

Hazard tree removals at Eagle Heights mound group

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Justification: Eight dead trees located in the Lakeshore Nature Preserve's Eagle Heights Woods pose a hazard to the integrity of the Indian burial mounds and the safety of visitors using the adjacent trail. Arborists designate "hazard trees" using the following definition: "A tree is considered hazardous if it has defects that may cause a failure resulting in property damage, personal injury or death." Ellen Agnew, certified arborist and grounds department supervisor, has determined that these trees meet this hazard definition.

The trees have been dead for several years and are decaying. Large branches have recently fallen across the mounds, and additional limbs will certainly drop in the future. It is likely that these trees may also topple and cause "tip-ups" (exposed root masses with associated pits and disturbed soil).

The "*UW-Madison Indian Burial Sites Management Policy*" (approved May 26, 2011, by the Campus Planning Committee) states that burial sites will be managed to "preserve the structural integrity of mounds." Furthermore, the university as property stewards for this site is required under the state burial sites preservation law (Wis. Stat. 157.70) to protect the mounds from disturbance—such as might occur from falling limbs and "tip-ups."

Tree locations: Five dead oaks on the mounds and three dead oaks near the adjacent walking trail have been identified as hazard trees. See attached map for specific locations.

Removal strategy: The optimal removal strategy would involve the use of a "bucket truck" in order to access and cut limbs to be lowered to the ground in a controlled descent. Constrained road access makes it impossible to bring a bucket truck to the site.

Due to the advanced decay state of the trees it would not be safe to use a tree climber to work up in the tree, to cut and lower limbs. The only safe option would be to drop the entire tree by cutting the main trunk at ground level. Dropping a large tree, with massive limbs attached, poses several challenges: the tree may "hang-up" in adjacent trees and the force of the tree hitting the ground may cause soil disturbance.

To avoid "hang-ups" the arborist may be required to remove additional trees in the fall zone. To avoid soil disturbance the trees will need to be felled ONLY under conditions where the ground is solidly frozen. It is likely that only small sized buckthorn and honeysuckle shrubs will need to be removed to safely remove the hazard trees. It is possible however, that a few additional small trees may be cut in the course of hazard tree removal. All efforts will be made to avoid removal of native trees in the drop zone.

Wood Clean-up: Trees trunks will be cut at ground level. Major limbs will be cut such that the main trunk rests on the ground. Major limbs that do not pose a safety hazard will remain attached to the main trunk. Woody material within five feet of the edge of the mound will be removed and scattered in adjacent areas.

Removal crew: Arborists from the Physical Plant grounds crew will fell the trees and buck limbs necessary to getting the main trunk to lie on the ground. Preserve staff and their contractors will be responsible for removing small diameter shrubs/trees to establish a safe tree "drop zone." The Historic and Cultural Landscape Resources manager will work with all parties to assure that the burial mound site is appropriately protected.

Site restoration: In order to prevent soil erosion on the mound as result of the tree removals, Preserve staff may need to re-seed the area with appropriate ground cover plants or install bio-degradable erosion control mulch or mats.