

LOWER WISCONSIN STATE RIVERWAY

CULTURAL RESOURCES PROTECTION AND PRESERVATION ON LANDS OWNED OR MANAGED BY THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Introduction

The Lower Wisconsin State Riverway encompasses nearly 80,000 acres along the final 92 miles of the Wisconsin River, beginning below the dam at Prairie du Sac and extending to the confluence with the Mississippi River near Prairie du Chien. The project encompasses bluffs, bottomlands, islands, sandbars, swamps, prairies and woods within the lower Wisconsin River valley. The project was created in 1989 to protect the scenic beauty and natural character of the valley, to provide a quality public use recreational area and to manage the corridor's resources for the long term benefit of the citizens of the State of Wisconsin. The Wisconsin Department of Natural Resources was charged with acquisition of lands within the project boundary from willing sellers, either fee title acquisition or scenic easement. Currently (February – 2006), over 46,000 acres within the project boundary are owned or controlled by WDNR.

Cultural Resources

The Riverway contains an abundance of archeological and historical resources, many of which are located on state owned or managed lands. These resources include rock art, earthworks (effigy, conical and linear mounds), Native American habitation sites and agricultural fields, historic sites associated with Euro-Yankee exploration (missionaries, fur traders, etc.) as well as post-settlement farmsteads, cemeteries and ghost towns.

Of special note, the Riverway contains a high concentration of effigy mounds and numerous conical and linear mounds. The Town of Eagle, Richland County, is believed to have the highest concentration of bird forms (thunderbird, eagle, hawk, falcon, etc.) within the effigy mound region. Due to the mapping and surveying of earthworks by T.H. Lewis, C.E. Brown, S. Taylor and others in the mid to late 19th century and early 20th century, the previous existence of thousands of mounds is known. As we view the landscape in the early 21st century, there remain mounds in the Riverway but the once rich tapestry of tumuli that covered the prairies and hills has dwindled substantially and the extant earthworks created by the hand of a once thriving culture over 1000 years ago now are numbered in the dozens. Some of these mounds are on privately owned lands, some are on tribal lands and many are located on public lands. The Ho-Chunk Nation has stated that the effigy mound builders were their ancestors and the mound sites are sacred. The religious or spiritual aspects of these sites to the Ho-Chunk Nation and other Native Americans is an important consideration in any discussion of protection or preservation.

With land ownership comes a responsibility for proper stewardship and, in the case of known archeological or historical sites; the burden of responsibility for stewardship is greater. The State of Wisconsin (and in the case of the Riverway, the WDNR) should be a leader in protecting and preserving these sites and should offer a model for other units of government and private citizens to emulate. Therefore, the following maintenance protocol is provided as a general guideline for proper stewardship of archeological sites containing effigy, conical and/or linear mounds.

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Mounds maintenance

The phased approach to mounds maintenance in the Riverway was developed by the Ho-Chunk Nation and Lower Wisconsin State Riverway Board (LWSRB) in regard to a project to maintain the mound group identified as McClary #4 in the Town of Eagle, Richland County. The site was purchased by the Ho-Chunk Nation in 1994. Because the site is located within the Riverway boundary, a permit for vegetative removal from the LWSRB was required. The phased approach was developed in order to assess visual impacts when viewed from the river, as required by the Riverway law. The Ho-Chunk Nation successfully has implemented Phases I & II and is in the process of implementing Phase III. The phased approach (Phases I/II) has been utilized at state owned sites in the Riverway including the Dingman, Hamilton, Jonas and Bloyer mound groups. (NOTE: An LWSRB permit is required for maintenance of a known archeological site pursuant to RB 2.06, Wisconsin Administrative Code.)

The phased approach is designed for sites that have not been managed or maintained and are generally overgrown with trees and/or woody vegetation. These activities should occur when the ground is frozen or dry and the leaves are off the deciduous trees. Ground disturbance should be minimized at all times. Each mound or mound group is unique and should be assessed according to the condition of the mound(s), condition of the site and risk of damage.

Phase I

Phase I involves removal of dead or down trees, trees which represent an imminent hazard to the mounds (leaners in danger of uprooting, storm damaged, diseased or insect infested), woody vegetation (trees and brush less than 5" DBH) and non-native invasive species. Healthy trees larger than 5" DBH remain. Material should be taken off the mounds and scattered or piled 25 feet or more from the mound wherever possible. A minimum of 15 feet should be maintained between brush piles and the mound.

Phase II

Phase II involves removal of all trees <14" DBH from the mound as well as continuing with brush removal efforts. Within 5 feet of the mound, all dead, down and hazard trees are removed.

Phase III

Phase III involves removal of all trees, healthy or not and regardless of size, from the mound and from within 5 feet of the mound.

Phase IV

Phase IV represents the long term maintenance of the site including establishment of appropriate ground cover to prevent or minimize erosion. Control of woody vegetation continues. Where feasible, restoration of the native plant community is encouraged. Attention should be paid to species selection when considering trees to be retained at a site in regard to long term canopy cover, suitability for the site, susceptibility to disease and/or insect infestation and longevity. Stump removal, if done at all, should only utilize small equipment to grind the stump and should not penetrate the soil of the mound.

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Mowing

Mowing should be limited or avoided. The use of native plants to establish ground cover is preferred. In some cases, occasional mowing may be appropriate. Where mowing does occur, the mower deck should be set at a high level to avoid ground disturbance, enhance vegetative growth and avoid erosion. Hand mowing (push mower) or mechanical mowing (lawn tractors) should be evaluated carefully. Compaction and exacerbation of edge diffusion should be avoided. If lawn tractors are used, 4WD or AWD vehicles with low impact tires are recommended to minimize compaction and ground disturbance. An alternative to mowing over the mounds is to mow around the mounds. Careful consideration should be given to mowing around the mounds to avoid ground disturbance and adverse impact to the mound edges. Any equipment operator should be trained thoroughly and should have extensive knowledge of the equipment being used at the site.

Burning

The use of fire to control woody vegetation and to enhance the native plant community in a prairie or savanna ecosystem may be a viable tool for the property manager. The validity of fire as a tool should be made on an individual site basis. While restoration of the native plant community at each mound site may be an ultimate goal, other factors may preclude the restoration effort, including the re-introduction of fire. Surveys of the site should be conducted prior to burning to assess the native plant community and to determine if artifacts are present on the surface. Additional surveys should be conducted following the controlled burning to look for artifacts and to determine the response of the native plant community to fire. The frequency of fire at a site should be determined following consultation with appropriate resource management professionals. Installation of firebreaks and use of firefighting equipment at a site should be carefully monitored.

Chemicals

The use of chemical treatments to control woody vegetation or non-native invasive species should be limited but may be required in some circumstances. While removal of woody vegetation by hand, both initially and on a routine maintenance basis, is preferred, the hand removal option may not be viable in an era of dwindling financial resources and decreasing personnel for resource management activities. The use of chemicals is an important decision for a site. The type of herbicide used is a critical component of the decision making process as is the application. In general, stump treatment of trees or woody vegetation with a small brush is preferred. Again, generally speaking, the broadcasting of chemicals is discouraged. A distinction should be made between use of chemicals on the mounds versus use of chemicals on the land adjacent to the mounds.

Site Assessment

A comprehensive site assessment is required at each site to evaluate the existing plant community and opportunity for restoration of the native plant community, to determine the conditions of the mounds, to determine the need for mapping, and to assess risks to the mounds.

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Botanical Survey

A comprehensive survey of a site should record the existing trees, woody vegetation and other plants at a site. Notations should be made regarding listed species. An assessment of native plant community relicts should be recorded and an evaluation of the treatment necessary to restore the native plant community should be made. Tree canopy and ground cover should be noted. Comments regarding tree species and potential for adverse impact from disease or insect infestation should be included. The potential for use of fire at the site should be recorded. Following implementation of Phases I-III at the site, which may include the use of fire, another survey should be conducted to evaluate the response of the native plant community at the site.

Archeological Survey

An archeological survey of the site should be conducted both before and after phased work is implemented. At minimum, the number and type of mounds should be recorded and surface observations should be conducted. If possible, GPS coordinates for the mounds should be taken. The condition of the mounds should be noted, such as whether the edges are well-defined or diffuse and whether the mounds are well-preserved or have been damaged. An additional walk through the site should be conducted following extensive tree removal or introduction of fire to the site. Artifacts found should be left at the site and not moved and should be reported to the DNR archeologist or Wisconsin Historical Society. **Artifacts may not be removed from the site!**

Mapping

While adequate maps of some mound groups are available, the vast majority of mound groups require mapping. Certainly, new technologies are available that would enhance existing maps. Mapping is important to assure an accurate record of the site is maintained. Site assessment should include notations regarding proximity to water features, proximity to roads and other notable features of the site.

If the WDNR is unable to create maps for sites from existing personnel and funding sources, grants to proceed with mapping should be sought. Cooperative efforts with other federal and state agencies, the university or technical school system, the Ho-Chunk Nation or other tribal entities, or 501c(3) organizations should be encouraged.

Risk Assessment

Each mound site should be assessed for inherent risks. Notations should be recorded regarding potential threats to the mound(s) from erosion (destabilized river banks, encroaching gullies); proximity to residential/commercial/industrial development, roads, agriculture, pedestrian or bicycle trails, playgrounds and parks; non-native invasive species and tree species of concern due to disease or insects. For example, property managers may wish to evaluate the number of ash trees at a site due to the potential for infestation by the emerald ash borer and the subsequent treatment recommended for infested areas (removal of all ash trees within ½ mile and removal of stumps and roots). Removal of all ash trees from the mounds or within 5 feet of the mounds may be considered a priority in areas where EAB infestation is incipient. Other species may come with a different suite of potential calamitous diseases or insect problems (Dutch elm, gypsy moth, oak wilt, etc.) Mounds associated with a “high risk” for damage should receive immediate attention to assure protection and preservation.

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Repair of damaged mounds

Where appropriate, repair of mounds damaged by post Euro-Yankee settlement activities and/or natural causes may be considered. Coordination with the Wisconsin Historical Society (WHS), WDNR archeologist and Ho-Chunk Nation is required.

At the Dingman mound group in the Town of Eagle, Richland County, repair of three conical mounds was accomplished in May of 2005. The mounds were damaged by looters at an unknown point in time within the previous 150 years. Permission to execute the repairs was secured from the WHS, WDNR and Ho-Chunk Nation. The project was undertaken with supervision from the WDNR archeologist. Leaf litter was removed from the damaged area. A fabric/geo-textile was placed in the excavated area to present a barrier from the original soil and the new soil. Coins minted in 2005 (in this case, buffalo nickels) were placed on the fabric at points throughout the bottom of the disturbed area to indicate the time of introduction of the new soil. Soil was then placed in the damaged area by hand (bucket by bucket) until the mound was restored. Ground cover was quickly established during the late spring and summer months. No erosion was evident during periodic monitoring. Significant canopy cover was present which may have assisted with erosion control during the time immediately following repairs.

Restoration of destroyed mounds (as opposed to repair of damaged mounds) should be discussed with WHS, the DNR archeologist, the Ho-Chunk Nation and other interested tribal governments. In some locations, establishment of chalk or lime outlines of destroyed mounds may enhance educational opportunities. In other cases, the actual reconstruction of a destroyed mound may be appropriate. Restoration of the Panther Spirit Mound near Mauston involved cooperative efforts by the Ho-Chunk Nation and students from the Mauston School District.

Trails

Pedestrian traffic should not be allowed on the mounds! Trails should be established at those sites where public visitation either is likely or is encouraged. Trails should be >5 feet from the mound and should be >10 feet from the mound where possible. Small trees and large brush stems that have been removed from the mounds in phase I or II successfully have been used for trail demarcation. The use of wood chips, shredded bark or mowing may be considered for trail maintenance. Location and design of trails should consider proximity to mounds, aesthetics, viewsheds and erosion control.

Signage

Signage at mound sites should be minimized but efforts should be made to educate and inform the public about the significance of the site and the people who constructed the earthworks. Maps of the mounds at specific sites or in a general context of other mound groups in the vicinity may be useful. A generic sign for selected sites that describes the effigy mound building culture and the types of mounds (effigy, linear or conical) may be appropriate. Affirmation of the sacred nature of the site to Native American peoples should be included in the signage. A strong statement about staying off the mounds and information on the burial sites preservation law should be included. Site specific signage should include a map of the site and information regarding the unique features of the site. In some circumstances, brochures or small maps could be provided to visitors.

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Volunteers

With fewer WDNR personnel available and funding for property management diminishing, the use of volunteer groups/individuals often is a necessity. In the Riverway, volunteer groups have provided hundreds of labor hours to protect significant archeological sites on state owned lands. Two prominent groups include Cultural Landscape Legacies, Inc. (CLL) and the Friends of the Lower Wisconsin (FLOW). CLL & FLOW volunteers provided equipment and labor to remove brush and trees and create trails at sites near Muscoda. In addition, one building was razed utilizing the CLL and FLOW labor force.

Volunteers require supervision and instruction. CLL has used the opportunity for education and sets aside time for volunteers to be instructed on the sanctity of the mounds to Native Americans and to discuss the effigy mound building culture. Use of volunteers requires a qualified team leader, either a person with an archeological/anthropological background or with experience in maintenance of archeological sites. The use of equipment by volunteers should be monitored closely. While well-meaning, most volunteers are not “expert” operators of mechanical equipment. Persons using chainsaws or mechanical brush cutters should have appropriate safety equipment and the number of persons using mechanical equipment should be limited to avoid safety issues.

Conclusions

The WDNR has a tremendous responsibility to properly maintain the known archeological sites on state owned lands within the Riverway. The department also has a unique opportunity to create a model of mound protection to be emulated statewide by other governmental units and by private landowners. In addition, there is great potential for education of the general public on the mound building culture, the sacred aspects of the mounds and the importance of the mounds to contemporary Native Americans, including the Ho-Chunk Nation. A synergistic approach to the mounds protection and preservation effort with involvement of federal and state agencies, local governments, the educational system, tribal governments, nonprofit organizations and private landowners could result in a truly magnificent outcome, not only for the current generation but also for future generations.

*Draft proposal (02/23/06) prepared by
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Original draft and revisions reviewed by the Lower Wisconsin State Riverway
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**LOWER WISCONSIN STATE RIVERWAY
MOUNDS MAINTENANCE PROTOCOL AD HOC COMMITTEE**

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