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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

POWERTECH USA, INC.

(Dewey-Burdock  
In Situ Uranium Recovery Facility)

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# A Landscape-scale Approach to Mitigating Adverse Effects on Historic Properties

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This document provides additional guidance to Department of Interior personnel concerning the management of cultural resources and mitigation of adverse effects on Historic Properties as part of a broader approach to managing public lands and waters at a landscape-scale. The approach outlined here is consistent with the regulations enabling the National Historic Preservation Act (NHPA), as well as with relevant Presidential Memoranda, and Executive and Secretarial Orders<sup>1</sup>. Additionally, the document identifies advantages of taking a landscape-scale approach, the challenges and considerations for implementation, and proposes some necessary first steps. It has been prepared as part of the strategy for implementing Secretarial Order 3330<sup>2</sup>. As this effort evolves, it is anticipated that this guidance will be revised to capture important lessons learned and other developments.

## What is a landscape-scale approach in the context of cultural resource management?

A landscape-scale approach is one in which individual resources are considered within the context of the broader cultures and historical themes to which they relate across a wide geographical area. It takes a comprehensive view of resources (both cultural and natural) related to those cultures and themes to assess the significance of the particular resource in question for preserving, studying, and interpreting aspects of our history and heritage. In the case of Traditional Cultural Properties (TCPs), it also seeks to

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<sup>1</sup> Executive Order Number 13514 entitled “Federal Leadership in Environmental, Energy, and Economic Performance,” issued by President Barack Obama on October 5, 2009.

Presidential Memorandum entitled “Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment,” issued by President Barack Obama on November 3, 2015.

Secretarial Order Number 3289 entitled “Addressing the Impacts of Climate Change on America’s Water, Land, and other Natural and Cultural Resources,” issued by Secretary of the Interior Ken Salazar in February 2010.

Secretarial Order Number 3330 entitled “Improving Mitigation Policies and Practices of the Department of the Interior,” issued by Secretary of the Interior Sally Jewell in October 2013.

<sup>2</sup> Clement, J.P. et al. 2014. A strategy for improving the mitigation policies and practices of the Department of the Interior. A report to the Secretary of the Interior from the Energy and Climate Change Task Force, Washington, D.C., 25 p.

understand the place of individual historic properties within the practices of the living cultures for whom they are significant, and to understand such properties in relation to one another. Importantly, it requires managers to look across jurisdictional boundaries, and to give consideration to the protected status (or lack thereof) of similar resources in addition to the specific resource in question. For example, if a historic ranch building is one of many similar buildings related to the theme of western ranching, it would not be as significant as if it were the last remaining example of its type. However, if it were the sole example of that resource type afforded protection under NHPA by virtue of being under Federal ownership, that status would certainly give greater weight to the importance of preserving it. Similarly, managers should also look at the broader area in which the ranch building exists, and should consider managing the building and surrounding area as a cultural landscape.

A landscape-scale approach requires integrating historic preservation concerns early in the planning process so that those concerns may be considered at the same time as other environmental issues and values in land-use planning, suitability studies, and project scoping. Furthermore, this approach can provide valuable context for consideration of historic properties and cultural values during planning efforts that will inform the National Environmental Policy Act (NEPA) and NHPA Section 106 processes, and can lead to optimizing options for mitigating adverse impacts. A landscape-scale approach does not replace Section 106 compliance or weaken the procedure for the consideration of protecting historic properties in Federal undertakings.

Commitment to a landscape-scale approach necessarily entails work on the part of Federal agencies to consider historic properties before such agencies determine how they will proceed with specific undertakings. Fundamental to this approach is development of a historic preservation plan that identifies critical resources, priorities, and overall objectives. The preservation plan is discussed in greater detail below.

## **Why take a landscape approach?**

The Department is moving toward managing cultural and natural resources and planning conservation and preservation at a landscape scale for several reasons. A landscape approach examines such larger areas to more fully recognize natural and cultural resource conditions and trends, natural and human influences, and opportunities for resource preservation, conservation, restoration, and development. The approach seeks to identify important ecological and heritage values and patterns of environmental change that may not be evident when managing smaller, local land areas. There is recognition that addressing natural and cultural resource concerns and issues early in the planning process gives managers and project proponents the flexibility to avoid unnecessary impacts and come to agreement on proper mitigation strategies. A shift to a landscape-scale approach is intended to increase the public benefit of our actions, including improving conservation and preservation outcomes, as well as reducing the sometimes costly uncertainties project proponents face in permitting and environmental compliance.

A landscape-scale approach asks managers and stakeholders to think more broadly about the preservation context in which projects (and mitigation) occur. It asks us to think about priorities and about desired future conditions beyond the confines of an individual project or area of potential effect.

## **What are some considerations in developing a landscape-scale preservation plan and then developing mitigation efforts to work toward it?**

Developing a preservation plan to identify critical resources, set priorities, and establish desired future conditions requires that agencies bring stakeholders together for broadly inclusive consultation. Some DOI bureaus are already doing this, though they may call the processes and resulting documentation by different names: The Bureau of Land Management (BLM), for example, uses “Class I Assessments”, while NPS terms them “Resource Management Plans”. Mitigation plans and strategies help provide a systematic approach to heritage resource stewardship. Mitigation strategies may be developed at various levels of resource management and with varying degrees of obligation. At the broadest level the Federal agency develops them as part of regional landscape assessments that identify high value resources and classes of resources within an area, assess their relative values, and identify management measures and recommendations to address on-going or anticipated effects. Such strategies may be developed at various points in the planning process – as part of preservation plans, or as part of the pre-assessment in land-use planning. Recommendations from these studies may be evaluated and incorporated into land use plans and then be available for consideration during land use authorizations. Mitigation strategies are also developed during compliance with the NHPA and incorporated in the Section 106 Memorandum of Agreement (MOA) or Programmatic Agreement (PA) that completes the process with a legal agreement to avoid, minimize or mitigate (i.e., compensate for) adverse impacts to historic properties. These decisions must be made in consultation with stakeholders, including Government-to-Government consultations with Indian tribes and consultation with Native Hawaiian organizations (NHOs) as well as State Historic Preservation Offices (SHPOs). For particularly complex or unusual PAs, managers are encouraged to solicit the active involvement of the Advisory Council on Historic Preservation (ACHP).

### **Need for planning in advance.**

To achieve the benefits of a landscape-scale approach, Federal agencies need to integrate historic preservation concerns early in the planning process so that they may be considered at the same time as other environmental concerns in land-use planning, suitability studies, and project scoping, and so that there can be efficiency, coordination, and minimal conflict as mitigation efforts, whether for cultural resource or natural resource impacts, are developed and implemented. This requirement is consistent

with recently developed guidance issued jointly by the ACHP and the Council on Environmental Quality concerning the coordination of NEPA and NHPA Section 106 compliance.<sup>3</sup>

A landscape-scale approach to conservation and preservation is being developed specifically because the issues affecting cultural and natural resources typically transcend political and jurisdictional boundaries, with the implication that the decisions individual agencies make have impacts beyond the borders of the lands they manage. For this reason, Federal agencies should work together and in consultation to develop appropriate historic preservation plans. Agencies are also encouraged to engage with regional conservation and preservation organizations, particularly National Heritage Areas and Landscape Conservation Cooperatives. Doing so will help to reduce conflicts between agencies and ensure greater public benefit from the work of agencies with diverse and sometimes competing missions.

Most states already have a State Historic Preservation Plan, and such plans may be a useful starting point for development of landscape-specific plans. However, State Plans may be too general to meet the needs of a landscape-scale level plan and, because they are intended for a different purpose, they may not have been developed through the sort of inclusive, consultative process necessary to develop a landscape-scale level plan that represents the interests of all parties who might wish to consult on a particular undertaking.

A landscape-scale level plan should articulate a vision for the desired future state of preservation on the landscape. Where possible, it should identify important themes and resources that are given priority for preservation and protection. The plan should seek to articulate what is known and what is important, while also addressing gaps in our knowledge so that an absence of evidence does not become conflated with evidence of absence.

The plan should include information about TCPs. Managers should recognize that TCP information can be particularly sensitive, and that communities, particularly Indian tribes and Native Hawaiian organizations, may be unwilling to share details about TCPs with outsiders. Managers should work with communities to identify the general location and nature of sensitivities about such resources, while respecting the religious freedoms and rights to privacy of those communities. The goal should be to identify sensitive areas so that they can be incorporated into landscape-scale planning processes. An example of this is the Bureau of Ocean Energy Management's and the National Oceanic and Atmospheric Administration's recent work with three West Coast Tribal Historic Preservation Offices to develop *A Guidance Document for Characterizing Tribal Cultural Landscapes*<sup>4</sup> and working with these Tribes to develop internal capacity for viewing the tribal cultural landscape in a geospatial context that facilitates consultation among governmental entities, while protecting the sensitivity of the cultural information. For additional guidance on how to include Native American traditional cultural landscapes

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<sup>3</sup> Council on Environmental Quality and Advisory Council on Historic Preservation, 2013. A Handbook for Integrating NEPA and Section 106.

[http://www.achp.gov/docs/NEPA\\_NHPA\\_Section\\_106\\_Handbook\\_Mar2013.pdf](http://www.achp.gov/docs/NEPA_NHPA_Section_106_Handbook_Mar2013.pdf)

<sup>4</sup> <http://www.boem.gov/2015-047/>

in the Section 106 review process, see the ACHP's Native American Traditional Cultural Landscapes and the Section 106 Review Process: Questions and Answers<sup>5</sup>.

Finally, to the extent practicable, the plan should be represented in map form via Geographic Information System data layers, so that it can be integrated into broader planning processes including conservation design and suitability studies. Such plans are to be treated as living documents capable of incorporating new information, and should be revised and updated as resources are identified and concerns evolve. If it is not possible to incorporate Traditional Cultural Properties into such maps, procedures should be developed so that at certain stages in the process there is time and space for reaching out to Tribes and other groups about TCPs. At a minimum, the plan should be reviewed and revised every ten years.

### **Memoranda of Agreement and Programmatic Agreements.**

Memoranda of Agreement and Programmatic Agreements (MOAs and PAs) are Section 106 agreement documents that evidence important commitments made by Federal agencies and others on appropriate steps to resolve adverse effects to historic properties that may result from Federal undertakings and programs. MOAs are appropriate to record agreed upon resolution for a specific undertaking. PAs, on the other hand, are appropriate for multiple or complex Federal undertakings where effects to historic properties cannot be determined in advance, for Federal agency programs, for routine management of historic properties by an agency, or to tailor the standard Section 106 process to better fit in with agency management or decision-making.

### **Alternative Mitigation**

The regulations implementing NHPA Section 106 ("Protection of Historic Properties," 36 CFR Part 800) allow considerable latitude in terms of what constitutes appropriate mitigation of adverse effects on historic properties. There is no prohibition against alternative treatments in the ACHP's Section 106 regulations, and the law does not prescribe any specific measures to resolve adverse effects. The regulations [36 CFR § 800.6(a)] leave development of these measures to the Federal agency consulting with other parties, calling for them to "develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties." The Advisory Council on Historic Preservation encourages agencies to explore alternative or creative mitigation as they seek to resolve adverse effects. Such alternatives should balance agency mission, the ultimate public interest, and the management of the nation's irreplaceable historic properties. Importantly, it is not necessary for the mitigation activities to occur within the Area of Potential Effect (APE) for a particular undertaking, or focus on that historic property being adversely affected, provided that the consulting parties agree that the alternative activity is more desirable and suitable to implement. These activities must serve the public interest and the consulting parties should agree that they provide a better use of mitigation funding and resources.

Examples of alternative mitigation can include, but are not limited to:

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<sup>5</sup> <http://www.achp.gov/docs/landscapes%20q%20&%20a%207-11-12.pdf>

- Purchase of land or preservation easements on land (outside the APE) containing historic properties in order to guarantee long-term preservation of those properties;
- Archeological, architectural, and landscape surveys in areas away from the APE, because it provides a broader base of information upon which to make decisions about significance and resource management;
- Regional / topical syntheses of archeological data to compile information, develop or update contexts or predictive models related to periods and resource types, and compile and disseminate gray literature;
- Research into significant topics in the history, ethnohistory, archeology, cultural landscapes, and architecture of a region, because this adds to our body of existing information and reinforces heritage education programs and heritage tourism initiatives;
- Development of multimedia educational and interpretive materials related to historic properties outside the APE, or to the historic periods and cultural and ecological regions associated with historic properties inside the APE;
- Promotion of the use of historic properties outside the APE for heritage tourism in a manner that contributes to the long-term preservation and productive use of those properties;
- Support for specific projects of local and regional museums or preservation organizations, including National Heritage Areas, through sustainable partnerships;
- Inventory and preservation of historic properties of traditional religious and cultural significance to Indian tribes, on and off of tribal lands, and Native Hawaiian organizations;
- Support for preservation and dissemination of information from museum collections to contribute to regional / topical syntheses, update predictive models, or otherwise advance understanding of historic properties, history, and heritage.

### Who Holds the Money?

The question of who holds and administers funds for Section 106 mitigation may come up in discussion and negotiation, and is one that should be addressed as part of the MOA or PA. Although it is not necessary to use their services, both the National Park Foundation and the National Fish and Wildlife Foundation are Congressionally chartered entities with experience and the necessary administrative infrastructure for holding and administering such funds. While both organizations are willing to serve, the choice of one or the other may be guided by the nature of the lands and by the type of resources involved, as well as the general nature of the mitigation projects being contemplated. Importantly, both are able to hold the funds in investment accounts that may generate sufficient income to cover administrative costs. The question of how decisions about dispersal of funds will be made should be addressed in the MOA or PA and is a necessary part of any agreement with the entity that holds the funds.

Funds to support mitigation actions in the future should be held in trust by the administrative entity. Experience has shown that allowing project proponents to self-insure or self-bond for future mitigation or restoration costs may jeopardize those projects in the event that the proponent enters bankruptcy or

goes out of business. For this reason, it is recommended that MOA and PA not permit project proponents to self-insure or self-bond to cover future mitigation or restoration costs.

## Important Principles in Landscape-scale Mitigation

There is an established body of practice in Compensatory Mitigation within the natural resources arena, and several important principles are recognized; however, they do not translate precisely into a cultural resources context, although some of the concepts within natural resource landscape-level mitigation remain important considerations for managers.

### Durability.

An important concept in any type of mitigation is that of durability. In short, durability means that the benefit(s) of the mitigation action should last at least as long as the adverse effect(s) it is intended to mitigate. In practice, some impacts are temporary (e.g., disruptions during construction that end after construction), while others are permanent. This is further complicated by the relationship between impacts and the future preservation of the resource: for instance, a short-term temporary impact to a site could induce changes to the environment that impact long-term preservation. Monitoring strategies are often a necessary as part of most mitigation involving *in situ* preservation or remediation of sites. In the case of effects, such as partial or total destruction of the resource, which are permanent, the mitigating action should also be permanent. Unlike the situation with wildlife habitat, which can be damaged and later restored to full function, cultural resources are, by their very nature, often unique and irreplaceable: once lost, they are gone forever and cannot be replicated. If museum collections result from the mitigation, part of durability means ensuring that there are funds available to care for them in perpetuity. Depositing funds to pay for collection care in an interest-generating account is one way to ensure durability, and to insulate the collection from the vagaries of institutional funding.

### Limits of Substitution.

As managers consider efforts to mitigate adverse effects on historic properties, it may be tempting to think in terms of equivalencies; trading preservation or documentation of one resource for destruction of another. In doing so however, managers should be mindful that these resources are individually unique, and that it is not necessarily appropriate to mitigate adverse effects on resources related to the history or heritage of one group of people through actions that affect resources related to another group. The goal of mitigation should be to ensure the preservation of critical values (cultural, historic, scientific, etc.). Thus it should be possible to articulate how mitigation actions affecting one resource relate to the values of the historic property being adversely affected. For example, it might be difficult to articulate how preservation of historic buildings helps ensure the preservation of critical values of Native American archeological sites being adversely affected by a Federal undertaking. The extent to which the protection or enhancement of specific historic resources may be “substituted” for one another in mitigation should be determined on a case-by-case basis through consultation with SHPOs, Tribes, and other stakeholders, and negotiated as part of development of a MOA or PA.

## **Beyond Documentation.**

Historic properties not only reflect our history and heritage, they also embody important information about it. For this reason, even the most comprehensive efforts to document historic properties, whether through archeological data recovery, HABS/HAER/HALS drawings, or other actions, cannot fully mitigate their loss. Despite such efforts, loss of historic properties entails both the loss of our collective heritage and the irreparable loss of information embodied in those resources. As a result, documentation should be considered necessary when a resource will be adversely affected, but managers will need to acknowledge that documentation is not enough to offset the loss of historic properties. In such instances, compensatory or other types of mitigation may also be appropriate (see above for examples).

## **The Visual Dimensions of Landscape.**

Recent years have seen renewed attention given to the visual qualities of landscapes and seascapes as they relate to religious observances and other traditional cultural practices. Thus, in addition to being a significant consideration in NEPA processes, the visual aspects of landscapes are increasingly of concern in the context of NHPA Section 106 and other statutes, such as the NPS Organic Act of 1916 and the Federal Land Policy and Management Act of 1976. Undertakings such as wind farms which alter the horizon are a particular concern in this respect, as are transmission lines, solar farms, pipelines, oil and gas development, and human-caused alterations of the night skies through oil and gas flaring and artificial lighting. Early consultation is essential in minimizing conflict and called for in a variety of documents developed by DOI bureaus, especially with the BLM. Managers should recognize that the Area of Potential Effect for certain types of impacts from such projects can be very large. The highly sensitive nature of some areas may make them poor candidates for certain types of development.

In keeping with Secretarial Order 3330 and direction contained in the implementation strategy,<sup>6</sup> a multi-Federal agency effort is underway to provide guidance for addressing landscape-level mitigation for preserving shared visual resources. While initially focused only on scenic views with pleasing aesthetics, this effort has been broadened to include cultural resources and landscapes that are important to the experience of visitors to Federal lands. The guidance that emerges from that effort should be complementary to this guidance document.

## **Section 106 vs. Section 110.**

Mitigation is undertaken as a way of compensating for adversely affecting historic properties that are part of our nation's collective heritage. As such, there should be a clear public benefit to the activities that constitute mitigation. The sorts of identification and National Register evaluation activities that constitute compliance with NHPA Section 110 may be the same sorts of activities necessary to determine what resources are present within and outside of the APE and thus vulnerable to being

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<sup>6</sup> Clement, J.P. et al. 2014. A strategy for improving the mitigation policies and practices of the Department of the Interior. A report to the Secretary of the Interior from the Energy and Climate Change Task Force, Washington, D.C., see page 15, action item #15.

adversely affected by an undertaking, but conducting these activities early in a project as part of Section 106 compliance is not the same as mitigation and must not be regarded as such. That said, the consulting parties on a MOA or PA may decide that broader survey beyond the APE or development of a complex National Register of Historic Places nomination would be an appropriate form of mitigation because it would enhance understanding of the context and significance of historic properties within the APE.

### **Cumulative Effects.**

The concept of cumulative effects is an area where NEPA and NHPA overlap, but this does not mean that addressing them via a NEPA process necessarily satisfies the requirements of NHPA Section 106. Large undertakings, especially those that will be carried out in phases, or multiple smaller undertakings affecting a particular historic property may be particularly well suited to taking a landscape approach to mitigation, and it is precisely such projects that are of greatest concern with respect to adverse effects that may be cumulative in nature. Project managers should anticipate that stakeholders will have concerns about the potential for these effects, and are therefore encouraged to address cumulative effects through MOA or PAs. It is also appropriate to consider building into such agreements a process for periodically assessing cumulative adverse effects during the lifespan of large projects and identifying how these effects will be resolved should they occur. As preservation plans and similar documents are revised and periodically updated, it is appropriate to look at what cumulative adverse effects have occurred within the landscape, including those that may not be attributable solely to a single project, and to evaluate how well such effects are being mitigated. If necessary, revisions to the preservation plan should address current and anticipated changes in threats to historic properties as well as any changes in preservation priorities.

### **Concluding Thoughts**

The move to a landscape-scale approach to managing the nation's public lands is intuitively appealing because of the promise it holds for improved conservation and preservation outcomes. But while such a move holds potential for tremendous public benefit, it will require changes to how Department of the Interior bureau staff approach planning and consultation if these benefits are to be fully realized. The greatest of these changes is a shift from a reactive to a proactive footing, with greater emphasis on integrated planning and public engagement. While the transition to this approach will no doubt be challenging, it should result in greater predictability, both in terms of staff workloads, and in the timing and level of engagement for the members of the public with whom we consult.