WISCONSIN DEPARTMENT OF NATURAL RESOURCES
BURIALS, EARTHWORKS, AND MOUNDS PRESERVATION POLICY & PLAN

People have settled here, raised families here, worked here, and died here for thousands of years. Common people built this land, this place we call Wisconsin. They hunted mammoth along the edges of continental glaciers. They cleared the land and they raised crops. They built towns and cities. And they buried their dead …

The Department of Natural Resources (DNR) is the State's single largest owner of archaeological sites, historic structures, and other important cultural resources, including burial areas. The DNR *manages* these important cultural resources - physical records of our common past - on behalf of the people of Wisconsin.

Burial sites are universally considered sacred, and it is DNR policy that all such areas on DNR properties will be appropriately cared for, and will be treated with the respect they deserve.

Indian earthworks or "mounds" are by far the most conspicuous and numerous of burial features occurring within DNR properties. More mounds were built by American Indian communities in Wisconsin than in any other region of North America. Prior to EuroAmerican settlement, there may have been 15,000 to 20,000 mounds in the state - perhaps 4,000 of these remain today. The earliest mounds, dating as far back as 500 BC were round or "conical" in shape. At about AD 800, people began to build mounds in other forms as well, including linear-shaped, and "effigy" mounds made in the shape of birds, turtles, bears, panthers and other animals (more effigy mounds occur in Wisconsin than anywhere else in the world). Still later, a small number of platform or pyramidal mounds were constructed. Mounds may exist singly, or as "mound groups" of several to over 100 individual mounds, sometimes clustered as "sub-groups" within a larger group. Additionally, both Indian (prehistoric as well as historic) and non-Indian peoples (EuroAmerican settlers and others) have been buried in *non-mound* settings.

All of these sites are protected from disturbance under the State's burial sites law (Wisconsin Statutes s.157.70). An important feature of WS 157.70 stipulates that there may be no disturbance of the burial or within (a minimum of) five feet from the perimeter or base of a mound or other defined burial area. A buffer greater of 15 feet or greater is preferred, and is the DNR standard (exceptions considered in consultation with the Wisconsin Historical Society).

The DNR recognizes that it has a responsibility for the proper stewardship of all burial areas occurring on DNR properties, and has developed these standards to better care for these important places. The following standards apply to human burial sites of all forms – including non-mound burials; conical, linear, effigy and platform mounds; and other types of burial sites. This policy and standards do not apply to areas where cremated human remains have been recently deposited or dispersed. The policy and plan components apply to all DNR properties. Submerged burials require additional considerations; please consult with the Departmental Archaeologist for further guidance.

This policy and plan recognizes that the pace of implementation will reflect the availability of needed resources, including both staffing and funding. That noted, implementation of this policy is a priority for the Department, and should be realized sooner rather than later.

For management purposes, it may be useful to think of burial areas as "preserves" which occur within a larger setting, and which have different management needs than other areas of the DNR property within which they occur.

DNR BURIAL SITE MAINTENANCE PLAN

General Considerations

Each burial site is unique and should be assessed according to the condition of the burial area proper, general conditions of the site, location (including public accessibility/remoteness), and risk of damage. Features of this Burial Site Maintenance Plan can generally be applied to all burial sites (non-mound and mound), but may need tailoring to better accommodate the unique characteristics of specific burial sites.

Individual Bureaus and Property Managers should consider prioritizing which sites first need attention, and will generally be those considered to be "at risk" (e.g., due to erosion caused by pedestrian or vehicular traffic, or by natural forces), burial sites which are relatively accessible, and burial sites which occur in developed areas of State Parks and other high traffic or high profile areas.

As noted above, state law requires that there may be no disturbance of a burial or within (a minimum of) five feet from the perimeter or base of a mound or other defined burial area, and without a permit from the Director of the Wisconsin Historical Society (WHS). A **buffer** greater than fifteen feet is always preferred (as noted previously, and in consultation with WHS, fifteen feet is the DNR standard). However, *when they occur in "groups" or "sub-groups" (e.g., distinct clusters of burial features [e.g., mounds] which form a larger "group"), burial features should generally be maintained as a group or sub-group, with the buffer area extending out from a perimeter line which circumscribes the group or sub-group, rather than out from individual burial features.* Trails through such areas should be carefully planned to avoid impacts to burial features (see below also). Existing trails running through mound groups or other burial areas should be evaluated and re-routed, if necessary, to avoid adverse impacts to the burial area.

At this time, burial sites located in more remote areas and/or away from public use areas should not be signed and should remain in a more natural condition than described below – as appropriate, you may consider removing dead or diseased trees (to ground surface only – no stump removal), deadfall, brush, and small trees (≈10 inch diameter or less) occurring on or within ≈15 feet of the perimeter of defined non-mound burial sites or mound bases on such remote sites.

It may be desirable and efficient to organize **regional work teams** to implement vegetation control measures, especially for wooded areas. Development of such teams would be useful both for establishing local "experts" better able to recognize burial sites, as well as for creating capable and efficient functional units that can more expeditiously implement woody vegetation control and other maintenance measures.

The Departmental Archaeologist is available to provide training in the recognition of burial mounds and other burial sites.

Archaeological Assessment

The first steps in the development of a maintenance plan for a mound or non-mound burial site are: (1) contact the Departmental Archaeologist to discuss the proposal and to determine if the site has been previously recorded with the Office of the State Archaeologist at the WHS; and (2) identify associated, extant records which may include detailed maps, descriptions, photographs of the burial area, and records of previous investigations. At the end of this process, copies of newly-developed, maps, photos, etc. should be provided to the Departmental Archaeologist.

After identifying and reviewing such information, it may be desirable to conduct an archaeological survey via pedestrian reconnaissance to identify extant mounds or other burial features. If one is not already available, an *accurate* map of the burial area should then be made, including (as appropriate) mound shapes, dimensions, mound-mound angle(s), presence of "spirit houses", depressions or other burial features, general condition (e.g., obvious looters pits, animal burrows, other actual/potential impacts), and relationship to nearby (relatively) prominent topographic features. DNR personnel, DNR-approved hired consultants, or DNR-approved cooperative partners may complete this mapping. Include GPS coordinates and elevations for each mound/burial feature as able (or at least first and last mounds in the group). All notes, maps and photos should include dates. *Any observed artifacts or bone materials observed at-surface should be immediately reported to the Departmental Archaeologist – do not attempt to remove them!*

Vegetation Assessment

After completing the archaeological survey, conduct a vegetation assessment – if wooded, consult with the area DNR forester or plant ecologist at the outset of this assessment component. Include a description of the existing plant community, including endangered and threatened species and invasives, and a discussion of forest health (especially impacts of tree removal on mounds) if the area is wooded. Also identify the probable pre-modern vegetation, address suitable methods for restoration of the native plant community, and evaluate the sustainability of future vegetation. Note whether the use of fire is an appropriate and desirable vegetation management tool for mounds and adjacent areas.

Vegetation Control / Tree Removal

Removal of trees and shrubs from mounds and immediately adjacent areas (within ≈15 feet of mound base) is generally desirable to protect them from windthrow and other damage, and to encourage growth of ground cover that helps prevent erosion. However, at some locations, selected trees may be retained for forestry purposes; when significant, unavoidable mound damage would occur during tree removal; or for other management purposes.

During tree removal, avoid disturbing the burial site in any way. Do not drop trees on or drag them across the burial areas, drive machinery over the areas, or stage vehicles or material on them. Remove trees only when the ground is frozen. Stumps are to be left in place or cut to ground level (see below). Remove vegetative material by hauling it away or scattering or piling it at least 15 feet from the defined burial area or mound (consider trail development issues!). Ideally, volunteers must be supervised by a person with experience in the recognition of early burial sites, especially in the case of mound sites (also consult with the Departmental Archaeologist).

For burial areas that are overgrown with WOODY VEGETATION, as needed (due to personnel, budget, or other constraints), scheduling of tree removal on burial sites can be done in phases (refer also to DNR "Chain Saw" policy), and would reasonably progress from more heavily visited areas to less visited areas. Using a phased approach:

Phase I involves the removal of trees that are dead, leaners, damaged, diseased, or insect infested; brush; trees less than ≈5 inches in diameter; herbaceous plants; and invasive species on or within ≈15 feet of a defined burial area or mound base.

Phase II involves removal of all trees that are less than ≈10 inches in diameter from the mounds, and the removal of all dead, down and hazardous trees on or within ≈15 feet of a defined burial area or mound base.

Phase III involves the removal of all remaining trees on or within ≈15 feet of a defined burial area or mound base.

Stump removal is <u>prohibited</u>; stumps may only be cut or ground only to ground level and, if needed, one should only utilize smaller equipment to grind/cut the stump, and should not penetrate below the "natural" surface and into the soil of a burial area/mound or adjacent areas (remember, per state law, there is to be <u>no</u> soil disturbance within at least five feet of a burial site/mound base).

Chemical treatment may be a necessary component of invasives and/or woody (including stumps) vegetation control. Ideally, herbicide application is selective and targeted rather than broadcast type (although broadcast spraying may be required to control or eradicate certain undesirable species).

Grassy vegetation (ideally no- or low-maintenance, preferably with native species) should be established to stabilize area soils and inhibit woody plant succession. Mowing and/or periodic, controlled burning may be useful in maintaining such cover (see also below).

For burial areas covered by TURF-TYPE VEGETATION, vegetation control typically consists of mowing, augmented, as needed, by periodic controlled burning. Be careful to AVOID having mowing equipment blades or deck "clip" or other wise cut into the burial area, especially when cutting on or over mounds. Consider that <u>mounds do not need to be mowed with every mowing</u>; indeed, *it is desirable to not mow mounds routinely or cut the grass as short – this can help to minimize inadvertent impacts to mounds, as well as "highlight" mound shape and so make them more evident to the public* (see also below). Mowing of mounds should not occur when soils are water-saturated. Hand-mowing of mounds is preferable.

LONG TERM MAINTENANCE CONSIDERATIONS

Long term maintenance of burial areas focuses on developing and maintaining appropriate ground cover to prevent erosion and limit growth of new invasive and/or woody vegetation, and to prevent inadvertent impacts due to poor trail design or other unintentional or intentional damage. Species selection depends on soil and canopy conditions and should consist of native species commonly found in the area. Issues of public accessibility, the relative remoteness of the burial site, and the ability (or inability) to periodically monitor it must also be considered when contemplating selective revegetation. <u>Ideally, vegetation suppression and subsequent revegetation efforts will result in an area plant mix which requires little or no routine maintenance.</u>

All trail development proposals adjacent or proximal to burial sites on DNR properties must be reviewed by the Departmental Archaeologist prior to implementation (see also below).

Chemical treatment should be limited, but may be necessary in some circumstances, especially to control re-growth of invasives or woody vegetation. While broadcast spraying is generally discouraged on burial sites, it may be needed in order to control invasives or other undesirable species on or adjacent to burial areas.

As above, limit or avoid mowing on mounds because it can damage mound contours, cause soil compaction, result in edge diffusion, and encourage people to walk on the mounds. In some cases mowing may be necessary to promote a thick ground cover and control growth of woody plants and invasives. Mow once in the spring and once again in the fall, with the mower deck set

high to avoid ground disturbance. When mowing with a lawn tractor rather than a push mower, the use of a four wheel drive vehicle with low impact tires is recommended. An alternative to mowing mounds is to mow around them; again, this serves to highlight their shapes and reduce negative impacts. The equipment operator should be well trained and use extra caution to avoid cutting into the edges of the mounds.

In a prairie or oak savanna setting, **prescribed burns** may be conducted to control invasives and woody vegetation, as well as to enhance the growth of native plants. The use of fire will depend on local circumstances. Consult plant resource management professionals to determine if fire is appropriate and how frequently it should be used as a control measure. During burns, monitor installation of firebreaks and use of firefighting equipment to ensure that mounds are not disturbed.

MOUND/BURIAL SITE RESTORATION

In some cases, the repair of damaged mounds or other burial areas may be appropriate, and requires consultation with a number of parties. The Departmental Archaeologist will coordinate restoration requests with the WHS, interested tribal governments, and other interested parties. A recommended general procedure is to: (1) record the nature and extent of the damage and current condition of the mound (include sketch map and photographs); (2) remove leaf litter from the damaged area; (3) lay geotextile fabric on the ground surface in the area of the damage, (4) scatter current year coins (year of restoration; nickel preferred) on the fabric to indicate the time of restoration, and (5) use hand tools to place new soil from an off-site location on the fabric to replace missing soil. The restored section will likely require seeding to inhibit erosion. Photographs should be taken once the restoration has been completed.

The "restoration" or "reconstruction" of burial sites/mounds that appear to have been completely destroyed requires similar consultation. Work may involve complete reconstruction of the site if its original location and configuration can be accurately established. *Note: even though the above-ground portion of a burial site (e.g., a "mound") may appear to be destroyed, associated sub-surface pit burials may remain intact – do <u>not</u> assume that a burial is completely destroyed just because the above-ground component is gone!*

Neither chalk nor lime should be applied to the ground surface to outline extant or destroyed mounds (among other things, this changes soils chemistry, and may adversely impact revegetation efforts).

PUBLIC USE, TRAILS, SIGNS, AND FENCES

Burial/mound sites located in more **remote areas**, away from more readily monitored, higher traffic public use areas, should not be signed and should remain in a more natural condition. Such sites should not have trails built to, around, or proximal to them.

Except for maintenance, **pedestrian (or other) traffic should not be allowed on burial sites/mounds**. Do not locate signs, fence posts, picnic tables, or public events on them. For sites located in public use areas, erect signage indicating that the site is protected from disturbance by State law and, when appropriate, affirming the sacred nature of burial sites/mounds to Indian or other related communities, and directing people to stay on the trail and off the mounds or other burial site. **Signs** may also inform the public about the significance of mounds and the people who built them, and may include maps of a specific mound group or mound groups in the vicinity. Interpretive signage should be developed in consultation with the

Departmental Archaeologist, in cooperation with respective Bureau interpretive staff (e.g., for Parks, this would be the Chief Naturalist). Signs must be located a minimum of 15 feet away from the burial sites perimeter or mound base.

Trails may be established in the vicinity of burial sites, especially mounds, both to encourage public visitation and to direct associated traffic, but they must be located a minimum of five feet from the defined burial site perimeter or mound base (more than five feet is preferable). A trail does not need to be built to provide access to every mound in a group of mounds – too often, that kind of approach unnecessarily complicates trail design and compromises the long-term integrity of the mounds. The trunks of small diameter trees that have been removed from the burial areas/mounds may be used to mark the edges of trails. Use wood chips, shredded bark, or mowing for trail maintenance. Trail design should also take into account aesthetics, viewsheds, and erosion control; however, *avoiding impacts to the burial area is a primary consideration in any trail design proposal.* Developing trails in and around mound groups requires having an accurate map of mound(s) and mound groups!

Fencing may be considered to help direct and limit traffic flow, and to prevent the development of informal trails which may result in adverse burial site impacts. If needed, fencing should ideally be a "low-profile" type, such as a waist or mid-thigh high, split-rail fence. In some instances, barrier-type vegetation may be a desirable alternative or adjunct to fencing; selection of plant type(s) should be made in consultation with a DNR Forester or other plant specialist.

APPROVALS AND RELATED ISSUES

The Departmental Archaeologist will review and approve all related signage, burial site de-vegetation, maintenance, restoration, or trail development and relocation proposals and, as indicated, will consult with interested third parties (e.g., individual families, tribal governments) when such burial areas are known to be associated with such parties.

Copies of all pertinent documentation, including maps, photos, etc., should be retained by the respective property manager, and two copies of these documents should be forwarded to the Departmental Archaeologist.