluded an occupancy rate of “frequent”, rather than “occasional”. Because of the subjective nature of the risk assessment process, I do not feel the report’s overall risk rating was arrived at in error.

The report rating of “probable” for likelihood of failure is forecast over a three year time frame. Based on my experience of cone development occurring over a two to three year period, the report’s “probable” rating is a reasonable conclusion.

As a 28 year veteran Arborist and owner of a tree service, I recommend to all of our customers, especially those in possession of trees with a high level of exposure to uncontrolled targets (ie, sidewalks, streets, parking areas, etc.) that they evaluate their trees on an annual basis or after any major weather event (ie, high winds, earthquakes, lightning strikes, heavy rainfall, etc.).

If I maintain all inputs from the report and reduce the time period from three years to one, this reduces the likelihood of failure of the cones from “probable” to “improbable”. This “improbable” rating brings about an overall risk rating of cones striking a pedestrian to “low” over a one year period.

I feel it would be prudent to continually monitor this tree for any changes from its current state, as well as manage the tree’s weight distribution and cone development and react as appropriate based on the conclusions drawn from the monitoring.

Conclusion:

Utilizing the TRAQ matrices, along with all of the same inputs as the report, with a change of the pedestrian occupancy rate beneath the tree, I arrive at an overall risk rating of “low” for the tree.

The larger the time frame utilized in a risk assessment, typically a higher overall risk rating will result. If the time frame of one year is utilized, the overall risk is “low”.

Given the tree’s high level of exposure to public use areas, I recommended the tree be monitored by an ISA Certified Arborist every twelve months, after any major weather event, or until a different interval is deemed appropriate.



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7. Loss or alteration of any part of this report invalidates the entire report.

Sincerely,

Fredrick Frey
ISA certified Arborist
WE-4209



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Sincerely,

A handwritten signature in black ink, appearing to read "Fredrick Frey", is written over a large, faint, light-green silhouette of a tree that occupies the lower half of the page.

Fredrick Frey
ISA certified Arborist
WE-4209