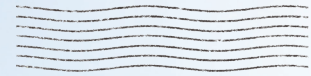
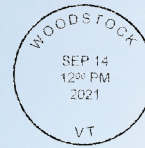




LETTER FROM WOODSTOCK



THINKING AND ACTING ANEW

Rolf Diamant

In December 1862, one month before he signed the Emancipation Proclamation, President Abraham Lincoln warned Congress that the Union had reached a critical inflection point and that “the dogmas of the quiet past are inadequate to the stormy present.”¹ Much the same can be said about the National Park Service (NPS) as it reaches an inflection point in its efforts to adapt national parks to rapidly destabilizing climatic conditions. A recent *New York Times* article, “What to Save? Climate Change Forces Brutal Choices at National Parks,”² followed by a National Public Radio report, “What Climate Change Means for America’s National Parks,”³ were a wake-up call for many Americans unaware of significant shifts in NPS thinking on climate resiliency and the future of beloved national parks. This focus on park climate resiliency has been further elevated by a devastating summer of extreme weather-related events, and by

the release of the latest Intergovernmental Panel on Climate Change (IPCC) Report offering a grim prediction of much worse to come.

The shift in NPS thinking referenced in the media accounts is comprehensively explained in the report *Resist-Accept-Direct (RAD)—A Framework for the 21st-century Natural Resource Manager*.⁴ The December 2020 document presents clear but sobering management options for national parks facing “rapid, irreversible ecological change.” This report might become a touchstone document for guiding NPS in the early 21st Century, much like the Leopold Report was from the 1960s through the 1980s. The RAD

Joshua trees may fade away from their namesake national park under climate change, which is forcing the National Park Service to fundamentally rethink its management philosophy. BRAD SUTTON / NATIONAL PARK SERVICE

planning framework is basically a triage approach to decisionmaking. In certain scenarios the trajectory of environmental change may be resisted, with systems restored or stabilized. In other scenarios the trajectory of environmental change cannot in any way be reversed or mitigated, and attendant losses will have to be accepted. In still other scenarios the trajectory of environmental change can, with selective intervention, be intentionally directed toward achieving a desired new condition. The RAD framework is derived from the work of a consortium of government and non-governmental climate adaptation researchers led in part by Patty Glick and Bruce Stein of the National Wildlife Federation. “The concept of things going back to some historical fixed condition,” Glick was quoted as saying to the *Times* reporter, “is really just no longer tenable.”

The early conceptual groundwork for RAD was developed more than a decade ago, by NPS and US Forest Service resource managers and researchers, including William Tweed and David Cole. “The key challenge to stewardship of park and wilderness ecosystems,” Cole wrote in a 2008 *George Wright*

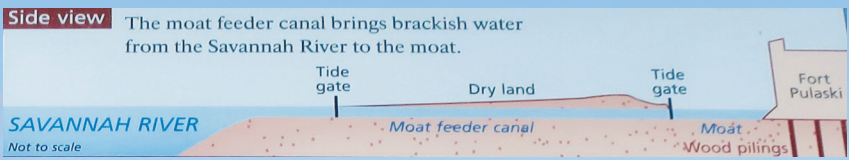
Forum article, “is to decide where, when, and how to intervene in physical and biological processes to conserve what we value in these places.”⁵ This evolving approach to decisionmaking was further codified in the 2016 NPS *Director’s Order #100 (DO-100): Resource Stewardship for the 21st Century*. DO-100 calls on NPS to anticipate continuous change and to develop resilience strategies that may include “managing for the persistence of current conditions, accommodating change, or managing towards desired new conditions.”⁶ As I write this 26th Letter from Woodstock, there is an expectation that DO-100, rescinded by the Trump administration less than a year after it came out, will be updated, and reissued—not a moment too soon.

The *New York Times* story describes how Acadia National Park, faced with incredibly difficult choices brought on by quickly warming temperatures, now appears at the cusp of “managing toward desired new conditions.” Park resource managers are contemplating an audacious campaign to replant failing red spruce-dominant forests, currently being overrun by invasive brambles, with more climate-tolerant trees not endemic to Acadia. In using the RAD approach Acadia’s science coordinator, Abraham Miller-Rushing, like many fellow NPS resource management professionals, had to accept a paradigm shift away from his earlier training and long-held beliefs that every place “could be preserved forever with the right techniques.”

The NPS RAD report identifies several other national parks facing large-scale adaptation planning challenges like Acadia’s. These include western parks directly affected by record heat and drought conditions, including Sequoia-Kings Canyon, Yosemite, and Rocky Mountain National Parks, and “threats to the persistence of iconic species like the namesake trees of Joshua Tree National Park.” The RAD decision framework is also directly applicable to the stewardship of climate-sensitive cultural resources. In an earlier Letter from Woodstock I wrote of a visit to Fort Pulaski National Monument, perched on a small coastal island just barely above sea level. I regretfully speculated that “Cockspur Island with its massive masonry fortification will sooner

Decision tree depicting the three possible management responses to the trajectory of change under the Resist-Accept-Direct (RAD) framework.





Fort Pulaski National Monument, Georgia, with (inset) cross-section of Cockspur Island. ROLF DIAMANT

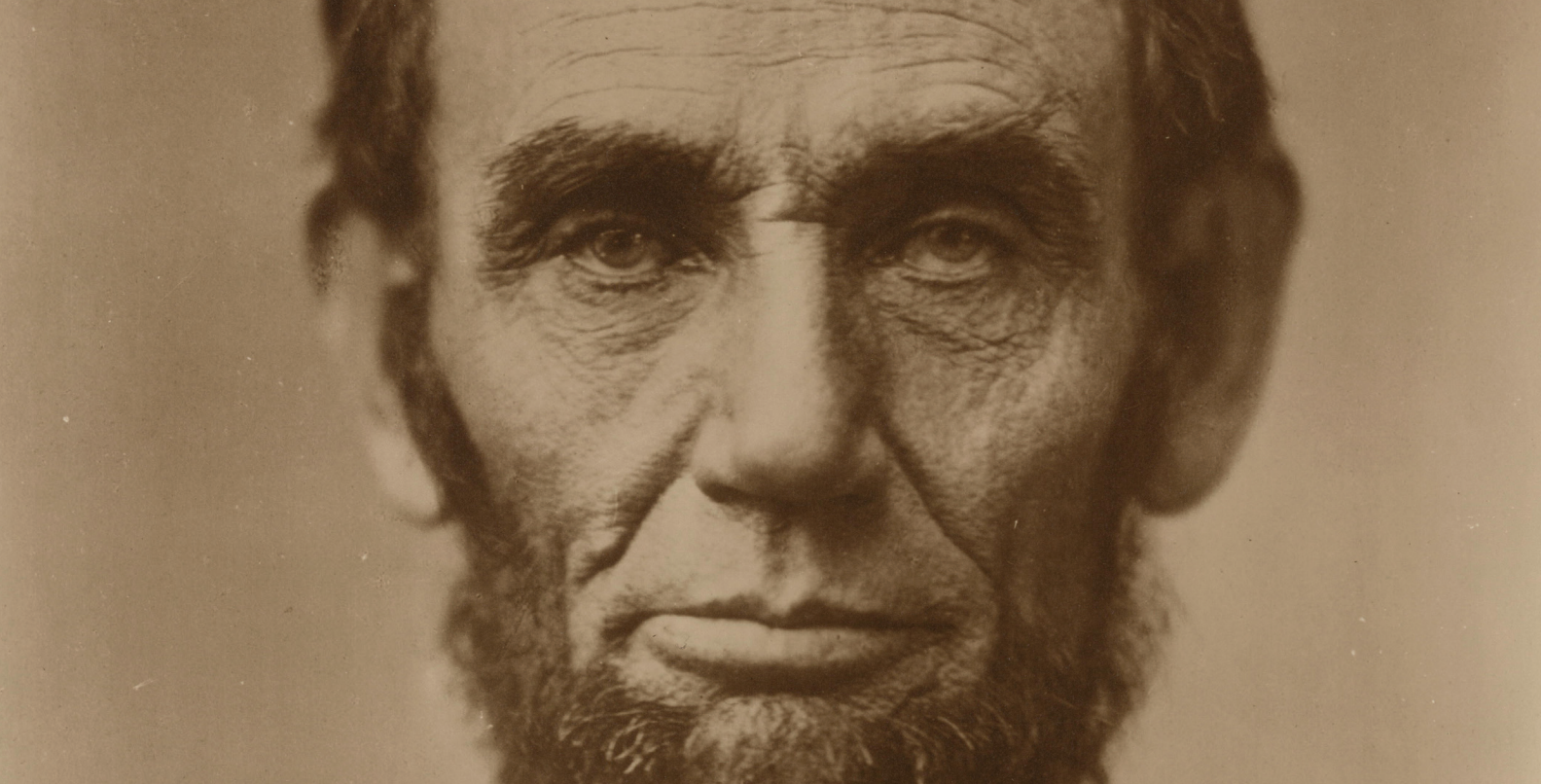
rather than later be flooded one too many times” and suggested that in some instances when physical elements of the landscape have been destroyed or seriously degraded “one part of resilience is the stewardship of public memory.”⁷

How does the RAD framework then square with the NPS Organic Act’s “preserve unimpaired” language?

I cannot in this essay delve into all aspects of this question, but it is important to note that the phrase “preserve unimpaired” has been interpreted in different ways at different times. When Frederick Law Olmsted Jr, an author of the NPS Organic Act, used the phrase “preserve unimpaired” in the 1916 legislation it was likely in the context of heading off further exploitation of national parks such as had occurred with the earlier congressional authorization for damming Hetch Hetchy Valley in Yosemite National Park.⁸ Only later in the 20th century was the interpretation of the “unimpaired” standard extended to include the protection and perpetual maintenance

of existing ecological conditions—within relatively stable climatic parameters. In the current era of anthropogenic climate change, that stability has all but disappeared, leading to a cascading chain of ecological disruptions and dislocations reverberating across the entire globe. In this environment, NPS needs to reconsider how to use the “unimpaired” standard to advance preservation goals without tying it so closely with the continuation of existing ecological conditions. The RAD report understands the need for nimbleness, describing NPS resource stewardship as “an evolving enterprise,” one that must embrace “humility, continual learning, and the willingness to course-correct.”⁹

The larger ramifications of climate change on NPS operations are only beginning to be understood. NPS Biologist Sarah Stehn predicted that the climate challenges facing national parks will transcend science and internal agency decisionmaking. “Recognized as not just an ecological challenge but as



A photograph of Abraham Lincoln made by Alexander Gardner in Washington, DC, November 15, 1863.
PHOTOGRAPHIC PORTRAITS OF ABRAHAM LINCOLN; LINCOLN MEMORIAL UNIVERSITY; THE MESERVE COLLECTION, 1941

a cultural and intellectual one,” she wrote, “the scope of climate change and its effects requires developing a shared vision among multiple agencies and regional groups ... from outside the normal realm of operation(s).”¹⁰ The RAD report, as well, acknowledges that “many other factors must be considered ... (e.g., societal and stakeholder preferences, legislative mandates and agency policies, availability of requisite resources and knowledge).”¹¹ This has become inherently as much of a political process as it is a resources management one. Adaptation teams will need to involve professional staff with public engagement and social science skills in tandem with scaled-up federal, state, and community partnerships and public outreach.

I think it is a safe bet that not everything people value the most in their national parks will survive in a changing climate. Resiliency has limits and there will be irreversible ecological and physical changes to places that people care deeply about. As Phil Cafaro wrote in a *George Wright Forum* Centennial Essay back in 2012, “NPS cannot refreeze glaciers. It cannot replant millions of acres of degraded forests. It cannot bring back species extinguished by climate change.”¹² Where opportunities exist for intervention,

whether in the form of resistance or directed change, they will be limited by difficulty and cost. As adaption priorities are set, inevitably issues of fairness, equity, and environmental justice will have to be resolved. The work of those on the front lines of climate adaptation will become increasingly stressful as RAD planning will almost assuredly be controversial and contested. If the current divide over masks and vaccinations is any indication, reaching agreement on climate adaptation strategies for national parks will not come easy. As NPS and the American people begin to come to grips with the tasks that lie before them, it is useful to recall other times when America confronted challenges of similar gravity and complexity that were ultimately overcome—and take encouragement from the words of Abraham Lincoln in that portentous winter of 1862:

*The occasion is piled high with difficulty, and we must rise—with the occasion. As our case is new, so we must think anew, and act anew.*¹³

Endnotes

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A glacial river on Kodiak Island, Alaska, meets the North Pacific Ocean. Coastal deltas represent the critical interface between terrestrial, freshwater, and marine connectivity. | **STEVE HILLEBRAND / USFWS**