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# Adapting National Preservation Standards to Climate Change

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# ADAPTING NATIONAL PRESERVATION STANDARDS TO CLIMATE CHANGE

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When it comes to the human ability to respond to climate change, laws matter. To slow the global warming that poses an existential crisis for our species, we must be willing to dramatically reshape our laws and legal institutions to encourage or require better behaviors. Within the areas where sweeping reforms are needed, it would be easy to overlook the rather narrow field of historic preservation law.

But recalibrating the way we treat historic places is essential in the climate crisis. In a time of vast uncertainty and rapid change, our historic places have the potential to connect us to our shared history. They often forge our collective identities and serve as backdrops for the moments that endure in our memories. Climate change will inevitably affect these places. We have already seen California landmarks burning, Alaskan cultural sites melting away, midwestern ghost towns exposed, and East Coast artifacts submerged. Others in this volume have considered these sites within their historical and cultural context, as well as the many practical implications of climate change, including the relocation—or the forsaking—of people and structures alike. My fellow scholars have also documented the dramatic impact of human activities—including buildings that overuse energy and are built and demolished wastefully— on our climate.

Keeping their work in mind, I hope to illuminate how our laws play an important role in choosing what is preserved and how. The first legal determination that affects the "what and how" occurs during the designation process. Designation is a formal legal process whereby government authorities apply criteria to determine which resources to list on the jurisdiction's register of historic places.[1] Typically, these criteria include some proof of historic significance, like an important historical event or an association with an important person, and integrity. The

National Register of Historic Places, for example, requires significance and "integrity of location, design, setting, materials, workmanship, feeling, and association."[2] Sites that come to lack integrity because of physical degradation can be removed from the federal, state, or local register of historic places on which they are listed. The integrity of a resource—and thus its ability to be listed on a historic register—can therefore be harmed by the effects of climate change. The designation process has been criticized for being too formalistic (in that it focuses on architecture over people),[3] exclusionary of places related to low-income people or underrepresented groups (because those places may have been built with less durable materials),[4] and in need of replacement by a grading system that recognizes that resources may fall along a spectrum.[5] Despite its flaws, the concept of integrity, as well as the designation process as a whole, remains the foundation on which all historic preservation law is built.

Designation is the first legal determination of preservation; this essay centers on the legal determinations that follow, affecting the "what and how" of preservation when someone wants to make a physical change to a site that has already been designated historic. When certain physical changes are proposed, very often a foundational set of standards is applied: the Secretary of the Interior's Standards for the Treatment of Historic Properties ("the Standards"). The Standards are widely accepted as the measure by which such proposed changes should be judged. Indeed, the Standards have been adopted into law by state legislatures, tribal governments, and local historic district commissions all over the country. For that reason, what they say and how they are interpreted have ripple effects on preservation at every level.

In the view of many preservationists, the Standards have capably protected physical fabric within a broad interpretive framework. Unfortunately, the Standards do not adequately address climate-related building adaptations, such as installing energy-efficient windows or solar panels, raising sites, or moving structures. The Standards' omission or lack of specificity about such features has made things difficult for people interpreting them. Too often, interpretations reject such features, and therefore miss opportunities to reduce the environmental impact of the people occupying historic places or of the places themselves. This essay explains the significance of the Standards, analyzes their inadequacy in the climate context, and suggests reforms that recognize the intertwined fate of our tangible heritage and our warming planet.

## —THE SECRETARY'S STANDARDS

The Secretary of the Interior's Standards for the Treatment of Historic Properties are among the most important foundational rules governing historic preservation practice today. They establish guiding principles for the way people should modify

historic properties to meet current needs.[6] The Standards are enshrined in federal regulations promulgated by the National Park Service, a division of the US Department of the Interior.[7] They have impact beyond the federal context, because they have been adopted or adapted by local, state, and tribal governments. In certain jurisdictions and for certain projects, compliance with the Standards is mandatory. This section examines the four treatments covered by the Standards and their broad reach, covering billions of dollars in preservation construction annually.[8]

***Four Treatments***

The Standards cover four types of treatment of historic properties: restoration, preservation, reconstruction, and rehabilitation.[9] The Standards set forth between six and ten principles for each type of treatment. The principles cover a broad range of construction activities, including repairs, deterioration, additions, archaeological resources, chemical treatments, materials, and finishes, among other things. The Standards generally identify whether such activities "shall" or "shall not" be undertaken. Those who administer the Standards at the federal, state, and local levels often equate these terms as allowing or prohibiting certain activities. According to the federal regulations, identifying the treatment that is appropriate, and thus the activities allowed or prohibited, depends on "the property's significance, existing physical condition, the extent of documentation available, and interpretive goals, when applicable."[10]

The restoration treatment, perhaps the most dogmatic of the four treatments, is usually chosen for interpretive sites, like museums, or highly significant buildings, such as National Historic Landmarks. It "stops the clock" to restore a property to a specific time period. Any materials outside of the chosen time period will be removed, and any deteriorated features will be repaired rather than replaced. For properties receiving the restoration treatment, the Standards mandate that designs for the property that were never built can never be built.

A preservation treatment fits properties where the intent is to retain as much of the historic fabric as possible. The Standards allow for a preserved property to be either used the same way it was used historically or devoted to new uses that maximize the retention of historic fabric. The Standards require maintenance of historic character—including changes that have been recognized during the designation process as having acquired their own significance. In that sense, preservation differs from the restoration treatment, which removes changes to a property that are inconsistent with one particular time period.

The reconstruction treatment is used in limited circumstances, to allow new construction to replicate the appearance of all or part of a historic property that has disappeared. Sufficient documentary or physical evidence about the missing part is required. Reconstructions are therefore not themselves historic, and the

Standards say that a reconstruction must reveal that it is new in some way. One example of a reconstruction built in compliance with the Standards is a slave cabin at Mount Vernon, the homestead of President George Washington. The cabin was clearly identified as a reconstruction and provides visitors with a fuller interpretative history of the overall site.

Finally, there is rehabilitation, for which the Standards provide the most flexible guidelines. According to the Standards, rehabilitation is appropriate for projects where fidelity to historic fabric is important but not paramount. The property can have a new use as long as only "minimal change" to historic features occurs. New additions and exterior alterations are allowed, as long as they do not destroy historic materials or disrupt a sense of scale. As is the case with reconstructions, rehabilitations conducted pursuant to the Standards will differentiate new and old materials. At the same time, new work should be "compatible" with the scale, materials, and shape of any remaining historic fabric. New work should be removable without impairing the physical integrity of the historic property. Because of its flexibility in addressing contemporary issues, rehabilitation is the treatment most commonly integrated into historic preservation practice.

***Application***

By their terms, the Standards apply to projects receiving funding from the National Historic Preservation Fund.[11] However, other programs and projects, both federal and nonfederal, also require the use of the Standards. As a result, the Standards end up governing most preservation construction projects in the United States.

A section of the National Historic Preservation Act, commonly referred to as Section 106, obliges federal agencies whose actions may affect properties on or eligible for the National Register of Historic Places to review their actions in accordance with the Standards.[12] Among the first determinations made is the agency's evaluation as to whether any effects are adverse. Adverse effects include changes to historic properties that are "not consistent with the Secretary's standards for the treatment of historic properties and applicable guidelines."[13] A finding of an adverse effect triggers a formal review process that involves, among other things, documentation that the agency has considered the effects.[14] The agency need not actually stop or mitigate adverse effects, but if a federal agency imposes adverse effects on a designated National Historic Landmark, the agency must "to the maximum extent possible… minimize harm to the landmark."[15] Lack of compliance with the Standards can thus trigger a finding of adverse effect, and in certain circumstances (like for National Historic Landmarks), lack of compliance can compel additional action.

Federal law also imposes duties on private parties to comply with the Standards. Taxpayers who rehabilitate National Register buildings may apply for a federal rehabilitation tax credit. Before an applicant can receive the tax credit, the

Secretary of the Interior must certify that a project meets the Standards.[16] All tax credit applicants must ensure that historic features are retained and preserved. Additions or alterations are acceptable as long as they are compatible with the existing historic fabric. The Secretary's finding that a project does not meet the Standards is usually granted deference by courts.[17] The vast majority of tax credit applicants successfully receive the credit. Between 1976 and 2019, forty-five thousand completed projects leveraged more than $102.64 billion in private investment in rehabilitation, and in 2019 alone, more than one thousand projects valued at $5.77 billion benefited from the tax credit.[18] The Standards have therefore become hugely important in preservation development in all fifty states.

Another federal tax incentive program for preservation provides tax deductions to federal taxpayers for easements they have donated to qualified nonprofit organizations.[19] The Internal Revenue Code requires that these easements prohibit "any change in the exterior of the building which is inconsistent with the historical character of such exterior."[20] Although the Standards are not explicitly referenced in the Internal Revenue Code, in practice nonprofit organizations incorporate the Standards into their agreements with taxpayers seeking the deduction. Thus the Standards are also being interpreted and enforced by private parties on an unknown, ever-growing number of private properties around the country.

In addition, state and tribal governments incorporate the Standards into their decision-making. This incorporation is consistent with the federalist framework of interrelated governmental entities envisioned by the National Historic Preservation Act. I have been unable to find any regulatory review process of any state historic preservation office not conducted in accordance with the Standards. Underscoring this point, the Kansas State Historic Preservation Office was quoted in a case as using the Standards in conducting reviews required by *state law*, explaining that "these standards are used across the nation and provide for consistency in staff reviews."[21]

Finally, local historic regulation, including certificates of appropriateness, are often tied, explicitly or implicitly, to the Standards.[22] The National Alliance of Preservation Commissions has identified commissions from Boise to Roanoke that incorporate the Standards explicitly.[23] The municipal code of Hartford, Connecticut establishes the Standards for rehabilitation as the key guide to the decision-making of its two historic properties commissions.[24] Boston, another historic city, roughly paraphrases the Standards, then cites National Park Service guidelines that interpret the Standards in a list of publications that "may be considered part of" the local rules.[25] New Orleans, similarly, does not expressly include the Standards in its municipal code but does indicate in supplemental guidance that the historic preservation regulatory process is "guided by principles contained in" the Standards.[26] In Philadelphia at least one lawsuit involving the historic commission has been based on the commission's failure to follow the Standards.[27]

There are hundreds of examples of state and local jurisdictions across the country that incorporate the Standards into their decision-making. And, as noted above, projects receiving a federal historic preservation tax credit must also comply with the Standards, amounting to billions of dollars in Standards-compliant real estate development each year. The Standards, and interpretations thereof, are therefore highly significant in historic preservation practice and in real estate development nation-wide.

## —THE STANDARDS' CLIMATE MISTAKES

With this context, this part of the essay examines how the Secretary of the Interior's Standards for the Treatment of Historic Properties address climate change. As described, the Standards set forth broad principles for the way people should treat historic properties. They have not been amended in any substantive way for decades.[28] Despite changing values over this period, few rank-and-file preservationists or academics have complained about the effectiveness of the Standards.[29]

Those who have, have powerfully critiqued the Standards for over-emphasizing material fidelity rather than the meaning of the place within its cultural context.[30] That is to say, the Standards prioritize the integrity of the constructed elements of the historic resource, rather than its cultural or intangible elements, and at the expense of a flexible approach to later modifications. This critique originates in the criteria used for the designation of properties in the first place; the designation always includes a criterion of what resources have or do not have integrity. Although the debate about what "integrity" means is beyond the limited scope of this essay, it is important to note that the Standards' inflexibility is influenced by the criteria for listing properties and the fact that those criteria have, similarly, not been changed in decades.

In addition to critiquing the material focus of the Standards, some suggest that they thwart architectural creativity because they make it difficult for new architecture to be both "compatible" and "differentiated."[31] Others criticize the Standards because they make affordable housing projects more difficult.[32] Some believe that the Standards are too vague, which prevents the public from understanding what they intend to accomplish.[33]And then there is the critique that the Standards wrongly forsake sustainable materials in favor of historic ones.[34]

All of these views are relevant to the ways the Standards have thwarted climate goals. A rigid emphasis on specific materials and techniques hinders the creativity we need to make our historic places more resilient and to reduce their impact on a warming planet. It also binds property owners to older materials—particularly old wood and unfired masonry—that are highly susceptible to lichen, fungi, erosion,

splash, and smoke damage brought by ever-increasing temperatures, precipitation, and wildfires.[35] The allegation that the Standards thwart affordable housing—an essential societal goal—must be taken as seriously as the allegation that they challenge our ability to address climate change, and perhaps the two problems may be solved together by infusing the Standards with greater clarity and a broader purpose.

The Standards are not the only text we must consider. To supplement the Standards, the National Park Service has issued a series of formal "Guidelines." Over the years, the Guidelines have added detail to the broad Standards. They are sometimes general, updating National Park Service interpretations of all four treatments in the Standards, and are sometimes more specific, focusing on particular concerns or materials. This part of the essay critiques the Standards and their Guidelines, highlighting specific ways in which they undermine the ability of owners of historic places to address the climate crisis.

***The Standards***

The Standards do not explicitly address climate change or environmental issues. None of the sections describing the four treatments— restoration, preservation, reconstruction, and rehabilitation—refers to sustainability or climate change. No exceptions for environmental measures are made in the preamble to the definitions of the four treatments in federal regulations. What can property owners do, consistent with the Standards, to mitigate the risk, harm, or impact of climate change? In trying to apply the Standards to a few examples, we learn that the answer to this question is "not much."

Take the installation of energy-efficient windows or solar panels as one example. Not all modern energy-efficient windows perform better than historic wood windows in good repair with outside storm windows. In addition, the Department of Energy has found that "the US Department of Energy (DOE) has documented that air loss attributable to windows in most buildings is only about 10% of the total air loss."[36] However, the presence of energy-efficient windows as a replacement for nonfunctional and nonrestorable historic windows can reduce drafts that dramatically affect occupant comfort and can make a difference in electric bills. As noted above, a restoration treatment requires that a property be physically restored to its status at a particular point in time.[37] The reconstruction treatment may occur only in accordance with "the accurate duplication of historic features and elements."[38] Unless the windows or panels were used historically, they are not allowed by the Standards governing restoration and reconstruction. Similarly, for properties subjected to a preservation treatment, the Standards say that "alteration of features, spaces, and spatial relationships that characterize a property will be avoided," and if there is such severe deterioration that repairs are not possible, "new material will match the old in composition, design, color, and texture."[39] The rehabilitation treatment, which is ostensibly the most flexible of the four, repeats

this language but with one change: "the new feature will match the old in design, color, texture and, *where possible*, materials."[40] The Standards do not clarify how modern materials will be considered.

As another example, consider whether the Standards allow raising buildings to withstand floods, which are caused by extreme weather events and sea level rise, both exacerbated by our changing climate. None of the four treatments address raising buildings. Reconstructions require fidelity to historic designs, even if the reconstruction is not itself historic: the Standards ban "designs that were never executed historically."[41] The Standards for restoration and preservation treatments allow only for necessary repairs and some replacement of historic materials—not changes that would raise an entire structure. Rehabilitations allow "exterior alterations" but only if they do "not destroy historic materials, features, and spatial relationships that characterize the property" and if they maintain the "historic materials, features, size, scale, and proportion."[42] Raising a building and still satisfying the Standards for rehabilitation seems virtually impossible, since any increase in height would destroy "spatial relationships," "size," "scale," and "proportion."

Finally, consider how the Standards treat moving structures from their historic location. In many cases, the very location that gives historic structures meaning may be the threat to their continued existence.[43] Moving resources may sometimes be the only way to actually save them. Moving historic homes, bridges, entire Main Streets, and the people who use them may become necessary as sea levels rise or wildfires become more common. Some neighborhoods and archaeological sites are already submerged. None of the four treatments address this issue. Even the Standard describing rehabilitation, intended to be the most flexible treatment, states that "Each property will be recognized as a physical record of its time, place, and use."[44] Reconstruction, similarly, requires that the reconstruction be placed "in its historic location."[45] These constraints reinforce the Standards' seemingly total ban on relocation.

While these three examples are certainly not exhaustive, they illustrate the challenges faced by those who wish to change historic properties to address the climate crisis. We turn next to the Guidelines, which on their face aim to clarify certain aspects of the Standards.

### *The Guidelines*

If the Standards have failed to address, or seem to disallow, modifications of historic properties to address climate change, then one might think that the Guidelines fill in the gaps. But the Guidelines make things worse, because their specificity leaves no doubt about what is effectively allowed or disallowed.[46] By their terms, the Guidelines evaluate techniques and materials as either "recommended" or "not recommended." However, it is important to understand

that those who administer the Guidelines at the federal, state, and local levels equate a recommended item with approval and a nonrecommended item with disapproval. That said, there have been modest improvements in the area of adaptive treatments related specifically to the flooding of buildings, upon which future reforms can build.

The latest generally applicable Guidelines, issued in 2017, focus primarily on buildings even though other types of historic resources are subject to the Standards. The 2017 Guidelines articulate best practices for masonry, wood, metals, roofs, windows, porches, mechanical systems, and interiors, among other things.[47] The Guidelines do not mention climate change once, however, they do in a few places recognize the need to reduce energy usage of buildings being rehabilitated. For example, in the section on windows, the Guidelines state that exterior storm windows and other reversible treatments that promote energy efficiency may be acceptable if the profile of a historic window is not obscured from the street.[48] In the section on mechanical systems, the Guidelines recommend energy efficiency improvements, such as insulating attics and crawl space or adding "appropriate" awnings, to reduce energy usage.[49]

The Guidelines also suggest strategies to ensure that a building is more resilient to natural hazards, although they do not explicitly recognize that such hazards will only become more frequent and intensify with climate change.[50] Resiliency strategies include identifying vulnerabilities and their impacts, ensuring that historic resource maps are up-to-date, and documenting the property and its character-defining features. These strategies generally seem harmless although somewhat ineffective in helping people overseeing construction on a historic site understand what the Standards allow them to do. The Guidelines offer only a vague recommendation to prevent or minimize "the loss, damage, or destruction of the historic property while retaining and preserving significant features and the overall historic character."[51] But no guidance is offered to people needing to address real-time climate threats.

The 2017 Guidelines refer readers interested in sustainability to a previously issued set of guidelines relating to sustainability (the "Sustainability Guidelines"). The Sustainability Guidelines deal with only one of the four treatments, rehabilitation, and like the 2017 general Guidelines, they deal only with buildings. The Sustainability Guidelines offer a highly constrained and conservative series of recommendations related to eight specific material aspects of rehabilitation: windows, weatherization and insulation, HVAC and air circulation, solar technology, wind power, roofs, site features and water efficiency, and daylighting. In each of these areas, charts and photographs explain what types of modifications are "recommended" and "not recommended." Omitted from the Sustainability Guidelines entirely is the suitability of increasingly common mitigation techniques, including preparing and treating wood to protect against fungal growth (caused by

increasing precipitation) and making significant topographical and landscaping changes needed to reduce the risk of wildfires.[52]

Likewise, the 2019 Guidelines on Flood Adaptation for Rehabilitating Historic Buildings (the "Flood Guidelines") focus on one treatment (rehabilitation) and one type of historic property (buildings).[53] They are intended to apply only to buildings with a 1 or 2 percent annual chance of flooding, according to flood insurance maps.[54] But they are promising in that they start to address the kinds of adaptations that are necessary now to save buildings from flood risks. These adaptations include filling a basement, changing the site and landscape, moving buildings, abandoning the first story, and elevating buildings.[55] The Flood Guidelines sanction new floodwalls and levees that are scaled to be compatible with the historic character of the property.[56] And they anticipate "unconventional treatments" like floating foundations, hydraulic lifts, and "living with water, which they indicate will need to be evaluated in the future.[57]

It is worth evaluating the three example climate strategies just discussed in light of all of these Guidelines. None of the Guidelines make energy-efficient windows viable. They prohibit altering the historic character of windows, changing the appearance of windows in any way, or replacing windows (including the historic glass). Replacement material "that does not match the historic window" is prohibited.[58] Even "new insulated windows" are forbidden if the historic windows can be repaired.[59]

Raising buildings is forbidden by the Guidelines, except that if homes are subjected to a preservation or rehabilitation treatment, they may be elevated if elevating homes is part of "local or regional traditions."[60] Beyond that limited exception, only repairs or limited replacement in kind are allowed.[61] The Sustainability Guidelines fail to include raising buildings as a recommended treatment, and so, by implication and in practice, they are read to prohibit elevation. The later-issued Flood Guidelines, however, allow raising historic buildings, as long as character-defining features of a historic building are protected.[62] The Flood Guidelines suggest that heights be limited and that any new foundation complement the building's historic character. While this guidance helps, it applies only to the rehabilitation treatment, only to buildings (as opposed to other types of historic properties), and only to those within certain designated floodplains. Extending this guidance to all of the other types of properties—encompassing structures (including bridges and roads), sites (including archaeological sites), and objects—is essential, as many properties will face flooding risks in the years ahead.

The 2017 Guidelines take a hard line against moving or relocating buildings, suggesting in several places that structures be kept in place to retain "the historic relationship" between buildings and landscape features.[63] They prohibit moving

buildings onto historic sites. They ban even the relocation of buildings within a site, like an industrial mill complex, and, perhaps worst of all, they prohibit changing the level of a site's grade, which means that topographical changes cannot be made to guard against ground-borne hazards like wildfire and water.[64] The 2019 Flood Guidelines seem to reverse those recommendations, albeit for a fairly limited number of properties. They suggest that moving a building to a new site is possible if there is a documented risk of flooding. It also says that if owners cannot avoid relocating a building to a new site "noticeably different from the original setting," relocating may be acceptable. If a building is moved, the Flood Guidelines suggest moving it in one piece, making minor repairs along the way and protecting fragile features like chimneys and plasterwork.[65] Beyond the scope of this essay are guidelines issued by FEMA and the National Flood Insurance Program, which exempt historic properties from requirements that they be altered to satisfy federal requirements, if doing so would jeopardize their status of being designated historic.[66]

The various Guidelines have added specificity to Standards sometimes criticized for their vagueness. Yet they have mostly failed to promote reasonably climate-conscious preservation practice. Only the Flood Guidelines start to tackle the serious adaptation strategies we will need to address one consequence of climate change, although the Flood Guidelines' scope is very limited, and they promote interventions, such as raising buildings, that raise equity concerns in terms of impacts on neighboring properties. Overall, the Guidelines—and the Standards they interpret—justify criticisms that they ignore modern problems and are overly focused on the materials they protect rather than the people, neighborhoods, and communities that preservation is meant to serve.

## —REFORMING THE STANDARDS

How might the Standards and their associated Guidelines be reformed to better harmonize preservation and environmental goals? As noted above, the Standards have in several important respects outlived their value to the field. In focusing on the Standard's deficiencies related to climate change, this essay does not intend to diminish other concerns—and in fact, some of the reforms suggested here could provide other benefits. There are three potential reforms worth considering: eliminating the Standards, revising the Standards, and augmenting existing Guidelines.

### *Eliminating the Standards*

Given their rigidity on the one hand, and their vagueness on the other, should the Standards be eliminated entirely? Eliminating the Standards would offer the freedom and flexibility currently missing from preservation practice today. It would immediately loosen the firm grip of aesthetics on regulatory decision-making. And

it would give free rein to people hoping to make radical physical changes to address climate issues—or to express their creativity in other respects.

All that said, I am not yet ready to argue for the death of the Standards. In their defense, the Standards have unified historic preservationists' approach to a sweeping range of actions, including federal agency undertakings, developers' tax credit projects, and smaller-scale local historic districts around the country. They have enabled the development and redevelopment of visually coherent neighborhoods, with deep benefits to property owners who have come to rely on their predictability. And the Standards have justified current laws governed by the Standards, because although they are vague, they provide property owners with sufficient information to understand what is expected of them. Indeed, judicial challenges of the Standards have never been successful.[67]

Eliminating the Standards would probably mean the end of historic preservation regulation as we know it, since it would eliminate the criteria to which approvals and denials are tied. Review processes focusing on the Standards occur not just at the federal level, where the Standards have been adopted and formally interpreted through the Guidelines, but also at the state and local levels. So much of this regulation is tied in with the Standards that eliminating them altogether would lead to regulatory chaos. Without the Standards and a coherent body of law interpreting them, decision makers could be charged with arbitrariness—and challengers could win.

***Revising the Standards***

Rather than toss out the Standards entirely, preservationists should consider serious reforms to ensure that they reflect how we live today. I hesitate to use this essay to suggest specific language, because there are many things to consider beyond climate, and wide consultation is needed. I also acknowledge that making changes will not be easy, since changing any federal regulations requires an extensive process, with public review and comment—and since reforms to the Standards themselves may not even be popular among preservationists. But based on my observations above, I will offer a few guiding principles for reform.

First, revisions should be made to the prefatory language in the Standards, which states that they "will be applied taking into consideration the economic and technical feasibility of the project."[68] This provision of the federal regulations should be amended to add "climate threats, environmental conditions, and equity" to the list of considerations weighed when evaluating the applicability of the Standards. So far, this essay has clearly made the case for climate and environment to be added. But equity is a critically important addition, because so many decisions in preservation are made without considering impacts on low-income people and people of color. If, for example, the Standards are modified to sanction the elevation of historic resources at risk of water damage or the

fortressing of historic resources at risk of fire damage, decision makers should be required to account for the impact on neighboring property owners in reviewing the particulars of an application.

Second, the Standards should add a fifth treatment to the four already listed: relocation. The Flood Guidelines are the first instance in which the National Park Service considers a relocation treatment, albeit only for specific types of properties (buildings) threatened specifically by flooding. Relocations will be increasingly necessary in the years ahead, for reasons other than flooding. Some of the principles laid out in the Flood Guidelines— including taking care to move and site properties in settings as close to their original setting as possible—are worth adopting for all properties.

Third, a sixth treatment—deconstruction—should be added to the Standards. Again, the Flood Guidelines acknowledge that sometimes sites will need to be demolished to save the livelihoods of the people living on them or to save the neighborhoods in which they are located.[69] If demolition must occur, the most sustainable way to do it is to deconstruct historic places. Following the lead of places like Portland, Oregon, a new deconstruction treatment articulated in the Standards can ensure that valuable materials are salvaged for reuse and that construction debris is eliminated from the waste stream.[70] Of course, the Standards could indicate that the deconstruction treatment is a last resort.

Fourth, existing Standards for the four treatments should be revised to incorporate both climate adaptation (techniques and materials that respond to changes in our climate) and climate mitigation (techniques and materials that prevent the harmful effects of climate change). At a minimum, in accordance with the second suggestion above, all references to preserving historic resources in place, without a relief valve for environmental threats, should be eliminated. Doing so will, in turn, eliminate the contradiction that we see now between the Flood Guidelines, which support relocation, and the rehabilitation treatment in the Standards, which does not. Moreover, provisions about adding solar panels and roof-mounted wind turbines to buildings subject to the restoration and preservation treatment should be added to the Standards. These new provisions could state a preference for installations that are out of public view, but if such placement would render installations ineffective, the provisions could simply require that new equipment be removable without significant damage to historic fabric. Similarly, the Standards should loosen strict requirements that all but ban new energy-saving devices, such as modern or insulated windows or high-performance insulation. Finally, revisions should be made to references to “chemical or physical treatments,” which occur in the restoration, preservation, and rehabilitation treatments.[71] These treatments should be allowed if they will protect against smoke and mold risks (among others), even if they cause some minor or cosmetic damage or alteration.

### *Augmenting the Guidelines*

Even if all of these changes are not made to the Standards or are not made right away, the National Park Service should continue to issue Guidelines that address challenges posed by climate change. The Guidelines should be extended to cover historic resources beyond buildings, and they should address physical risks other than flooding, from hurricanes, tropical storms, tornadoes, blizzards, wildfires, earthquakes, extreme heat, and drought—which are all becoming more frequent and more powerful as a result of climate change. In addition, the 2011 Sustainability Guidelines should be updated where they clearly thwart environmental goals.

These ideas must be tempered by the one obvious flaw of the Guidelines: they can be changed, rescinded, or replaced as National Park Service priorities change. While they are a good temporary fix, the more permanent solution is to revise the Standards themselves.

## —CONCLUSION

The law must adapt as the physical context of historic sites evolves. Climate change has already damaged or destroyed many historic places, eviscerating their ability to communicate their significance and their ability to serve as places of memory and connection. At the same time, historic buildings can themselves contribute to climate change by using too much energy or water. We must be freed of the constraints that would prevent us from retrofitting, moving, or otherwise altering historic sites to address these concerns. Even cornerstones of preservation law, like the Secretary of the Interior's Standards for the Treatment of Historic Properties, must be scrutinized. We must implement permanent changes to the Standards and its official interpretations to address the impact and risks of climate change on historic resources.

But necessary legal reform does not end with the Standards. The designation process may need to be overhauled to ensure that the very criteria that qualify a resource as eligible for listing on registers of historic places do not hinder our ability to make changes that can ensure the resource withstands or adapts to the effects of climate change. Local zoning laws, building codes, and tax incentives must be scaled to promote sustainable building reuse. Housing and environmental policies should promote environmentally just investments in our older places. Property tax abatements and credits can reduce energy consumption and carbon emissions while promoting clean energy use. Financial policies providing access to capital should be opened to ensure equitable redevelopment at the neighborhood scale. As I have written elsewhere, disaster laws must be updated wholesale, to ensure that they—the last line of legal defense on the climate battlefield—help us protect the historic places that embody human culture.[72] And future preservation

advocates must be educated and empowered by preservation educators. Packaging our ambitions into tangible legal reforms—including and especially the Standards that govern changes to so many historic properties—is the only way we will ever be able to harmonize historic preservation and climate goals.

1. See Sara C. Bronin and Ryan M. Rowberry, *Historic Preservation Law in a Nutshell*, 2nd ed. (St. Paul, MN: West Academic, 2018), chap. 2, which describes the legal process and implications of designation at the federal, state, and local levels.

2. 236 C.F.R. § 60.4.

3. See, for example, Vince Michael, "Diversity in Preservation: Rethinking Standards and Practices," *Forum Journal* 28, no. 3 (Spring 2014), which explains that the National Register's integrity criterion prioritizes architecture over culture and creates a binary system without nuance; or Melinda J. Milligan, "Buildings as History: The Place of Collective Memory in the Study of Historic Preservation," *Symbolic Interaction* 30, no. 1 (Winter 2007). "If the resource's features and materials are intact, then the site is worthy of National Register status," Milligan writes, "with physical features ultimately trumping events and people as the deciding factors in making this determination." Milligan, "Buildings as History," 116.

4. See, for example, *Preservation and Social Inclusion*, ed. Erica Avrami (New York: Columbia Books on Architecture and the City, 2020), which describes how the designation process sometimes presents barriers to listing historic resources relevant to underrepresented groups and historic resources that lack physical integrity; Anneka Olson, "Integrity and Incentives: Seeking Equity in Historic Preservation Law," *Access: Interdisciplinary Journal of Student Research and Scholarship* 1, no. 1 (Fall 2017), which explains that the integrity criterion "is also often the automatic disqualifier for vernacular buildings that may have been heavily used and modified," 14; Raymond W. Rast, "A Matter of Alignment: Methods to Match the Goals of the Preservation Movement," *Forum Journal* 28, no. 3 (Spring 2014), which notes that in an effort to make preservation more diverse, the preservation movement are misaligned, and "the standard that is most out of alignment is 'integrity'"; Page Putnam-Miller, "Reflections on Federal Policy and Its Impact on Understanding Women's Past at Historic Sites," in *Restoring Women's History through Historic Preservation*, ed. Gail Lee Dubrow and Jennifer B. Goodman (Baltimore, MD: Johns Hopkins University Press, 2003); and Ned Kaufman, "Historic Places and the Diversity Deficit in Heritage Conservation," *CRM: Journal of Heritage Stewardship* 1, no. 2 (Summer 2004), which criticizes the "integrity" requirement for creating a bias against the preservation of working-class and immigrant history, because those historic sites are unlikely to have survived unaltered.

5. See, for example, Patrice Frey, "Why Historic Preservation Needs a New Approach," *Bloomberg CityLab*, February 8, 2019, which argues for a grading system for properties.

6. Federal law generally assigns historic properties to one of five categories: districts, sites, buildings, structures, and objects. The law establishing the

National Register for Historic Places, which is the federal inventory of designated historic sites, identifies these five types of historic properties. 54 U.S.C. § 302101. In some situations, the categories matter—for example, only "buildings" can benefit from federal historic tax credits. But the Standards apply to all five types.

7. 36 C.F.R. part 68.

8. See text accompanying n. 18 in this essay.

9. 36 C.F.R. § 68.2 (setting forth the definitions for each of the four treatments). In the Standards, "preservation" is a term of art, not the term for rehabilitations of all buildings, as in common usage.

10. 36 C.F.R. § 68.3.

11. 36 C.F.R. § 68.1.

12. 54 U.S.C. § 306108.

13. 36 C.F.R. § 800.5(a)(2)(ii). Adverse effects under Section 106 also include moving property from its historic location, which is something that may be inevitable under climate change. 36 C.F.R. § 800.5(a)(2)(iii).

14. Agencies are required to consult with tribal, state, or local leaders to develop a process that ensures adverse effects will be considered. 54 U.S.C. § 306102(b)(5)(B).

15. 54 U.S.C. § 306107. Note, however, that the Ninth Circuit has interpreted that harm-minimization language to simply require the agency to meet a higher standard for planning, not as a mandate for substantive action. *Presidio Historical Association v. Presidio Trust*, 811 F.3d 1154 (9th Cir. 2016).

16. 36 C.F.R. § 67.7(a). Note that the Standards for rehabilitation used in the tax credit program are minimally modified from the standards set forth in a separate section of federal regulations that apply specifically to the tax credit. See 36 C.F.R. § 67.7(b).

17. See, for example, *Amoco Production Company v. United States Department of the Interior*, 763 F.Supp. 514 (N.D. Okla. 1990).

18. US Department of the Interior, National Park Service, *Federal Tax Incentives for Rehabilitating Historic Buildings: Fiscal Year 2019* (Washington, DC: US Department of the Interior, 2020), 2. Note that the numbers cited do not include the additional money invested in projects approved pursuant to the Standards at the state and local levels, or federal projects developed in accordance with the Standards that did not receive the federal rehabilitation tax credit.

19. Internal Revenue Code §170.

20. Internal Revenue Code § 170(h)(4)(B)(i)(II).

21. See *Reiter v. City of Beloit*, 947 P.2d 425 (Kan. 1997).

22. Two scholars conducted a review of jobs posted to Indeed.com that were related to historic preservation in the United States. They found that "three-quarters of all jobs posting during this time were in the area of regulatory compliance," and they assert that "overwhelmingly [local] regulations are based on the Secretary of the Interior's Standards." Jeremy C. Wells and Barry L. Stiefel, "Introduction: Moving Past Conflicts to Foster an Evidence-Based, Human-Centric Built Heritage Conservation Practice," in *Human-Centered Built Environment Heritage Preservation: Theory and Evidence-Based Practice*, ed. Jeremy C. Wells and Barry L. Stiefel (New York: Routledge, 2019).

23. National Alliance of Preservation Commissions, "Design Guidelines for Preservation Commissions."

24. Hartford, Connecticut, Municipal Code § 28–219(b).

25. For example, the city's standards for Beacon Hill are set forth in City of Boston, "Historic Beacon Hill District Architectural Guidelines."

26. City of New Orleans Historic District Landmarks Commission, "Guidelines Introduction."

27. See *Turchi v. Philadelphia Board of License and Inspection Review*, 20 A.3d 586 (Pa. Commw. Ct. 2011).

28. The precursor to today's Standards was developed initially in 1973 and was expanded to include rehabilitation in 1976. In 1977 the Department of the Interior promulgated regulations for rehabilitation that were used for the tax credit program. In 1992 the department published the Standards with four treatments, as we know them today, and these were formally adopted as federal regulations in 1995. See US Department of the Interior, National Park Service, "A History of the Secretary of the Interior's Standards."

29. Armon White, "Defining Appropriateness" (master's thesis, Columbia University, 2018). White notes that "literature on the Secretary's standards themselves has been largely limited to a simple cataloguing of what the standards are," 7.

30. Daniel Bluestone, "Dislodging the Curatorial," in *Bending the Future: Fifty Ideas for the Next Fifty Years of Historic Preservation in the United States*, ed. Max Page and Marla R. Miller (Amherst: University of Massachusetts Press, 2016). This critique originates in the criteria used for designation of the properties in the first place, although the debate about what "integrity" means is beyond the limited scope of this essay, and some sources are covered in nn. 3–5 in this essay.

31. David Payne, "Charleston Contradictions: A Case Study of Historic Preservation Theories and Policies" (PhD diss., Clemson University, 2013), 245.

32. Elizabeth A. Lyon and David L. S. Brook, "The States: The Backbone of Preservation," in *A Richer Heritage: Historic Preservation in the Twenty-First Century*, ed. Robert E. Stipe (Chapel Hill: University of North Carolina Press, 2003), 109.

33. Gary L. Cole, "Replacing the Secretary's Standards," *Traditional Building Magazine*, July 28, 2015. Cole argues that the Standards should be replaced with a "model historic building code."

34. Jennifer Kuntz, "A Guide to Solar Panel Installation at Grand Central Terminal," *Vermont Journal of Environmental Law* 10, no. 2 (2009): 315.

35. Alanna Casey and Julianne Fontana, "Cracks Preservation Must Fill," Keeping History Above Water, March 15, 2017.

36. See US Department of the Interior, National Park Service, *Preservation Briefs* (Washington, DC: US Department of the Interior, 2011).

37. 36 C.F.R. § 68.3(c).

38. 36 C.F.R. § 68.3(d)(4).

39. 36 C.F.R. § 68.3(a)(2).

40. 36 C.F.R. § 68.3(b)(6).

41. 36 C.F.R. § 68.3(d)(6).

42. 36 C.F.R. § 68.3(b)(9).

43. See David G. Anderson et al., "Sea-Level Rise and Archaeological Site Destruction: An Example from the Southeastern United States Using DINAA (Digital Index of North American Archaeology)," *PLOS One*, November 29, 2017. This article finds that thirteen thousand historic sites will be lost if sea levels rise by a few feet.

44. 36 C.F.R. § 68.3(b)(3); emphasis added.

45. 36 C.F.R. § 68.3(d)(2).

46. This is why, below, I use the terms "prohibit" and "forbidden," even if the Guidelines say "not recommended."

47. US Department of the Interior, National Park Service, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings* (Washington, DC: US Department of the Interior, 2017). Hereafter, NPS Guidelines.

48. NPS Guidelines, 103, 105.

49. NPS Guidelines, 125. For a restoration, the Guidelines suggest storm windows and insulation but not awnings (202).

50. NPS Guidelines, 153.

51. NPS Guidelines, 153.

52. US Department of the Interior, National Park Service, *The Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings* (Washington, DC: US Department of the Interior, 2011). Hereafter, Sustainability Guidelines.

53. US Department of the Interior, National Park Service, *Guidelines on Flood Adaptation for Rehabilitating Historic Buildings* (Washington, DC: US Department of the Interior, 2019). Hereafter, Flood Guidelines.

54. Flood Guidelines, 6.

55. Flood Guidelines, 4.

56. Flood Guidelines, 18.

57. Flood Guidelines, 53.

58. NPS Guidelines, 48.

59. Sustainability Guidelines, 4.

60. NPS Guidelines, 73, 155.

61. NPS Guidelines, 55–57.

62. Flood Guidelines, 36–42.

63. NPS Guidelines, 66, 138. See also the recommendation of "maintaining the building, its site, and setting in good repair" (153).

64. NPS Guidelines, 138.

65. Flood Guidelines, 49–51.

66. See Sara C. Bronin, "Resilient Heritage: Disaster Policy and Historic Preservation in the United States," in *The Cambridge Handbook of Disaster Law*, ed. Susan Kuo, John Travis Marshall, and Ryan M. Rowberry (Cambridge: Cambridge University Press, forthcoming 2021).

67. Only a 2012 case challenging a local law based on the Standards came close, but the property owners eventually lost. See Hanna v. City of Chicago, No. 06 CH 19422 (Cook County, Ill. Chancery Div. May 2, 2012).

68. 36 C.F.R. § 68.3.

69. Flood Guidelines, 53.

70. Portland, Oregon, Deconstruction Ordinance, City Code, Chapter 17.106 (2019).

71.36 C.F.R. §§ 68.3(a)(7), (b)(7), and (c)(8).

72.See Bronin, “Resilient Heritage.”