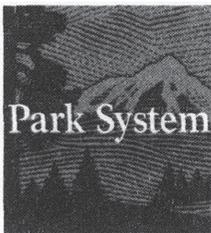


National Park System Advisory Board



Citizen advisors chartered by Congress to help the National Park Service care for special places saved by the American people so that all may experience our heritage.

National Park System Advisory Board

Planning Committee Report

November 2012

**National Park System Advisory Board
Planning Committee Report
November 2012
Contents**

1.0 Background and Context

- 1.1 Planning for the Future
- 1.2 Articulating a Vision
- 1.3 The Current System
- 1.4 Plan Purposes
- 1.5 Past Practices and Future Directions

2.0 Create an Integrated System That More Fully Represents Our Heritage

- 2.1. Targets
- 2.2 Natural Resource Representation
- 2.3 Cultural Resource Representation

3.0 Sustain the Integrity of Parks, Historic Sites, and Other Protected Areas

- 3.1 Large Landscape-Scale Conservation
- 3.2. NPS Units and Partnership Models
- 3.3 Boundaries

4.0 Improve Connections for Urban Populations

- 4. 1 Equity and Access in the Urban Context

5.0 Build Institutional Capacity in NPS for Systems Planning and Partnerships

6.0 Conclusion

Summary of Major Recommendations

Committee Members

References

Appendices

- A. The Current System
- B. Natural Resource Representation
- C. Cultural Resource Representation
- D. Large Landscape Case Examples
- E. Partnership Management Models
- F. Urban Connections

**National Park System Advisory Board
Planning Committee Report
November 2012**

1.0 Background and Context

1.1 Planning for the Future

National Park Service (NPS) responsibilities for managing parks and programs have grown over the past century in response to opportunities rather than a clear design. The most recent evidence of a “system plan” prepared by the NPS appeared in 1972. In 1988 the National Parks Conservation Association (NPCA) developed its own plan for the National Park System. The committee noted that most large complex organizations make much more frequent and substantial commitments to long range systematic planning.

The National Park System Advisory Board (NPSAB) established a planning committee in 2010 including 15 members with extensive experience in natural resources, cultural resources, park management, and urban issues. The committee’s report on principles and guidelines for a system plan was adopted in June 2011 and was reflected in the first goal in the 2011 “Call to Action”: Identify a national system of parks and protected sites (rivers, heritage areas, trails, and landmarks) that fully represents our natural resources and the nation’s cultural experience... work with communities and partners to create a comprehensive National Park System plan that delineates the ecological regions, cultural themes, and stories of diverse communities that are not currently protected and interpreted. The Board was asked to expand on its previous work and support the next steps in developing a foundation for system planning.

Rapid changes in our world: natural systems, cultural resources, population, technology, science, and scholarship all suggest an urgent need to have clear direction for the National Park Service’s role in conserving our nation’s heritage.

Planning for the future of the National Park Service needs to consider a wide range of technical and financial assistance programs and other designations such as national heritage areas, wild and scenic rivers, trails, and landmarks as well as the areas that the NPS directly manages. Although the National Park System is defined in current law as the almost 400 units NPS manages, the committee believes that to meet the challenges of the future the NPS units, other protective designations, and programs must work together to achieve a common purpose. We also anticipate that new models of parks featuring more partnerships and a mix of land ownerships will be needed in the next century.

Planning for the future should identify themes missing in the current system but allow and encourage initiatives from local communities and national constituencies to find the best strategy to conserve the resources they consider important. A national park plan should be a continuing, dynamic process rather than production of a single document. The process should be interactive and iterative. It should promote conservation at the landscape scale considering integration of natural, historic, cultural resources and human communities. It should emphasize connections: between people and their natural and cultural heritage, between parks and programs, and across habitats and larger landscapes to allow for adaptation to environmental change, between urban populations, and cultural sites as well as parks.

Opportunity and risk assessments—evaluation of uncertainties, the potential for losses, the probability of occurrence and likely impacts, along with restoration possibilities—should inform planning, and management should be adaptive. National Park System units, designations, and programs can be cornerstones and catalysts in an integrated system of protected areas. Corridors and partnerships with adjacent landowners and managers are important tools to promote meaningful conservation beyond traditional boundaries.

Open space and recreational needs of disadvantaged communities need to be addressed throughout the process. The NPS should encourage the development of community capacity to engage on a long-term basis in identifying important natural and cultural resources near home, finding ways to protect them, and promoting access to existing parks.

The NPS should communicate more effectively that establishing and maintaining parks and protecting cultural sites are investments in community infrastructure that support broad national priorities. Parks, historic preservation, and heritage areas generate jobs, promote education, enhance civic engagement, support public health, and provide a host of valuable ecosystem services. These investments are valuable in times of plenty and scarcity: some of our nation’s most widely respected and appreciated protected areas were established during previous eras of severe fiscal challenges.

Time is of the essence. To address the rapid pace of change, the U.S. Fish and Wildlife Service (USFWS) is currently proceeding with a plan for strategic growth of the refuge system. The Bureau of Land Management (BLM), the Forest Service (USFS), and other federal agencies also are making progress with their own systems planning efforts. We recommend that the NPS begin work immediately on its own system planning process—in coordination with a variety of partners, either by using available authorities or by seeking new legislative direction.

Throughout our discussions the committee considered the term “parks” to include historic sites and cultural resources. The term “landscape” also encompasses the ecological and cultural context for historic and cultural sites, as well as the ecosystems and human communities surrounding those sites. The committee endorses recommendations by the Second Century Commission to substantially condense the number of different titles for park system units, and to clarify public understanding that regardless of official designation, all areas managed by the NPS are part of the same system of national parks.

Our findings and recommendations are organized by four major concepts:

1. Create an integrated system of national parks, heritage areas, programs, landmarks, and protected areas that more fully represents and safeguards our nation’s natural and cultural heritage.

2. Sustain the integrity of parks, historic sites, and other protected areas by creating corridors to link habitats, and promote compatible uses of surrounding lands and by planning for risk management and adaptation to respond to a changing environment.

3. Improve connections for urban populations with the recreation, public health, economic, cultural history, civic engagement, and other benefits of parks and NPS assistance programs.

4. Build institutional capacity in the National Park Service for systems planning to establish a vision, identify goals, and select strategies to meet the challenges of the future.

1.2 Articulating a Vision

Planning for the future of the parks and protected areas should begin by engaging all interested individuals, groups, and levels of government to define a collaborative vision. The National Park System Advisory Board's vision for the future is based on the principles of creating a more integrated system of parks and programs, sustaining the integrity of these assets, and improving connections for all Americans. As a starting point for further discussion of a vision we suggested:

“A national system of parks, protected areas, and programs that fully represents and adequately protects our heritage of natural and historic resources, reflects the breadth of our nation's cultural experience, and provides opportunities for education and recreation that inspires and engages our population, leaving an enduring legacy for future generations.”

The committee developed several ideas for expanding on that broad vision statement and the implications of a system that “fully represents” our national heritage:

“Envision a conservation system that is large and connected enough for organisms to adapt and evolve to changing environmental conditions and sustain the integrity, diversity and health of the ecological and evolutionary processes and associated ecological services in the parks. Such a system would help ensure resilience in the face of climate, land-use change and other environmental stressors.”

As noted by the NPSAB's Science Committee's report *Revisiting Leopold* “The goal should be to steward NPS resources for continuous change that is not yet fully understood, in order to preserve ecological integrity and cultural authenticity, provide visitors with transformative experiences, and form the core of a national conservation land- and seascape.”

As noted by the Cultural Resources Subcommittee: “As a steward of historic places, the NPS has opportunities to help the American public engage in critical thinking about the past and about how the past shapes the present and future. For many engaged in historic preservation, telling more honest, inclusive stories is a beginning. The real prize is making historic places major sites where Americans can meet for conversations about where we, as a society, a nation, and communities, can and should go from here.”

The committee's urban group noted: “Together the NPS, its partners, sister agencies, stakeholders and community members can play a significant role in ensuring that densely populated diverse communities across the country become mobilized to support connections to parks and open spaces.”

The committee suggests that in elaborating on a vision statement, the NPS consider state historic preservation plans that highlight the ideas of creating a stewardship ethic and cultivating shared values recognizing the linkage between the cultural and natural environments. State wildlife action plans that describe the importance of habitat connectivity also may provide useful ideas in elaborating on a vision for the NPS in the next century.

1.3 The Current System

Congress has described our national parks as a cumulative expression of a single national heritage. The system includes a collection of national treasures, but a quick review of the system's characteristics and distribution reveals some apparent deficiencies:

- National Park System units encompass 3.7 percent of the United States, but only 1.4 percent of the contiguous 48 states. Almost half of the National Park System acres are in Alaska.
- They include minimal marine representation.
- Most of the acreage is western. Ninety-one percent of the acreage is west of the 98th meridian (73 percent without Alaska and Hawaii).
- Thirty-three states have less than one percent of their area in national parks.
- Eight eco-regions have no representation in the National Park System.
- The majority of underprotected ecological systems are found in low elevation and on moderate to high productivity soils.
- Representing one example of an ecosystem type does not necessarily reflect contemporary ideas of the need for redundancy and resilience to address climate change, the rapid pace of development, and other pressures.
- When consideration is given to other protected public lands, the same pattern emerges of substantial concentration in the west, and relative scarcity in the eastern states.
- The list of national parks by historic significance category highlights some obvious discrepancies in representation: numerous battlefields and presidential homes, few sites specifically representing migration and immigration, social movements, education, arts, and science
- Tools readily available for identifying topics represented in the system do not necessarily reflect the important dimensions of chronology, geographic region, race, ethnicity, class, and gender.
- Although recent initiatives have made progress in broadening representation, the current system of national parks and historic landmarks reflects the "traditional" focus on iconic scenery and architecturally remarkable buildings, often associated with individuals who were wealthy, or politically influential.
- The current inventory does not adequately reflect the full breadth of the American experience, or offer opportunities to forge lasting connections with a changing population.
- The NPS presence in major metropolitan areas is limited. Forty of the 50 largest metropolitan areas have a site managed by the NPS within 50 miles, but many of these are small historic properties with limited staff and program capacity. In 10 of the largest 50 metropolitan areas, the NPS has no site within 50 miles.

Additional details on the analysis of park distribution by state prepared by committee member Denis P. Galvin appears as Appendix A.

The NPS should communicate to the public the strengths in the current system and the gaps that are evident in representation of natural and cultural features and in connections with America's changing demographic characteristics.

1.4 Plan Purposes

A National Park System plan is often assumed to focus on the identification of “gaps” and opportunities to establish new park areas. This is only one of several potential purposes for such a planning effort. We recommend that system planning be designed to achieve the following:

- (a) Highlight the importance of parks and other protected areas for their inherent conservation and historical values as well as for contributing to other national priorities such as sustainable economic growth, education, civic engagement, and public health.
- (b) Clarify the distinctive role of the National Park Service in the broader network of areas protected by other agencies, state, local, and tribal governments, and the private sector.
- (c) Expand appreciation for the capability of NPS to provide educational experiences and to stimulate civic dialogue.
- (d) Engage and expand the constituency for national parks, NPS programs, and conservation.
- (e) Identify a range of tools and techniques for addressing gaps in protected area representation considering programs as well as federal management designations.
- (f) Identify current and potential threats to conservation goals.
- (g) Support strategies for addressing rapid changes in the environment as well as demographic, economic and other characteristics.
- (h) Support models of collaboration and partnership that enable the NPS to increase impact and broaden engagement.
- (i) Articulate the opportunities for ecological restoration to contribute to conservation goals and place-based educational opportunities, especially in urban areas.

1.5 Past Practices and Future Directions

We found several points of contrast between current or past practices and new or future concepts that should characterize system planning. Some of the “past” practices date back several decades, and some of the “future” directions reflect work already in progress. This section is intended to highlight contrasts recognizing that most of these ideas deserve much more detailed and nuanced narrative for next phases of system planning.

Past: National parks are established to protect iconic scenery, architecturally distinguished buildings, and to promote tourism.

Future: *National parks, as well as NPS programs, conserve lived-in landscapes, protect biological complexity, enhance ecosystem services, conserve cultural heritage, promote civic engagement, and provide more equitable access for diverse populations.*

Past: The National Park Service is known to the public as the steward of areas with clear boundaries which define the limits of NPS management authority.

Future: *The NPS is an agency of professionals with substantial expertise in resource conservation, historic preservation, and education. It plays a much greater role beyond established park boundaries enabling all Americans to participate in conserving and interpreting the places that they hold dear.*

Past: Natural areas should be protected so that they will be free from any evidence of human impacts.

Future: *Humans have been influencing the natural environment for thousands of years. Conservation should illuminate how nature influences culture and how culture influences nature.*

Past: Natural areas should be managed to reflect conditions at the time of European contact.

Future: *Natural systems are constantly changing, and preservation means allowing natural processes to continue as well as recognizing that the contexts of those processes have changed dramatically in many places.*

Past: Protect at least one of everything.

Future: *One is not enough: redundancy is needed to prevent catastrophic loss, allow for adaptation to climate change, and other ecological processes and for broader, contextual representation in keeping with the best of current scholarship.*

Past: Natural areas and cultural sites can be protected by establishing and securing clear legal boundaries.

Future: *Air, water, plants, and wildlife can cross boundary lines with little or no regard for legal authorities; to allow for resiliency and adaptation for climate change, connectivity is critical. Protection of complex ecological systems requires engagement and cooperation at a large landscape scale. So do cultural resources where stories, traditional uses, and important sites are not always easily confined within an administrative boundary and where context is often vulnerable to incompatible uses.*

Past: National recognition or designation as a park should be reserved for areas and sites that retain their “pristine” condition.

Future: *Restoration of degraded habitats may offer the best available opportunity to provide park experiences and functioning ecosystems, especially in urban areas. Integrity of cultural resources needs to be evaluated in context of the character of the resources, what stories can be illustrated, and what other sites might be available.*

Past: Reflecting what now is recognized to be an outdated view of history, cultural sites most often were designated to commemorate big battles, “great men,” architectural elegance, and American triumphalism.

Future: *Our cultural heritage is diverse and complex. NPS programs continue to make advances in reflecting social, economic, and cultural trends and themes, not just politics and war, and must embrace the experiences and perspectives of all Americans, considering race and ethnicity, class, and gender.*

Past: Sites were added to the National Park System to tell the “correct” story about our history.

Future: *Continuing recent initiatives by NPS historians and scholars, sites should be designated and interpreted to embrace historical ambiguities, broad contexts, multiple perspectives, and varied interpretations not only of what happened, but why it matters and what it means in the contemporary context.*

Past: Parks should offer interpretation and visitor experiences based only on their “core mission.”

Future: *Parks should update their interpretive programs consistent with a contemporary reading of their authorizing legislation to recognize the potential breadth of their resources and opportunities to provide inspiring experiences that touch on many different dimensions of our national story.*

Past: Designation of one or two sites important to a specific group provides adequate representation of that part of our national experience.

Future: *NPS programs continue to recognize that human experience within our diverse nation is complex and varied over time, cultures, and geography. For example, the American Latino Heritage initiative highlighted that many NPS sites and National Register listings represented the Spanish colonial era, but Latino experience in the past 200 years was largely missing.*

Past: Urban populations need access to park and recreation opportunities, and these can usually be provided by state or local governments.

Future: *As a matter of equity, urban populations should have access to national park areas and programs. A strong constituency is needed for support of our national parks and other protected areas highlighting the need to engage urban populations which now often have little, if any, easy access to NPS sites or programs.*

Past: The NPS Rivers, Trails, and Conservation Assistance Program is the most widely recognized way to engage with urban populations, although NPS preservation assistance programs are transforming neighborhoods and providing avenues for urban communities to express and preserve their heritage.

Future: *The entire range of NPS programs and authorities including national natural and historic landmarks, heritage areas, historic surveys, preservation assistance, and preservation tax incentives needs to be available to engage with urban populations, especially in the major metropolitan areas without any NPS presence, or where the capacity of NPS is limited in relation to the service area.*

Past: Professionals and experts should identify new parks and other designations.

Future: Science and scholarship are essential, but need to provide support for community action in recommending what should be protected.

Past: The NPS can develop and implement a plan for what the system will look like in 50 or 100 years.

Future: The NPS can offer guidance and a framework, but will take value from initiatives by local communities and national organizations to find creative ways to achieve the desired results.

2.0 Create an integrated system of national parks, programs, landmarks, and protected areas that more fully represents and safeguards our Nation's natural and cultural heritage

2.1 Targets

Nations throughout the world have identified specific numerical targets for land to be preserved. Several states and regional organizations also have identified numerical goals that should be considered as the NPS embarks on system planning. For example:

- A strategy addressing the 2009 Executive Order on Chesapeake Bay conservation identified a goal to protect two million additional acres by 2025 including 695,000 acres of forestland of highest value for maintaining water quality. The strategy also aims to increase public access to the Bay and its tributaries by adding 300 new public access sites.
- In 1999 less than three percent of California state waters were in marine protected areas (MPAs), and most of those MPAs were small and lacked clear objectives. Because of a system planning process, by 2013, approximately 16 percent of state waters will be in 124 MPAs that represent and replicate most marine and estuarine habitats and are designed to be ecologically connected.
- A report by Harvard Forest offers “a vision of New England that triples the amount of land remaining free from development; a future in which more than 70 percent of the land across the region would remain forested, punctuated only by waters, wetlands, and farmland.”
- Parks Canada’s system plan focused on protecting representative examples of 39 major landscape types, and would expand the amount of land in national park status from 2.25 percent to about 3.0 percent.
- The international conservation community has adopted specific, numerical targets for biodiversity conservation. Targets adopted in 2010 include:
 - At least halve and, where feasible, bring close to zero the rate of loss of natural habitats, including forests.

- Establish a conservation target of 17 percent of terrestrial and inland water areas and 10 percent of marine and coastal areas.
- Restore at least 15 percent of degraded areas through conservation and restoration activities.
- Make special efforts to reduce the pressures faced by coral reefs.

Some nations have already exceeded these targets. For example, protected areas represent approximately 36 percent of Belize’s terrestrial areas and 13 percent of its marine area.

Targets that identify only a percentage of total land area to be conserved risk leaving out a range of resource types. For example, protecting 10 percent of the land base might encompass many deserts or mountains, but no wetlands. A more desirable target would be to protect at least some specific percent of each major ecosystem or cultural resource type,

Setting conservation targets and defining the role of the National Park Service in the larger network of protected areas is inevitably a task that requires balancing science and scholarship with political feasibility. A recent editorial in the publication *Conservation Biology* argued that science should provide a starting point for that discussion, rather provocatively suggesting:

“If the conservation community sets protection targets based on preconceived notions of what is socially or politically acceptable or on assumptions of inevitable population and economic growth, we will make very limited headway in stemming extinction. Our task is not to be beaten down by political reality, but to help change it. Nature needs at least 50 percent, and it is time we said so.”

In developing a system plan, the NPS must identify clear targets looking forward 5, 10, or 50 years. Targets should recognize that success will be the result of engaging partners and not just direct land management by the NPS.

The committee did not attempt to select specific numerical targets, but recommends that they be bold and focus on results like doubling the effectiveness of NPS units and programs.

2.2 Natural Resource Representation

The committee observed that a vision, goals, and targets need to be identified before gaps can be clearly identified. Gaps can be defined as the difference between targets and the existing representation of resources. Contemporary ideas about system design also recognize the importance of redundancy and resilience in considering what is “adequately” represented

The committee found a substantial body of recent research and new mapping capability that helps identify gaps in natural resource representation as well as trends in land uses surrounding parks that indicate vulnerabilities. Gap analysis has played a major role in conservation planning by gathering and analyzing data sets to determine which species or ecosystems represent “gaps” in the current system of conservation areas. Systematic conservation plans such as the eco-regional assessments of The Nature Conservancy took gap analysis one step further by identifying those potential conservation areas to fill the gaps for a particular set of ecological goals.

Many advances in conservation planning methods and tools have occurred over the last decade. Chief among these are better incorporation of ecological processes and functions, expanding these functions to include ecosystem services, better inclusion and understanding of the costs (economic and otherwise) of conservation actions, improved planning for freshwater and marine ecosystems, incorporating climate change adaptation considerations, new ecological restoration tools, and new approaches to connectivity and planning for multiple objectives.

A recent analysis by NPCA and the U.S. Geological Survey (USGS) shows that 16 percent of the 711 terrestrial ecosystems in the US are not represented in the National Park System and 392 (55 percent) have less than five percent of their total area within NPS units. Almost 30 percent (206) have less than five percent of their total area in any protected status. These 206 ecosystems could be considered top priority for future protection along with the 20 types not now represented in any protected areas. Priority attention also could be directed to areas with multiple resource values: representation as well as the occurrence of threatened or endangered species, and high potential for public use, and other factors.

The NPS will need to determine how many different natural feature types should be represented in national park sites and other designations. The answer might reasonably recommend different scales for different regions. The NPS could also focus on areas with relatively high potential for educational opportunities.

Another potential approach to identifying priorities for filling “gaps” is to look for the intersections of underrepresented ecoregions and at-risk species of birds or other wildlife. For example, several previous studies have identified grasslands as poorly represented in the existing system of protected areas, and as providing important habitat for several species that are declining. California coastal scrub communities are also an example of an underrepresented resource type that encompasses important habitat for threatened and endangered species. The gulf coast of Texas offers an example of opportunities to protect important habitat and serve other national goals for addressing impacts of storms and climate change on fragile coastal areas.

The committee was invited to consider if the Landscape Conservation Cooperatives (LCC) provide a useful framework for considering representation and gaps. Some of the cooperatives are fully operational, while others are making progress toward an ability to help address the questions outlined in this report. The LCCs seem to be an excellent source of access to available studies and data primarily about natural resources, but do not currently appear to be designed to directly answer specific policy questions about priorities and gaps.

The NPS should apply the classification systems available through the U.S. Geological Survey (USGS) and other sources to identify gaps in natural resource representation. Priorities for new parks should be considered in the context of other protected areas, and opportunities should be pursued to improve habitat connectivity by expanding boundaries and the potential for leverage in large landscape-scale conservation. Planning for the future shape of the system should reflect science documenting that smaller, more isolated areas are more likely to lose species over time, and that human development activity adjacent to parks may have an adverse impact on natural processes that sustain park values.

As observed by the NPSAB Science Committee's report *Revisiting Leopold*, "because ecological and cultural systems are complex, continuously changing and not fully understood, NPS managers and decision makers will need to embrace more fully the precautionary principle as an operating guide. The precautionary principle requires that stewardship decisions reflect science-informed prudence and restraint."

The committee recognizes that the marine environment presents a special set of challenges and opportunities. Our subcommittee report on natural resource representation includes a brief discussion of marine and freshwater ecosystems and gaps, but we recognize the importance of giving these areas special attention as the NPS develops capacity and proceeds with system planning. This attention should consider opportunities to address protection for areas adjacent to coastal parks as well as the potential for more active NPS engagement in the waters offshore.

A discussion of the principles of ecosystem protection and a detailed analysis of the methods for identifying gaps in natural resource representation by committee members Mike Scott, Craig Groves and Jodi Hilty appears as Appendix B.

2.3 Cultural Resource Representation

The framework for cultural resources adopted by the NPS in 1994 recognizes eight major themes and at least 39 "topics." These broad contextual themes have many facets that must be considered in light of time, location, ecologies and geography, race and ethnicity, class, gender, and other factors. As with natural resources, if at least one of each resource "type" is a goal for the system, then some agreement needs to be reached on how many types are to be represented. This may require choosing a general category and assembling a group of scholars to recommend what distinctions are important in system design. The American Latino Heritage initiative offers an excellent example of how this might be accomplished.

The NPSAB Planning Committee reviewed the list of parks and designated national historic landmarks by significance topic. We found some obvious differences in representation: 70 parks are identified as significant for Native American heritage (mostly southwestern archeological sites), while only one is identified under the topic of economics. Thirty-five current NPS units are listed as representing presidential sites, and only four are listed as representing education. Further evaluation of representation for NPS units as well as national historic landmarks and other designations will require much more detailed analysis of data bases that often reflect original listings from many years ago or other information that needs to be updated.

The committee was asked to consider what gaps in the representation of sites of special importance to minority populations merit priority attention as we approach the 2016 centennial. We suggest that this question be considered in a broad context of the thematic framework adopted by the NPS in 1994. Sites important to specific minority groups can be found under each of the eight major themes. Future thematic studies can focus on individual ethnic or other minority groups, but they also can address the stories and experience that may be important to multiple groups and highlight the stories that link us as Americans. For example, sites that represent immigration and migration, labor, the arts, and other stories can be of special importance to multiple minority groups and to all Americans. The National Historic Landmarks

Committee has already emphasized the need to reflect current scholarship highlighting the connections between different groups.

We believe that grassroots-driven initiatives must be given a much greater role, especially in cultural and historical interpretation. If the gaps in history and culture are going to be filled-in, such as Latino history, then the people whose history is being interpreted need to have a greater part in determining their nationally significant stories. This will require improved communication between NPS and grassroots organizations as well as engagement of scholars.

Representation of a theme does not necessarily require the designation of a new site. The NPS should further pursue opportunities to enhance and diversify the stories told at existing NPS units, national heritage areas, national historic landmarks, and other sites. Models for this include not only the initiative of the Civil War battlefield superintendents (*Taking the High Ground*), but also NPS participation in the International Coalition of Sites of Conscience by the Northeast Region of the NPS. New technologies should be applied to help visitors recognize multiple stories and connections.

The NPS should continue to conduct historic context studies and theme studies that will provide the basis for evaluation of additional national historic landmarks, national heritage areas, and other NPS program designations to tell the whole American story and increase representation of themes not now well covered including: migration, immigration, industry and manufacturing, labor, arts, science, and technology, as well as other sites important to Latinos, Asian Americans, African Americans, and other minorities. A context study of sites related to leaders, trends, and critical events in the history of conservation would be especially relevant to 2016. Special attention should be given to the need for NPS to be proactive in supporting and prioritizing theme studies.

The NPS should review and recommend updates if needed to current guidelines for applying criteria for significance, suitability, feasibility, and partnership management alternatives. These updates should reflect contemporary ideas about representation, redundancy, resilience, and restoration for natural areas. For cultural resources, the committee discussed the challenges of the 50-year “rule,” especially in recognizing important sites at risk of being lost due to the rapid pace of technological change. We recognize that the 50-year standard is flexible, and encourage the NPS to enhance public understanding about this flexibility.

Concerns about current standards for integrity have been brought to our attention as a potential obstacle to designations of historic sites important to minority groups. We recommend that National Register and National Historic Landmark (NHL) program managers continue to review, update as necessary, and enhance understanding about the guidance for evaluating integrity taking into account the type of property, and its rarity or representativeness. This does not mean that standards should be abandoned, but they can be applied with a broad perspective on understanding the meaning of a place and the circumstances of its uses by a given community.

The NPS should place renewed emphasis on recognizing that history changes over time and that layers of changes may deserve consideration in establishing a period of significance that is thoughtful, and informed by good scholarship. A continuum of use may indeed be historically

significant, compared to one moment in time or the date of initial construction. The NHL program has been working to address this issue, and we encourage their efforts to continue.

We also suggest that the NPS should continue to use and develop the tools and methods for identifying, evaluating, and protecting cultural landscapes and ethnographic resources. Those resource types provide opportunities and sophisticated models for evaluating change over time (and thus integrity questions) as well as the relationships of tangible and intangible resource values and stories.

The NPS should pursue interpretive and educational media partnerships, especially to deploy new technologies as potential ways to address the challenge of addressing “historical meaning and social value.” This can enhance linkages among all NPS sites, as well as linkages between NPS sites and museums or other institutions. The National Register tour itineraries offer excellent opportunities to make these connections. In addition to linking thematic stories, new technologies can communicate ideas that may not be based on a specific site or structure. A recent study by the Organization of American Historians on the state of history in the NPS recommended that an advisory group be established to address a variety of programmatic issues. We suggest that such a group could be created under the auspices of the National Historic Landmark Committee to assist the committee as it pursues its goal to expand on the ideas and issues related to system planning.

Additional observations by committee members Laura Feller, Dwight Pitcaithley, Ray Rast, and Quintard Taylor about the representation of cultural resource topics and issues related to the current criteria for national significance appear as Appendix C. Also attached in Appendix C are listings of NHLs and NPS units by significance topics based on available data, along with notes on the constraints of readily available data sources.

3.0 Sustain the integrity of parks, historic sites, and other protected areas by maintaining corridors to enable species movement, promoting compatible uses of surrounding lands, and by planning for risk management and adaptation to respond to a changing environment.

3.1 Large Landscape-Scale Conservation:

A Conservation Study Institute review of experience in work at the landscape scale observed that “The National Park Service has nearly 100 years of experience to tell us that agencies working only within their boundaries cannot preserve large-scale landscapes and ensure the viability of the populations which depend on them. Their boundaries are not big enough, their pockets not deep enough. They cannot control exotic species, influence regional air and water quality, shape local land use trends, preserve adequate habitat for species survival, protect whole ecosystems, or ensure economic viability of neighboring communities. New methods of working with partners and sharing responsibilities will be necessary to meet these goals.”

Conservation of biodiversity in the long-term requires planning and implementation beyond the scale of any single national park. Connecting networks of protected areas is one of the most recommended approaches in the scientific literature. This requires ensuring adequate core

protected areas and permeability of landscapes such as through corridors to ensure that species can move among protected areas to maintain viable populations and to track appropriate climate space and other resources. Failure to plan and implement in a coordinated manner across this scale will very likely lead to further extinctions of species within parks and across regions.

The Department of the Interior (DOI) and other federal agencies have embraced the idea that conservation for the future requires working on a scale larger than individual parks, refuges, forests, or other public and private lands. Interagency collaboration is widely recognized as essential in meeting challenges that transcend established administrative boundaries.

We reviewed several general studies of landscape-scale conservation, and we developed nine case briefs of the NPS experience in working on a landscape scale including the Appalachian Trail, Blackstone National Heritage Area, California Desert, Everglades, and the Greater Yellowstone area. Case studies on four areas that were most illustrative—Essex National Heritage Area, Crown of the Continent, Chesapeake Bay, and Boston Harbor Islands—are attached as Appendix D. These case studies were prepared primarily by committee members Gretchen Long and Annie Harris, with support from NPS staff.

Some of these initiatives began in response to specific threats: mining, timbering, fragmented development, and climate change for the Crown of the Continent and water quality degradation in the Chesapeake Bay. Alternately, Essex and Boston Harbor Islands were initiated in response to opportunities for enhanced public access and interpretation, and heritage tourism rather than specific threats. In the cases of the Chesapeake Bay, Boston Harbor Islands, and Essex, NPS engagement in the large landscape is supported and to some extent defined by legislation. The NPS involvement in the Crown is a more self-directed effort stimulated by non-governmental organization activity and the NPS management of Glacier National Park.

We found many common principles that applied to interagency and inter-jurisdictional partnerships regardless of the size, scope, and scale of the area or project. In all of these cases, some common threads are:

- Early collaboration in the planning process across agency and geographic boundaries helps find areas of mutual agreement and interest.
- The recognition that the NPS cannot accomplish its mission without substantial support and cooperation from many different partners including, local governments, tribes, and private landowners.
- The value of consistent leadership in building and sustaining relationships.
- An ability to overcome legal and administrative constraints.
- A willingness to share responsibilities and authority.
- The importance of active engagement by local “grassroots” organizations.

- Support from the business community and by non-governmental organizations.
- The NPS can provide leadership and play an influential role without necessarily having full control. A moderate voice and the use of science can enhance collaborative efforts.
- Effective communication is needed to describe the economic benefits of conservation and tourism, capitalizing on national and international recognition of parks and surrounding landscapes.

Three challenges that are common to all large-landscape efforts involving the NPS are:

1. *the lack of an explicit legal or administrative framework for cooperation across agency lines;*
2. *the cumbersome processes for the review of partnership agreements;*
3. *the mobility of park leadership within the system.*

In spite of the emphasis on “collaborating,” NPS managers continue to encounter bureaucratic obstacles to sharing funds and responsibilities. Although each of the principal federal land management agencies has either statutory direction or explicit policies to coordinate their planning and management activities with their neighbors, there is little agreement on what this means or entails and no legal enforcement of these mandates. These coordination requirements do, however, provide some foundation for convening these groups and engaging them in planning efforts.

We recommend that Congress, or the President by Executive Order, consider adopting a new federal interagency conservation coordination requirement designed to ensure that federal conservation objectives are achieved. Such a new interagency conservation process would not only mandate that each of the four principal federal land management agencies (USFS, BLM, NPS, USFWS) engage in coordinated planning and decision making designed to advance federal conservation interests, but would also require preparation of a new interagency conservation coordination statement by the action agency. This would require the action agency to notify potentially interested agencies about any proposed plan or decision, solicit written comments from them, and require the action agency to respond directly to those comments, including an explanation why there are no feasible alternatives, and why it has rejected any proposed changes.

A related approach would be to ask Congress to consider adopting a new National Conservation Network Law. The purpose would be to legally recognize the extensive federal conservation land network that already exists, to promote better coordinated planning and management, and to establish explicit linkages between nearby conservation lands.

At a minimum, the Departments of Agriculture and Interior should adopt or revise federal ecosystem management and collaborative conservation policies to include landscape-scale planning requirements, wildlife corridor proposals, interagency coordination requirements, and private landowner collaboration standards and options. Such collaborative policies should

recognize that many USDA programs beyond the U.S. Forest Service can support protection of natural resource values.

At least where federal lands are involved in large landscape conservation efforts, the discussion should also involve determining whether new protective designations are required to achieve these. This would entail, for example, discussion of park expansion opportunities, new wilderness designations, strategic land exchanges, and national monument designations.

When considering new designations, it is important to distinguish between permanent protection and less than permanent protection efforts. For example, the newly designated Path of the Pronghorn migration corridor was stitched together with each agency/entity taking action within the scope of its authority, but some of these actions could be administratively reversed in the future.

We endorse current initiatives in the 2011 “Call to Action” that support NPS engagement in large landscape-scale conservation activities, including the national heritage areas as an essential part of its mission and not as an external or optional activity for park and program staff. We support the creation of additional national heritage areas, especially those associated with NPS units. National heritage areas should be recognized as a part of the National Park Service “family” with a consistent place in the NPS budget and information distributed to the public about the National Park System. The NPS also should enhance its ability to cooperate in the creation of state heritage areas

We suggest that the NPS integrate large landscape-scale capacity and engagement throughout the organization: it should encompass the broad range of NPS programs and capabilities, and not be limited to corridors and land acquisition.

The NPS should revitalize programs in cooperation with the other agencies that provide technical assistance to gateway communities and build partnerships with the private sector beyond park boundaries. The NPS also should invest in training personnel in collaboration and partnerships and evaluate staff based on their success in these areas.

For success in developing and sustaining partnerships, the NPS needs to undertake a comprehensive review of the current legal and administrative requirements for partnerships, and seek to streamline the process. Cumbersome procedures for review of partnership agreements as well as some unrealistic requirements for financial commitments and reporting requirements are especially burdensome for small organizations and discourage support from potential public and private partners.

The NPS should build “communities of practice” (groups of professionals with shared interests and experience) to improve its capacity for success in developing sustained partnerships.

The NPS has a tradition of encouraging personnel to move from park to park for career advancement opportunities. While mobility has advantages, consistent leadership in a park is often essential for building and sustaining relationships outside the park. The NPS should recognize this value of consistency when considering movement of superintendents and the park

leadership team. Recognizing that leadership changes are inevitable highlights the need to build capacity for partnerships throughout the organization and to institutionalize arrangements with park partners. When staff moves take place, a transition strategy should be developed and implemented and should include the non-NPS partners in the orientation and training of the incoming NPS personnel.

3.2 NPS Units and Partnership Models

We were asked to consider how innovative models for parks might be deployed to address challenges and opportunities for the future.

Throughout the world, discussions about the future of conservation are focused less on “setting aside” lands for pure nature reserves, and more on crafting strategies that combine active, sustainable human uses with conservation of natural, cultural and historic features. Rather than separating people from nature, these discussions seek to recognize the dynamic interactions between people and the environment, suggesting that private ownership and land uses might be part of the resource to be protected. This is especially true in urban areas where revitalization of neighborhoods and industrial infrastructure may be the goal rather than creating “museums.” Looking to the future, the NPS should be encouraged to find models that fit the circumstances of the resource to be protected and made available for public use.

Status as a “unit” of the National Park System is generally regarded as a high honor and assurance of permanent protection for public benefit. Status as an NPS unit also is expected to provide access to funding in the NPS budget each year. Designations that do not fall under the definition of NPS units are perceived to be lacking a permanent commitment and are subject to inconsistent (or no) federal funding.

At one end of the spectrum are parks where the NPS owns and operates the entire area within legislatively defined boundaries. At the other end are assistance programs, and “parks” where the NPS owns and operates little, if any, of the land. The NPS listing of acreages indicates that in 14.5 percent of the units, the NPS owns less than 50 percent of the land. That listing also includes 15 “units” where the NPS does not own any land as of 2012, but several of those areas anticipate acquisitions as funds are made available or transfers are completed.

We observed that titles and designations are not always consistent in communicating the NPS role and management system. More important than ownership, title, or designation are standards governing resource management and visitor services. Some of the models for “partnership” management have been applied where continued private ownership and use are considered to be part of the cultural landscape to be protected. We found that no model is inherently better than another without considering the context of intended accomplishments based on the type of resource to be protected and managed as well as the capacity of potential partners.

In selecting a model for a specific site or area, starting the discussion with what functions need to be performed and who will be responsible may be more productive than starting with a focus on a specific designation or title. At one end of the spectrum, the NPS assists others who have lead responsibilities for resource protection and managing an area. At the other end, the NPS is primarily responsible for managing the resources and providing visitor services. The key to

crafting a successful model is to clearly define roles, responsibilities, standards, and expectations.

We also were invited to consider issues and opportunities related to the creation of new park system units where the NPS has little or no authority to acquire and manage land. We specifically considered the examples of Boston Harbor Islands, New Bedford Whaling, Rosie the Riveter, and Mississippi River NRA. where land ownership is absent or limited, and found that the critical questions are: (1) do the resources meet criteria for inclusion in the National Park System, especially are they outstanding examples of a resource type, and (2) to what extent does the NPS have authority and capacity to ensure that resource management and visitor services are consistent with NPS policies. While new varieties of park system units may take more time to reach their full impact, we observed that these partnerships with other regional and local entities immediately engage the support of a broader range of stakeholders and over the long-term often develop a very robust and resilient park with strong community support.

The importance of NPS policies and standards is evident in the example of City of Rocks National Reserve in Idaho. The legislation authorizes the transfer of management responsibilities to state or local governments upon the Secretary of the Interior's determination that ordinances and regulations are in place to protect the resources as described in a comprehensive plan. The Secretary also may withdraw this transfer/delegation upon a finding that management is not consistent with preservation purposes. On the other hand, a legislative proposal to create a new NPS unit at the Waco Mammoth site in Texas would prohibit the NPS from spending any funds and would therefore offer no assurance that the resources would be protected in perpetuity to meet NPS standards, or that the NPS would even be able to actively participate in site management.

We recommend that the NPS support proposals to create new NPS units only where the National Park Service would have the authority and capacity to assure consistency with NPS policies. This should not preclude areas where a mix of ownerships and management are consistent with the intended resource conditions and visitor experiences. Status as an NPS unit should only be supported for areas that meet established standards, and should not be offered just as an emblem to attract visitors or a means to gain access to NPS funding. National Park Service presence just to operate visitor centers also is not usually appropriate without some assurance that significant natural and cultural resources will be managed consistent with NPS policies.

In addition to an evaluation of partnerships in a large landscape scale, the NPS should encourage an independent review of experience with partnerships for management and operation responsibilities of specific units, synthesizing previous evaluations to identify the common elements contributing to success or challenges and to outline policy or legislative changes that would promote effectiveness

The NPS should review and update its guidance for the designation of "affiliated areas" to provide better recognition for sites that are not directly managed by NPS but meet standards for designation as a unit and can be effectively managed by others.

Additional reference material on management models compiled primarily by committee member Annie Harris appears as Appendix E.

3.3 Boundaries

We were asked to consider questions about the delineation of park unit boundaries to encompass more, often much more, land than the NPS ever intends to own, manage, and operate. Some interested parties have advocated delineating the minimum area necessary to encompass the significant resources within a new unit boundary. On the other hand, some advocates for new parks envision a more expansive boundary surrounding a core or a linear feature.

Ideally park boundaries would encompass all of the natural features and processes, cultural context, or areas needed for management efficiency important to the area's purpose. Since this is not usually feasible, compromises are inevitable. The purpose of a park boundary should be to define the limits of certain roles and responsibilities for the NPS, while recognizing the need for cooperation on both sides of the line. Being within a boundary delineated by Congress provides encouragement for other federal agencies as well as state and local partners and private landowners to make better land use decisions consistent with park purposes. Encouragement for support of park values does not necessarily ensure consistency with NPS goals, but park managers report some better success in working with partners inside a legislated boundary than without a boundary. The boundary also may define the limits of the NPS's site-specific authority to provide financial assistance, acquire land, or provide other services.

The NPS should produce a summary of issues and opportunities related to experience with boundaries encompassing lands not intended for NPS ownership. This information may suggest the need to update the NPS boundary adjustment guidelines that were developed in response to congressional directions in 1991. Park managers also need to be better informed about the broad range of partnership authorities that may apply across established boundaries.

4.0 Improve connections for urban populations with the recreation, public health, economic, cultural history, civic engagement, and other benefits of parks and NPS technical assistance programs.

4.1 Equity and Access in the Urban Context

The National Park Service presence is most evident in the western states, and usually in areas distant from cities. By 2030 more than 87 percent of the US population will be living in urban areas.

A general conclusion drawn from our research and highlighted by many of the leading environmental organizations is that the NPS must engage with urban communities to establish positive lifelong connections between Americans and their national parks, trails, waterways, and natural and cultural heritage. In addition, the NPS should take a leadership role to help address barriers between communities and parks and open space. This may involve many federal partners including HUD, EPA, DOT as well as the USFS, BLM, USFWS, and the Corps of Engineers. Together the NPS, its partners, sister agencies, stakeholders and community members can play a

significant role in ensuring that densely populated diverse communities across the country have access to parks and open spaces and become mobilized to support these assets.

The urban context provides an especially important opportunity to consider the wide range of NPS programs and authorities as well as individual “units.” The Rivers, Trails, and Conservation Assistance Program is most often identified as the leading candidate for NPS engagement in urban areas. Several historic preservation programs such as the National Register and National Historic Landmarks, and the Historic American Buildings Survey, Historic American Engineering Record, and Historic American Landscapes Survey may be equally valuable for creating community connections. Many national heritage areas have also proved to be especially effective in engaging urban populations.

There is no broadly accepted standard for what type of services should be provided by the National Park Service in metropolitan areas where the need for access to parks and open space is the greatest. A new system plan should outline how “adequacy” in access to nationally important resources, including cultural sites as well as natural areas and recreational opportunities should be determined.

The NPS has some presence in reasonable proximity to 40 of the 50 largest metropolitan areas. There are 10 major metropolitan areas where no NPS unit is located within 50 miles. This finding suggests one possible approach to prioritizing attention on those areas lacking any easy access to a NPS site. However, consideration also should be given to the limited capacity of most existing NPS sites to meet urban population needs and interests. Proximity also does not necessarily mean that access is available for many urban residents who do not necessarily have a car. Evaluations of accessibility need to consider opportunities for public transportation as well as potential social and economic obstacles that prevent urban residents from having realistic access to NPS units, landmarks, or similar sites.

The NPS should continue and expand current initiatives to create an urban parks community of practice and other institutional capacity to communicate about what works and what needs improvement among staff that operate in the urban context. The complexity and interrelated components of urban issues call for synchronized and leveraged efforts between agencies and departments and the NPS should work together in collaboration with other federal departments, agencies within the Department of the Interior, state and local governments, and as many public and private partners as possible in order to be successful. We recognize that the City Parks Alliance has been making substantial contributions to communication within agencies and across agency lines.

The NPS also should have a relatively permanent presence in program offices located in urban areas as a complement or supplement to the potential for creating new units. A program office could be an extension of the current NPS regional offices, not be limited to one specific activity or project, and provide a gateway to the entire range of NPS capabilities to meet community needs. The NPS also could collaborate with other agencies and organizations to establish urban service centers that build on existing institutions and leverage existing programs

The NPS should review its inventory of completed special resource studies and focus attention on following up within available authorities or propose new designations for those that could leverage community support and cooperation with other agencies, especially in urban areas.

The NPS Advisory Board is encouraged to establish a committee on urban engagement to recommend additional steps for developing and improving NPS recognition and presence in our metropolitan areas.

A detailed report by committee members Belinda Faustinos, Ed Reyes, and Jennifer Wolch on opportunities for improving access and equity for urban populations appears as Appendix F.

5.0 Build Institutional Capacity in the NPS for Systems Planning and Partnerships

Transformational change on the scale we have proposed requires a significant investment in human capital. The NPS needs to develop the institutional capacity to perform in a highly complex environment, including managing networks of partners and stakeholders, and adapting to new and evolving environmental challenges. This will require that the NPS pay careful attention to its workforce, including recruiting, mentoring, retention, skill enhancement, and career development. The NPS will also have to devote resources to training and education for managers, supervisors, and staff at all levels. Workplace training and education are complementary. Training focuses on specific task requirements, whereas education prepares employees to anticipate and deal with future or unknown challenges. Preparing for unknown challenges is especially important for the NPS because it will develop an overall capacity for flexibility and responsiveness.

The NPS already enjoys high levels of dedication and mission-focus among its current workforce. It will need to invest additional resources to promote greater agility and crosscutting skills in the workforce. Government agencies that have successfully achieved transformational change include the Internal Revenue Service (IRS), the Defense Logistics Agency (DLA), and the U.S. Government Accountability Office (GAO). In all three cases, the organizations shifted financial resources into training, and were able to produce substantial returns through this investment. For example, DLA quadrupled its training budget to introduce managerial, supervisory, technical, leadership and general transformation training. This led to much higher customer and employee satisfaction, at the same time that costs were cut in half, attrition dropped from 17 percent to 2 percent, and efficiencies (such as the time to hire new personnel) were improved by 50 percent. Similar results were obtained at IRS and GAO. The challenge for the NPS will be to set aside and retain funding for investing in human capital, during a period of budget austerity in Washington, DC.

The NPS currently has a park planning office and a strategic planning function, but neither of these offices is designed to undertake planning for the system as described above. The park planning program with a staff of four in the Washington, DC, office is focused on development of plans for individual parks and congressionally directed studies of potential new designations. The strategic planning function now works as part of the NPS budget office on performance management as required by the Government Performance and Results Act (GPRA). There is currently no staff capacity focused on looking at the “big picture” long-range direction for the NPS as a whole.

We recommend that the NPS dedicate a cadre of staff to the system planning function. These would include representatives of various program areas including natural and cultural resources as well as the conservation and historic preservation assistance programs. Many of these programs are currently represented in the Planning Leadership Group, which could be strengthened to provide more active engagement and dedicated staff support. Such a planning function would develop an initial plan, not as a one-time project, but as a continuing process to engage in the entire range of ongoing planning efforts.

One goal for a planning function that is really strategic and considers the entire system is to encourage each park unit and program to communicate that it is linked to the rest of the NPS and that its effectiveness will be leveraged if there is coordination. This will require a substantial shift in the way park and program managers think about their mission and how interpretive programming is targeted.

National Park Service leadership needs to continue to encourage innovation by building an administrative environment that supports and rewards creativity.

The current legal framework for competitive grants and cooperative agreements should be critically examined and legislative remedies should be considered as necessary to allow NPS some of the same flexibility available to other agencies. The NPS also should encourage the advancement of staff who have the capacity to develop and sustain partnerships, and invest in the training and evaluation of personnel to improve their collaborative and cooperative management skills.

The NPS also should cooperate with non-profit organizations such as The Nature Conservancy, the National Parks Conservation Association, and the National Trust for Historic Preservation along with and other federal agencies and the landscape conservation cooperatives in identifying priorities for protection.

A substantial amount of local interest in the creation of new units managed by NPS is based on the anticipation of increases in visitation and economic benefits of heritage tourism. Creation of a new NPS unit or changing the designation of an existing unit from a monument to a national park may generate some initial press coverage and increased visitation but this is not necessarily sustainable over time. The NPS should have a broader range of tools to assist local sites and governments in efforts to attract and sustain heritage and ecological based tourism. Building on the experience with National Register travel itineraries, the NPS should cooperate with the National Trust and other organizations to help communities “market” their heritage resources without necessarily creating long-term management responsibilities. This could include improved cooperation with state tourism initiatives to link natural areas, programs to recognize historic sites where tangible resources may be limited, and use new technologies for interpretation.

Creation of a new NPS unit or other designation also often comes with high anticipation of federal staffing and investments for facilities or programs. The NPS needs to communicate realistic constraints on its ability to start up management of new areas in light of competing

demands for operating existing responsibilities. This may mean that NPS will need to manage expectations and clearly explain that new responsibilities may not be implemented until some point in the future when adequate funding and staff are available.

6.0 Conclusion: Connections for a System of NPS Units and Programs

In times of fiscal constraint, suggestions abound about concentrating on the NPS “core mission” of operating the parks, and questions are raised about the wisdom of spending funds on programs beyond park operations. The NPS mission is often described as “preservation of the parks unimpaired for the enjoyment of present and future generations.” Cooperation beyond park boundaries and with partners can appear as an additional responsibility when, in fact, it is essential to the agency’s conservation mission and should be recognized as a great opportunity for the NPS to build new support and be more effective.

We envision the 21st-century National Park Service as an agency in which connections are paramount: connections within landscapes, such as national heritage areas; connections across landscapes, such as wildlife corridors; connections among programs and units; and connections with communities and with partners. The NPS should be the convener, catalyst, and collaborator with citizens groups and other government agencies. Only by using its skills to promote and cultivate an ethic of stewardship and civic engagement throughout the nation will the NPS succeed in protecting national parks and in building broad support for conservation. We recommend that the NPS make every available effort to communicate internally and to the public that its park management and “partnership” responsibilities are both connected and united.

Conservation of our parks for the benefit of present and future generations depends on the cultivation of a stewardship ethic and civic engagement throughout the nation, not just among park visitors and a park’s immediate neighbors. The NPS cannot protect the parks without a strong constituency reflecting all dimensions of the public. The founders of the NPS recognized that inviting people into the parks to enjoy the resources was an essential part of the strategy for protecting those resources. We similarly encourage the NPS to highlight the ability of its many programs to build support for park protection. In doing so, the national park experiences that ensue will help build support for wider conservation initiatives that will strengthen communities, sustain large landscapes, ensure quality of life, and ultimately preserve the values represented in our National Park System.

SUMMARY OF MAJOR RECOMMENDATIONS

Create an Integrated System to More Fully Represent the Breadth of America's Heritage

1. The NPS should expand efforts to communicate with the public that an integrated system of units and programs provides a wide range of benefits supporting national priorities including job creation, public health, education, civic engagement, and environmental quality.
2. The NPS should build on the experience of the American Latino Heritage initiative and continue to conduct historic context and theme studies that will provide the basis for evaluation of additional national historic landmarks, national heritage areas, NPS units and other designations to tell the whole American story. Opportunities to increase representation of histories not now well covered include migration and immigration, industry and manufacturing, labor, arts, science and technology, Latinos, African Americans, Asian Americans, and other minorities. A theme study of conservation history would be especially timely before the NPS centennial in 2016.
3. The NPS should apply the classification systems and mapping tools available through USGS and other sources discussed in the natural resources subcommittee report to identify gaps in natural resource representation, focusing especially on opportunities to improve habitat connectivity, to leverage additional protection in large landscape-scale conservation efforts and to employ restoration strategies. For cultural resources the NPS framework of 1994 should provide the basis for identifying gaps, with special attention to grassroots inputs.
4. The NPS should update guidelines for applying criteria for significance, suitability, feasibility, and management alternatives considering new park and partnership models. Updates should reflect contemporary ideas about representation, redundancy, resilience, and restoration for natural areas. For cultural resources, efforts should continue to update guidance about integrity, history within the past 50 years and intangible resources.
5. New technologies should be used to provide linkages among NPS units, connections with other protected areas, and with museums or academic institutions. The NPS should also use contemporary technology including internet and cell phones to inform the public about the complexities of natural and cultural history. New technologies can be effective tools for interpreting complexity. Many sites recognized for a specific event can offer stories of multiple ethnic groups, not just for one reference. Many sites within the NPS can be correlated. Interpretation of natural areas can illustrate the implications of climate change and the importance of wildlife migration corridors as well as the interaction of human history with the natural environment.
6. The NPS should build upon its distinctive role and high public regard as steward of our most iconic natural treasures and cultural sites. The NPS should highlight its potential urban and educational capabilities for engaging the public and encouraging a stewardship ethic.

7. The NPS should develop a broader range of tools to assist the private sector and local governments in partnership efforts to attract and sustain ecological and heritage based tourism without necessarily creating additional long-term NPS management responsibilities.
8. The NPS should embrace a flexible approach to management partnerships. However, NPS should support new unit designations that involve a mix of ownerships only where NPS has a land base or adequate authority and capacity to assure consistency with NPS management policies.

Engage in Large Landscape-Scale Conservation

9. The NPS presence is often a cornerstone in large landscapes. The NPS should work with the Secretary of the Interior and Congress to pursue new designations and authorities designed to support large landscape-scale conservation and to better enable parks to address the challenges of a changing environment, including habitat connectivity. Specific outcomes might include a new federal interagency planning and management directive and/or a new National Conservation Network Law that acknowledges the systemic and interconnected character of our various protected areas, the high standards of NPS protection, and promotes interagency planning and management.
10. The NPS should encourage consistency in park leadership to sustain the relationships needed for successful long-term partnerships. Where leadership changes are essential, park managers should seek to institutionalize agreements, processes, and plans with neighbors, and also invite non-profit partners to help with a transition strategy. The NPS should improve training and communication for staff to be successful in developing and sustaining partnerships with communities and to work effectively on a large landscape scale to conserve natural and cultural resources.
11. The NPS should continue to seek authorization for a system of national heritage areas, and develop guidelines for encouraging these designations as a collaborative tool for protecting natural and cultural resources. National heritage areas should be recognized as a part of the National Park Service “family” with a consistent place in the NPS budget and in information distributed to the public about the National Park System.

Expand Connections with Urban Populations

12. The NPS should have a relatively permanent presence in program offices located in urban areas as a complement or supplement to the potential for creating new units. These program offices should enhance efforts to leverage cooperation with other federal agencies, states, and the private sector to meet the park, recreation, and historic site interests of urban communities.

13. The NPS should review the inventory of completed studies that might address opportunities for improved urban engagement and recommend priorities for future studies of potential new units or for other designations and the broad range of NPS assistance programs focusing on urban populations.
14. The NPS should continue work to develop a community of practice to build staff capacity to work effectively in the urban context.
15. The National Park System Advisory Board is encouraged to establish a committee on urban engagement to implement these recommendations and to identify additional steps for developing and improving NPS recognition and presence in our metropolitan areas.

Develop Institutional Capacity in NPS for Systems Planning and Partnerships

16. The NPS should develop institutional capacity including a dedicated staff for system planning and proceed immediately to coordinate with work in progress by the U.S. Fish and Wildlife Service, as well as the states, other federal agencies, and the private sector. The NPS should pursue system planning that is expansive in scale, adaptive and dynamic; it should be an ongoing activity that helps integrate NPS units with its program responsibilities. It should provide a framework that encourages input from community groups and national organizations.
17. The NPS should undertake a comprehensive review of the current legal and administrative requirements for partnerships, grants, and cooperative agreements, and seek to streamline those processes with policy or legislative changes as necessary. The NPS should provide training, evaluation incentives, and career development opportunities to enhance staff capacity for supporting effective partnerships.
18. The NPS should be proactive and cooperate with non-profit organizations, other federal agencies, and the landscape conservation cooperatives to identify priorities for protection. The NPS should continuously look for strategic opportunities to support effective conservation on a large landscape scale considering ecological as well as community connections.

**National Park System Advisory Board
PLANNING COMMITTEE**

COMMITTEE CHAIR

Gretchen Long

Member, National Park System Advisory Board
Past Chair, Board of Trustees, and Trustee Emeritus, National Parks Conservation Association

MEMBERS

Belinda Faustinos

Member, National Park System Advisory Board
Executive Officer, San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy
(retired)

Laura Feller, Ph.D.

Historian, National Park Service (retired)

Michael V. Finley

President, Turner Foundation

Denis P. Galvin

Former Deputy Director, National Park Service

Craig Groves, Ph.D

Director, Conservation Methods Team
The Nature Conservancy

Annie C. Harris

Executive Director, Essex National Heritage Area

Jodi A. Hilty, Ph.D.

Director, North America Program
Wildlife Conservation Society

Professor Robert B. Keiter

Wallace Stegner Distinguished Professor of Law and Director, Wallace Stegner Center for Land, Resources and the Environment; S.J. Quinney College of Law, University of Utah

Honorable Tony Knowles

Chairman, National Park System Advisory Board

Pamela A. Matson, Ph.D.

Chester Naramore Dean, School of Earth Sciences
Stanford University

Dwight T. Pitcaithley, Ph.D.

Professor, Department of History,
New Mexico State University

Raymond Rast, Ph.D.

Assistant Professor, Department of History
California State University, Fullerton

Honorable Ed P. Reyes

Council Member, Los Angeles City Council

J. Michael Scott, Ph.D.

Professor, Department of Fish and Wildlife
College of Natural Resources, University of Idaho

Quintard Taylor, Jr., Ph.D.

Scott and Dorothy Bullitt Professor of American History
University of Washington

Jennifer Wolch, PhD.

Dean, College of Environmental Design
University of California, Berkeley

STAFF

Warren Lee Brown

Former Chief, Park Planning and Special Studies
National Park Service

**National Park System Advisory Board
Planning Committee Report
References**

Alliance of National Heritage Areas, *National Heritage Areas and the National Park Service: Protecting Investment and Sustaining a Public-Private Partnership for the Future*, white paper.

Alliance of National Heritage Areas, *Annual Report 2010*.

Anderson, M.G. and A. Olivero Sheldon, *Conservation Status of Fish, Wildlife, and Natural Habitats in the Northeast Landscape: Implementation of the Northeast Monitoring Framework*, The Nature Conservancy 2011.

Barrett, Brenda, *National Heritage Areas: Developing a Model for Measuring Success*, 2004 US/ICOMOS International Symposium, Natchitoches, Louisiana.

Barrett, Brenda, "How to Treasure a Landscape: What is the Role of the National Park Service?" *CRM: The Journal of Heritage Stewardship*, vol. 7, no. 1, Winter 2010.

Barrett, Brenda, "Roots for the National Heritage Area Family Tree," *The George Wright Forum*, 2003.

Belize Ministry of Natural Resources and Environment, *The Belize National Protected Areas System Plan (2005)*.

Brown, Warren Lee, *New National Parks for the Next Century*, Proceedings of the 2009 George Wright Society Conference.

Chandler, William J., *The Future of the National Marine Sanctuaries Act in the Twenty-first Century*, May, 2006.

Chandler, William and Hannah Gillelan, *The Makings of the National Marine Sanctuaries Act A Legislative History and Analysis*, Marine Conservation Biology Institute, 2005.

Colorado Office of Archaeology and Historic Preservation, *History Colorado: The Power of Heritage and Place: A 2020 Action Plan to Advance Preservation in Colorado*.

Comer, P., et. al, *Ecological Systems of the United States: A Working Classification of U.S. Terrestrial Systems*, NatureServe, Arlington, Virginia, 2003.

Conservation Study Institute, *Collaboration and Conservation: Lessons Learned in Areas Managed through National Park Service Partnerships*, 2001.

Conservation Study Institute, *Collaboration and Conservation: Lessons Learned from National Park Service Partnership Areas in the Western United States*, 2003.

Conservation Study Institute, *Leading in a Collaborative Environment: Six Case Studies Involving Collaboration and Civic Engagement* by NPS, 2010.

Davey Adrian G., *World Commission on Protected Areas (WCPA, National System Planning for Protected Areas*, 1998.

Frenchman, Dennis, and Jonathan S. Lane, Discussion, *Assessment of Preservation and Development in Lowell National Historical Park at its 30-Year Anniversary*, Heritage Preservation and Development white paper.

Harvard Forest, *Wildlands and Woodlands: A Vision for the New England Landscape*, Harvard University, 2010.

Hawaii State Historic Preservation Division, *State Historic Preservation Plan Best Practices Report*, (SMS Consultants).

Prola, Rosemary, *Best Practices in Heritage Development from the National Heritage Areas*, white paper for National Park Service and National Alliance of Heritage Areas, 2005.

Kohnen Anna, *Gap Analysis of the Theme “Expressing Cultural Values” within the NPS Revised Thematic Framework*, National Parks Conservation Association white paper.

Lausche, Barbara, *Guidelines for Protected Areas Legislation*, IUCN Environmental Policy and Law Paper No. 81.

Lemieux, Christopher J. et. al, “Climate change, biodiversity conservation and protected area planning in Canada,” *The Canadian Geographer* 49, no 4 (2005).

Lincoln Institute of Land Policy, *Large Landscape Conservation: A Strategic Framework for Policy and Action*, 2010.

Marris, Emma, *Rambunctious Garden: Saving Nature in a Post-Wild World*, Bloomsbury USA, 2011.

McNamee Kevin, *Filling in the Gaps: Establishing New National Parks*, *The George Wright Forum*, vol. 27, no. 2, pp. 142–150 (2010).

Maybury, Kathleen P., editor, *Seeing the Forest and the Trees: Ecological Classification for Conservation*, The Nature Conservancy, 1999.

Mitchell, Brent, *International Models of Protected Landscapes*, *The George Wright Forum*, Vol. 20, no. 2, 2003.

Noss, Reed et. al, *Bolder Thinking for Conservation*, *Conservation Biology*, vol. 26, no. 1, 2012.

Ostola Larry, *Parks Canada’s National Historic Sites: Past, Present, and Future*, *The George Wright Forum*, vol. 27, no. 2, pp. 161–169 (2010).

Parks Australia, *Australia's Strategy for A National Reserve System, 2009-2030*.

Parks Canada, *System Plan*, <http://www.pc.gc.ca/eng/docs/v-g/nation/index.aspx>.

Parks Victoria, *Linking People and Spaces*, 2002.

Parks Victoria, *Victoria's System of Marine National Parks and Marine Sanctuaries Management Strategy, 2003-2010*.

Pennsylvania Historical and Museum Commission, *Pennsylvania's Statewide Historic Preservation Plan, 2012–2017*.

Phillips, Adrian, *Turning Ideas on Their Head: The New Paradigm for Protected Areas*, *The George Wright Forum*, vol. 20, no. 2, 2003.

Queensland Parks and Wildlife Service, *Master Plan for Queensland's Park System (Australia)*, 2001.

Sayre, Roger, et. al, *USGS-NPCA Ecosystem Gap Analysis 2012*, National Parks Conservation Association, (unpublished paper).

Seney Joe, *New Horizons for Cooperative Management and Collaborative Partnerships: Redwood National and State Parks, California, 1994–2010*, Proceedings of the 2011 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites.

Spence Christie et al, *Managing for Results: Parks Canada's Approach to Planning, Monitoring, and Reporting*, Proceedings of the 2011 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites.

Sprinkle, John H. Jr., "An Orderly, Balanced, and, Comprehensive Panorama of American History:" Filling Thematic Gaps within the National Park System," *The George Wright Forum*, vol. 27, no. 3, pp. 269–279 (2010).

The Nature Conservancy, *Planning for Tomorrow's Challenges: Recommendations of the Planning Evolution Team 2011*.

The Nature Conservancy, *Conservation By Design*, November 2006.

The Trust for Public Land. *2011 City Park Facts*.

Tweed, William C, *Uncertain Path: A Search for the Future of National Parks*, University of California Press 2011.

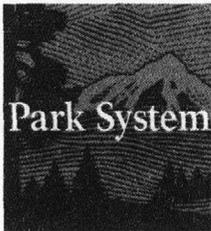
U. S. Fish and Wildlife Service, *Conserving the Future Wildlife Refuges and the Next Generation: The National Wildlife Refuge System*, Department of the Interior, October 2011.

U.S. National Park Service, Park Planning and Special Studies, *Protected Landscapes*, White Paper.

U.S National Park Service, *Report on Criteria for Affiliated Areas: Submitted to the Committee on Interior and Insular Affairs House of Representatives and the Committee on Energy and Natural Resources*, Pursuant to PL 100-336; National Park Service, February 1990.

U.S. National Park Service, *Roles in Urban Areas — Case Studies: San Gabriel Watershed and Mountains Special Resource Study*, Feb 2006.

National Park System Advisory Board



Citizen advisors chartered by Congress to help the National Park Service care for special places saved by the American people so that all may experience our heritage.

Appendix A

Where the Parks Are (And Are Not): A Comparative Analysis By State

National Park System Advisory Board

Planning Committee

November 2012

**National Park System Advisory Board
Planning Committee
Where the Parks Are (And Are Not): A Comparative Analysis By State
Denis P. Galvin**

In confirming the recommendation of the Second Century Commission that the growth of the national park system in the 21st Century should be guided by a plan, the Planning Committee of the National Park Advisory Board has had the opportunity to delve into

some of the details of the proposed plan. Director Jon Jarvis has asked the Board and Committee to identify gaps in the current system as precursor to such a plan. The Call to Action describes, "... a comprehensive National Park System plan that delineates the ecological regions, cultural themes, and stories of diverse communities that are not currently protected and interpreted." (Call to Action, page 9)

The Planning Committee is addressing this task in a variety of ways. Sub groups are looking at natural and cultural resources, large landscapes, urban opportunities, and increasing the diversity of park visitors.

One of the starting points for such an inquiry is a description of the existing National Park System. The Committee is also using a variety of techniques to characterize the system. This paper looks at the distribution of the system by state. Recognizing that resources do not adhere to state boundaries, it remains true that there is a considerable amount of data organized on state lines. The purpose of this analysis is to mine that data for insights into the current system.

To start with we looked at the distribution of park acreage. Subsequent analyses attempt to weight other factors in the distribution.

3.5% of the United States is occupied by national park areas, excluding Alaska the number becomes 1.5%

Using acreage as a measure the system is heavily western. If Alaska is included 91.0% of the system is west of the 98th meridian (roughly the eastern boundary of Colorado). If Alaska and Hawaii are excluded 72.6% is west of that line.

Next we looked at the state by state distribution of national parks by dividing park acreage by the total area of each state. (Since parks exist outside of the 50 states those units have been included, for a total of 55 analyzed units). Table 1 clusters the results in descending order.

TABLE ONE

States where NPS areas comprise more than 10% of the total area, (4):

Virgin Islands (5 units, 55.8%); American Samoa (1 unit, 18.2%); District of Columbia (18 units, 15.8%); Alaska (16 units, 12.8%).

States where NPS units comprise more than 5% of the total area, (4):
California (24 units, 7.8%); Florida (11 units, 6.3%); Hawaii (7 units, 5.3%); New Mexico (13 units, 5.0%).

States where NPS units comprise more than 1% of the total area, (14):
Washington (11 units, 4.3%); Arizona (20 units, 4.1%); Utah (12 units, 3.9%); Wyoming (6 units, 3.8%); Michigan (4 units, 2.0%); New Jersey (3 units, 1.8%); Guam (1 unit, 1.5%); Montana (5 units, 1.4%); Tennessee (7 units, 1.4%); Virginia (15 units, 1.3%); North Carolina (8 units, 1.2%); Nevada (2 units, 1.1%); Colorado (10 units, 1.0%); Idaho (5 units, 1.0%).

States where NPS units comprise more than 0.5% of the total area, (7):
Massachusetts (14 units, 0.9%); Maryland (13 units, 0.9%); Texas (13 units, 0.7%); West Virginia (4 units, 0.6%); South Dakota (5 units, 0.6%); Pennsylvania (16 units, 0.5%); Minnesota (4 units, 0.5%).

States where NPS units comprise more than 0.1% of the total area, (16):
Kentucky (3 units, 0.4%); Mississippi (7 units, 0.4%); Maine (2 units, 0.4%); New Hampshire (1 unit, 0.4%); Vermont (1 unit, 0.4%); Arkansas (6 units, 0.3%); Oregon (4 units, 0.3%); Wisconsin (2 units, 0.3%); Missouri (6 units, 0.2%); New York (19 units, 0.2%); North Dakota (3 units, 0.2%); South Carolina (6 units, 0.2%); Georgia (10 units, 0.2%); Connecticut (1 unit, 0.2%); Nebraska (5 units, 0.1%); Ohio (7 units, 0.1%).

States where NPS units comprise less than 0.1% of the total area, (10):
Louisiana (4 units, 0.07%); Indiana (3 units, 0.07%); Alabama (5 units, 0.06%), Kansas (4 units, 0.02%); Oklahoma (2 units, 0.02%); Iowa (2 units, 0.01%); Illinois (1 unit, 0.0%); Puerto Rico (1 unit, 0.0%); Rhode Island (1 unit, 0.0%); Delaware (0 units, 0%).

Park acreage is from the “Statistical Abstract of the United States 2011-2012, Department of Commerce, Table 1253”, (2009 data). State areas (land and water) were taken from “The World Almanac and Book of Facts 2012”. Park units counted from the “National Park Index 2010”.

RESULTS OF % ACREAGE COMPARISON

Recognizing that using only acreage as a measure has its shortcomings, it is still apparent that the National Park System is unevenly distributed among the states. If one arbitrarily assigned the standard that 1 % of the area of each state should be set aside as national parks, 33 states (and territories) would fall short. All of those states, except Oregon, are east of the 98th meridian.

ADDITIONAL FACTORS

In our subsequent analysis we looked at additional factors in assessing the distribution of the National Parks System among the states.

Factor 1

We simply ranked the results from Table one from one to fifty five. The Virgin Islands at 55.8% is first, Delaware at 0% is fifty five.

Factor 2

We divided the population of the state by the national park acreage. This attempts to measure the equity of access among the states. In Alaska the number is 0.01, that is every person in Alaska has 100 acres of national park area. It ranks first of 55. In Illinois there are 987,000 people for every acre of national park. It ranks 54th of 55.

Factor 3

We divided recreation visits by the population of the state. This gives weight to a non-acreage factor that would value urban parks and cultural areas that are small but well visited. It is also an indicator of economic impact. The District of Columbia with 59.29 recreation visits per capita is first of 55. Wyoming with 10.45 visits per capita is second. Connecticut with 0.01 (1 recreation visit per 100 state residents) is 54th.

Factor 4

We summed the total acreage of national parks, national forest, national wildlife refuges, and state parks expressed as a percentage of state area. This attempts to recognize that other forms of protection and recreation can affect the opportunity of individuals to access public lands. The top five states (or territories) in this ranking were: Virgin Islands (56.5%), Idaho (39.3%), Alaska (36.8%), California (33.9%), and Oregon (26.4%). The 53rd to 55th rankings were: Rhode Island (1.2%), Iowa (0.5%), and Kansas (0.4%).

Data Sources

Acreage of national parks by state: Statistical Abstract, Table 1253, op. cit.

Acreage of the states and territories: The World Almanac, op. cit.

Population of the states and territories: The World Almanac.

National park recreation visits by state: Statistical Abstract, Table 1253.

Acreage of national forests by state: Statistical Abstract, Table 869, (2006 data).

Acreage of national wildlife refuges by state: Annual Report of Lands Under Control of the Fish and Wildlife Service, (FY 2011).

Acreage of state parks by state: Statistical Abstract, Table 1252, (2007 data).

Factor 5

We averaged Factors 1 through 4 by ranking, and ranked the averages from 1 to 55. Some examples:

Virgin Islands: Factor 1 (55.8%, rank 1); Factor 2 (2.2, rank 6); Factor 3 (6.02, rank 3); Factor 4 (56.5%, rank 1); Factor 5, average of Factors 1 to 4 ranked against other states ($1+6+3+1=11$, 11 divided by 4 = 2.75, ranks 1 among 55).

Wyoming: Factor 1 (3.8%, rank 12); Factor 2 (0.2, rank 2); Factor 3 (10.45, rank 2); Factor 4 (19.0, rank 12); Factor 5 ($12+2+2+12=28$, $28/4=7$, ranks 2 among 55).

Tennessee: Factor 1 (1.4%, rank 16); Factor 2 (16.5, rank 20); Factor 3 (1.27, rank 17); Factor 4 (5.1%, rank 33T); Factor 5 (16+20+17+33=86, 86/4=21.50, ranks 20 among 55).

Missouri: Factor 1 (0.2%, rank 40); Factor 2 (71.7, rank 34); Factor 3 (0.66, rank 29); Factor 4 (4.0%, rank 30T); Factor 5 (40+34+29+39=142, 142/4=35.50, ranks 38 among 55).

Illinois: Factor 1 (0.0003%, rank 54); Factor 2 (987,000, rank 54); Factor 3 (0.0362, rank 51); Factor 4 (2.5%, rank 46); Factor 5 (54+54+51+46=205, 205/4=51.25, ranks 53 among 55).

Using the Factor 5 rankings the states align like this:

Top third (19)	Middle third (18)	Bottom third (18)
Virgin Islands	Tennessee	Missouri
Alaska	North Carolina	Wisconsin
Wyoming	Michigan	New York
Utah	West Virginia	Georgia
Montana	New Jersey	South Carolina
Arizona	Oregon	Nebraska
California	Mississippi	Connecticut
Washington	Arkansas	Alabama
Hawaii	Massachusetts	Louisiana
New Mexico	North Dakota	Indiana
District of Columbia	Minnesota	Ohio
Nevada	Maine	Oklahoma
South Dakota	Vermont	Puerto Rico
Colorado	Maryland	Kansas
Florida	Texas	Iowa
Idaho	New Hampshire	Illinois
Virginia	Pennsylvania	Rhode Island
Guam	Kentucky	Delaware
American Samoa		

CONCLUSION

In spite of the attempt to select measuring factors that diversify the results, the rankings display a decided western orientation. Twelve of the top 19 rankings go to states west of the 98th meridian. Only three eastern states are in that grouping; the District of Columbia (technically not a state), Virginia, and Florida.

By contrast, all of the states in the bottom third are east of the 98th meridian.

It is not clear what the implications of this analysis are for the future growth of the national park system, but if equity of access and distribution are factored in to the objectives for a future system, more growth in the lower ranked states ought to be considered.

Since these are not public land states, additions based on less than fee ownership are likely to become more common. Indeed, the growth of National Heritage Areas is something of a contrast to the distribution of national parks examined here. Of the 49 Heritage areas listed in the NPS FY 2013 Budget Request, 20 are in states listed in the bottom third, an additional 25 are in the middle third, 11 are in the top third. (The total adds to more than 49 because of multi state National Heritage Areas.) Perhaps Congress has used this legislative approach as a partial solution to spreading the benefits of the national park idea more evenly.

A STATISTICAL APPENDIX TO WHERE THE PARKS ARE (AND ARE NOT)

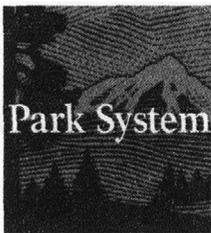
	% NP/ST	POP/NP	VIS/POP	% PUB.L
ALABAM	0.067 RANK 47	210 RANK 44	0.1652 RANK 40	4.3 RANK 37
ALASKA	12.8 RANK 4	0.01 RANK 1	3.21 RANK 6	36.8 RANK 3
ARIZONA	4.1 RANK 10	2.16 RANK 5	1.68 RANK 14	22.0 RANK 9
ARKANS	0.308 RANK 37	27.8 RANK 29	1.04 RANK 20	9.2 RANK 22
CALIFOR	07.8 RANK 5	4.59 RANK 12	0.95 RANK 22	33.9 RANK 4
COLORA	1.01 RANK 21	7.46 RANK 16	1.08 RANK 19	26.0 RANK 6
CONNECT	0.221 RANK 38	481 RANK 50	0.01 RANK 54	6.7 RANK 28
DELAWA	0 RANK 55	0 RANK 55	0 RANK 55	3.3 RANK 43
D.COLUM	15.8 RANK 3	84.8 RANK 37	59.3 RANK 1	15.8 RANK 16
FLORIDA	6.3 RANK 6	7.1 RANK 15	0.51 RANK 31	13.0 RANK17
GEORGIA	0.165 RANK 41	154.0 RANK 42	0.67 RANK 27	4.0 RANK 39T
HAWAII	5.3 RANK 7	3.68 RANK 11	3.17 RANK 8	9.4 RANK 21
IDAHO	0.96 RANK 22	3.0 RANK 8	0.3152 RANK 36	39.3 RANK 2
ILLINOIS	0.0 RANK 54	987,000 RANK 54	0.0362 RANK 51	2.5 RANK 46
INDIANA	0.066 RANK 48	421 RANK 49	0.34 RANK 33	2.1 RANK 47

	% NP ACRES	POP/ NPACRE	VISITS/ POP	%PUB. LANDS
IOWA	0.007 RANK 51	1128 RANK 51	0.0791 RANK 46	0.5 RANK 54
KANSAS	0.022 RANK 50	245.9 RANK 45	0.0358 RANK 52	0.4 RANK 55
KENTUCK	0.37 RANK 33	45.5 RANK 32	0.42 RANK32	3.7 RANK41T
LOUISIAN	0.072 RANK 46	188.1 RANK 43	0.10 RANK 44	3.7 RANK 41T
MAINE	0.4 RANK 30	14.7 RANK 19	1.68 RANK 13	1.3 RANK 52
MARYLA	0.92 RANK 23	78.7 RANK 35	0.60 RANK 30	3.2 RANK 44T
MASSAC	0.85 RANK 24	113.1 RANK 40	1.49 RANK 15	6.2 RANK 32
MICHIGA	2.0 RANK 13	13.8 RANK 18	0.16 RANK 41	11.0 RANK 19
MINNESO	0.54 RANK 28	17.6 RANK 21	0.12 RANK 43	7.2 RANK 27
MISSISSIP	0.38 RANK 31	25.0 RANK 27	2.22 RANK 10	5.0 RANK 35
MISSOURI	0.186 RANK 40	71.7 RANK 34	0.66 RANK 29	4.0 RANK 39T
MONTAN	1.4 RANK 17	0.8 RANK 3	4.24 RANK 5	21.1 RANK 10
NEBRASK	0.092 RANK 45	40.0 RANK 30	0.15 RANK 42	4.8 RANK36
NEVADA	1.09 RANK 20	3.5 RANK 10	2.16 RANK 11	12.8 RANK 18

	%NP ACRES	POP/ NPACRE	VISITS/ POP	% PUB LANDS
NHAMPS	0.36 RANK 34	60.1 RANK 33	0.03 RANK 53	17.0 RANK 15
NJERSEY	1.8 RANK 14	88.6 RANK 38	0.66 RANK 28	10.9 RANK 20
NMEXICO	5.0 RANK 8	5.3 RANK 13	0.81 RANK 25	22.2 RANK 8
NEWYOR	0.2 RANK 39	266.5 RANK 46	0.89 RANK 24	4.2 RANK 38
NCAROLI	1.2 RANK 19	23.5 RANK 26	1.91 RANK 12	6.6 RANK 30
NDAKOT	0.160 RANK 42	9.3 RANK 17	0.94 RANK 23	6.7 RANK 29
OHIO	0.118 RANK 44	338.3 RANK 47	0.25 RANK 38	1.5 RANK 49T
OKLAHO	0.023 RANK 49	367.7 RANK 48	0.33 RANK 34	1.5 RANK 49T
OREGON	0.316 RANK 36	19.2 RANK 22	0.23 RANK 39	26.4 RANK 5
PENNSYL	0.46 RANK 29	92.2 RANK 39	0.70 RANK 26	3.2 RANK 44T
RHODEIS	0.00048 RANK 52	210,400 RANK 53	0.05 RANK 49	1.2 RANK 53
SCAROLI	0.159 RANK 43	141.9 RANK 41	0.33 RANK 35	6.5 RANK 31
SDAKOTA	0.602 RANK 26	2.8 RANK 7	5.08 RANK 4	8.1 RANK 25
TENNESS	1.4 RANK 16	16.5 RANK 20	1.27 RANK 17	5.1 RANK 33T

	%NP ACRES	POP/ NPACRES	VISITS/ POP	%PUB LANDS
TEXAS	0.7 RANK 25	20.2 RANK 24	0.28 RANK 37	1.7 RANK 48
UTAH	3.9 RANK 11	1.3 RANK 4	3.17 RANK 7	21.0 RANK 11
VERMON	0.38 RANK 32	27.0 RANK 28	0.05 RANK 48	8.5 RANK 23T
VIRGINIA	1.3 RANK 18	22.0 RANK 25	2.87 RANK 9	8.0 RANK 26
WASHING	4.3 RANK 9	3.4 RANK 9	1.12 RANK 18	25.7 RANK 7
WVIRGINI	0.6 RANK27	20.0 RANK 23	0.97 RANK 21	8.5 RANK 23T
WISCONS	0.3 RANK 35	42.5 RANK 31	0.08 RANK 45	5.1 RANK 33T
WYOMNG	3.8 RANK 12	0.2 RANK 2	10.45 RANK 2	19.0 RANK 12
AMSAMO	18.2 RANK 2	6.2 RANK 14	0.04 RANK 50	18.2 RANK 14
GUAM	1.5 RANK 15	79.6 RANK 36	1.36 RANK 16	18.7 RANK 13
VIRGINIS	55.8 RANK 1	2.2 RANK 6	6.02 RANK 3	56.5 RANK 1
PUERTOR	0.002 RANK 53	49,680 RANK 52	0.07 RANK 47	1.5 RANK 49T

National Park System Advisory Board



Citizen advisors chartered by Congress to help the National Park Service care for special places saved by the American people so that all may experience our heritage.

Appendix B

Natural Resources Gap Analysis: Conservation Tools for National Parks System Management in a Changing World

National Park System Advisory Board

Planning Committee

November 2012

**National Park System Advisory Board
Planning Committee
Natural Resources Gap Analysis:
Conservation Tools for National Parks System Management in a Changing World**

**J. Michael Scott, University of Idaho Moscow Idaho
Craig Groves, The Nature Conservancy Bozeman, Montana and
Jodi Hilty, Wildlife Conservation Society Bozeman, Montana**

Introduction – an ecologically representative system of parks

The current system of national parks consists of park units that were established independently for a variety of reasons including scenic, wildlife, other natural and cultural values. The current National Park System is neither representative nor redundant of the natural features (e.g., land cover, ecological systems, topography, elevation and species) of America. Additionally, the size, spatial distribution and ecological integrity of the landscape surrounding many park units leaves the “scenery, natural objects and wildlife” of our National Park System vulnerable to 21st century threats such as climate and land-use change (Svancara et al. 2009; Svancara 2010).

Imagine moving to a National Park System in 2016 (the centennial celebration of the creation of the National Park Service) in which individual units are valued for the ecological contribution that they make to an informal national system of conservation areas¹ (hereafter referred to as INSCA in this report), and new park units are established in part to fill gaps in that national system. This informal national system of conservation areas or INSCA consists of a variety of state, federal, and private lands and waters that are managed to at least some degree for the purpose of conserving the native species and ecosystems of the United States across their full environmental, geographical and ecological range of occurrences. Envision a conservation system that is large and connected enough for organisms to adapt and evolve to changing environmental conditions and sustain the integrity, diversity and health of the ecological and evolutionary processes and associated ecological services in the parks. Such a system would help “ensure resilience in the face of climate, land-use change and other environmental stressors” (Second Century Commission 2009). This INSCA is needed to “protect, restore and sustain the most valuable places, landscapes and freshwater and marine environments in

¹ Unlike most countries that are signatories to the Convention on Biological Diversity, the United States is not a signatory and does not have any formally recognized system of protected areas. An informal system exists and there is a geospatial database – PADUS or Protected Area Database of the United States – that contains information on this system; the database is maintained by the US Geological Survey’s Gap Analysis Program (<http://gapanalysis.usgs.gov/data/padus-data/>). This informal system has no official recognition in terms of policy or management by any US federal government agency.

America” (National Parks Second Century Commission 2009). The National Park System is a key component of this INSCA. The challenge facing the National Park Service (NPS) as it approaches its second century is to envision and plan for what the National Park System will look like in the decades ahead; the species, geophysical features and ecological systems it will contain; where they will be located; and what relevance this system will have to the American public and the larger INSCA. The Centennial of the National Park Service could provide a forum for conversations regarding the formalization of the INSCA and the Park Service’s role in that larger conservation area network.

Ecological context of The National Park System

President Roosevelt stood at the entrance of Yellowstone National Park in 1903 announcing the world’s first national park to be a place where “the wild creatures of the Park are scrupulously preserved.” The desire for parks to preserve wildlife has been an assumed tenet for national parks around the world. Unfortunately, an increasing body of science indicates that this tenet is unlikely to be successful if the focus of conservation remains solely inward into the parks. The existing global protected area model in which parks and other conservation areas cover a relatively small area of land is a necessary strategy for conserving the world’s biodiversity (Rodrigues et al. 2004), but is insufficient without a consideration of the larger landscapes and watersheds within which parks and conservation areas are imbedded. Examples around the world document species losses within parks, and link these losses to impacts beyond park boundaries (e.g., Craigie et al. 2010). Most parks are simply not large enough to maintain all the species within them (Newmark 1987, 1995) or natural processes such as fire and migration. As but one example, we now know that conservation of a long-term viable population of wolverines (*Gulo gulo*) in the lower 48 states requires trans-jurisdictional management across the high elevation National Parks and other jurisdictions that make up wolverine habitat in the Rocky Mountains (e.g., Schwartz et al. 2009; Inman et al. 2011).

Conservation areas that are surrounded by a sea of development are less likely to successfully conserve what falls within their boundaries over the long term. Svancara and colleagues (2009) assessed the ecological context and connectivity of the National Park System. In doing so, they found that the combination of park size, ecological context and projected effects of climate change leave many of the parks’ species, ecological systems and processes vulnerable to change (Svancara 2010). This vulnerability can be mitigated by activities that reduce threats both internal and external to parks (Baron et al. 2008a,b) and maintain or even increase connectivity through collaborative management with landowners and managers in the matrix lands and waters between parks and other conservation areas. However the combined holdings of America’s parks, natural areas, wildlife refuges, wilderness and other conservation areas fail to represent the full range of our natural and environmental diversity (often referred to as geophysical features), species occurrences and ecological settings. The location of conservation areas is biased towards steep slopes and poor soils at high elevations. (Scott et al. 2001a; Aycrigg et al. in press; NABCI 2011). For example, assessments of national park units indicate that there are eight ecoregions which do not contain any national parks with significant natural resources (Svancara 2010). Overall, these analyses support calls by the Second Century

Commission to conduct assessments of how well our nation is conserving biodiversity (National Parks Second Century Commission 2009). Gaps that are found may represent opportunities for strategic growth within the National Park System or other types of conservation areas to fulfill a vision of a national system of conservation areas that captures the full range of America's biological diversity.

Second Century Commission Charge

The call by the Second Century Commission for "Actions to preserve America's natural and cultural resources by strengthening the Park Service's capacity to preserve park resources and extend the benefits of the National Parks idea in society by creating new National Parks, collaborative modes of corridor conservation and stewardship, and expand the park system to foster ecosystem and cultural connectivity". The Commission's science and Natural Resource Committee challenged America "to build the National Park System to ensure its long-term health in a changing landscape" (Colwell et al. 2009). While the "Future Shape of the National Park System Committee" identified a need to develop a strategic vision for the National Park system in the context of a larger Informal National System of conservation Areas (Galvin et al. 2009). These same issues were addressed by the Planning Committee's report to the National Park System Advisory Board (G. Long personal communication). To address these charges requires several things. The first is a full conservation assessment of what the current National Park System and other conservation areas hold. Secondly, it requires a more detailed stipulation of the conservation vision and goals for the NPS in its second century. What will our goals be? Will the emphasis be on species, ecological systems, ecological services, environmental settings, or a mix? Such a vision is needed to provide a clear set of objectives for the next century of NPS park managers to fulfill

Based on the work of the Second Century Commission, the existence of an INSCA, and several analyses and assessments of these conservation areas, we identify five opportunities for conservation planning and assessment by the NPS to:

- 1. Develop an ecological vision of what the National Park System will look like in 2066 - its 150th Anniversary - and how the National Park System can contribute to the conservation of America's biodiversity.**
- 2. Outline specific ecological goals (e.g., for particular ecosystems, geophysical features species, or ecosystem processes and services) for the National Park System.**
- 3. Assess how well the current system is doing at meeting these ecological goals in the context of a larger INSCA.**
- 4. Identify where strategic growth of the National Park System could help make our informal national system of conservation areas more complete.**
- 5. Use these assessments and vision to promote the concept of a national system of conservation areas.**

Below we identify tools and outline methods for conducting these assessments and developing this vision.

Conservation Planning and its Principles: Utility for National Park System

There is a considerable amount of guidance available for assisting the NPS in analyzing how well its current system of units represents the native species and ecosystems diversity in the U.S. and how expanding the NPS system could improve upon that representation as well as the ecological resilience (Walker and Salt 2012) of existing parks. Broadly speaking, this guidance comes from what is commonly referred to as the conservation assessment and planning literature. Conservation assessment and planning addresses two broad questions (Redford et al. 2003):

- 1) Where should new conservation areas, such as NPS units, be located in order to achieve specific local, regional, or national conservation goals?
- 2) What kinds of strategies or actions are necessary to achieve conservation of real places on the ground (or in the water)?

The first question is often referred to as spatial planning and the second as strategic planning. Scores of scientific articles have been published on spatial planning, often under the rubric of systematic conservation planning (Margules and Pressey 2000), while many fewer articles and much less guidance has been published in scientific journals about strategic planning. Although many organizations and agencies do these types of planning separately, the most recent advice is that they should be done concurrently (Wilson et al. 2009).

Gap analysis (Scott et al. 1993,2001,2004a,b,c, Rodrigues et al. 2004) has played a major role in conservation planning by gathering and analyzing data sets to determine which species or ecosystems represent “gaps” in the current system of conservation areas. Systematic conservation plans such as the ecoregional assessments of The Nature Conservancy (Groves et al. 2002) took gap analysis one step further by identifying those potential conservation areas to fill the gaps for a particular set of ecological goals.

Many advances in conservation planning methods and tools have occurred over the last decade. Chief among these are better incorporation of ecological processes and functions (Pressey et al. 2007), expanding these functions to include ecosystem services (Kareiva et al. 2011), better inclusion and understanding of the costs (economic and otherwise) of conservation actions, improved planning for freshwater (Nel et al. 2009) and marine ecosystems (Klein et al. 2010), incorporating climate change adaptation considerations (Groves et al. 2012), new approaches to connectivity (Aune et al. 2011), and planning for multiple objectives with tools like Marxan with Zones (<http://www.ebmtools.org/marxan.html>). All of these advances could be incorporated by the NPS to one degree or another as they consider analyses to better understand what contribution the NPS units currently make to conserving

the full range of America's natural resource diversity, as well as how the stewardship of these natural resources might be expanded in a world of climate and land-use change.

At the outset, a useful question for NPS to consider is: why do more planning? The simple but not necessarily obvious answer is that we believe that taking a thoughtful systematic approach to expanding or managing the NPS system will result in a better outcome than intuition alone or best guesses will provide. That is probably obvious. Less obvious and too often overlooked is that any planning effort should carefully consider its purpose, which will use the results, and what decisions will be affected. NPS will need to be clear about the overall purpose it envisions in the NPS system. That purpose will help guide the analyses and conservation planning. For example, one framework suggests that the purpose of conservation planning is to establish a set of conservation areas that are representative, resilient, redundant, and restorative – the Four Rs (Groves 2003). *Representative* usually refers to a set of conservation areas that contain a pre-determined set of biodiversity features and a range of environmental conditions under which these features occur. *Resilient* refers to the ability of conservation features (e.g., species or ecosystems) to persist in the face of both natural and anthropogenic disturbance. From this perspective, it incorporates the concepts of population viability and ecological integrity. *Redundant* indicates that a system of conservation areas needs to include multiple examples of the biological and other features for which it is being established so as to increase the odds that these features will persist over time. Finally, *restorative* implies that a conservation plan or assessment should identify those features that may not currently be viable but could be restored to a viable state over time. Below we provide additional guidance on how the NPS can better incorporate climate adaptation strategies in its current and future system.

These basic principles are embraced to one degree or another, either explicitly or implicitly, by several Department of Interior or Interior-related initiatives. For example, State Wildlife Action Plans (Meretsky et al. 2012) and the guidance for developing these plans include most if not all of these basic principles (www.wildlifeactionplan.org) The National Wildlife Refuge Improvement Act of 1997 established an explicit mission for the NWR system – the conservation, management, and restoration of a national network of habitats as well as the requirement for conservation plans for each refuge to help meet this mission (Gergely et al. 2000). Similarly, the Strategic Habitat Conservation Handbook of the US Fish and Wildlife Service of 2008 (<http://www.fws.gov/science/doc/SHCTechnicalHandbook.pdf>) embraces most of these principles as well. There has been no comparable system planning effort for the National Park Service since 1972.

Methodological Approaches for National Park Service

Terrestrial ecosystems gap analysis:

For terrestrial ecosystems, the USGS Gap Analysis Program has recently created a national land cover data set. The underlying classification unit in the land cover data set is ecological systems - groups of vegetation communities that occur together within similar physical environments and are influenced by similar ecological processes, substrates, and environmental gradients (<http://www.natureserve.org/publications/usEcologicalsystems.jsp>). Aycrigg and colleagues (in

press) used these data on ecological systems and land cover in combination with the Protected Area Database for the US (PADUS) (<http://gapanalysis.usgs.gov/padus>) to address three questions that are relevant to the NPS: 1) How well are ecological systems in the US represented within the different categories of protected areas (see gapanalysis.usgs.gov for details on the 1-4 classification of protected areas) and ecological scales of occurrence (Aycrigg et al. in press ; 2) What opportunities exist to achieve increased conservation of ecological systems through changes in public land management? and 3) What percentage of each ecological system is already under some degree of protection (i.e., falls within INSCA)? They found that the ecological systems best represented within the INSCA were sparse and barren systems such as alpine bedrock, ice fields, coastal dunes, volcanic rock and cinder lands, cliffs and badlands. The biggest gaps in ecological system representation were for grasslands and subtropical forestlands, and arid land systems especially those at lower elevations and on richer soils. Previous studies (Scott et al. 2001 a, c) as well as other recent assessments had similar findings (Sayre et al 2012).

The NPS could build on these analyses using the national land cover and protected area database and other data sources to answer several key questions necessary for evaluating the ecological representation and context of the National Park System:

- 1) Which ecological systems are currently represented in the NPS system and which are not? Of those that are not represented, which of these are represented and which are not in the larger network of conservation areas in the US (i.e., INSCA)?
- 2) Which ecological systems are underrepresented in the NPS system or by other types of conservation areas in the US? Underrepresentation could be analyzed along two lines: a) the percent coverage of an ecological system within the conservation area system and b) the degree to which the occurrences of an ecological system in the conservation area system fall above or below what is considered adequate for that system to be viable over the long term.
- 3) Which administrative regions of the NPS and Land Conservation Cooperatives of Department of Interior have the greatest diversity of ecological systems?
- 4) Where may there be opportunities to increase this representation of biodiversity both nationally and within NPS administrative regions or other types of conservation planning areas (e.g. DOIs Landscape Conservation Cooperatives hereafter LCC's)

These questions assume that the NPS system alone will never be sufficient by itself to provide representation of all the ecological systems of the US.

To answer the questions of where opportunities may exist, additional data sets will be necessary as the current data base of protected areas includes little private land. However GAP has been working with TNC to incorporate their natural areas and to add the National Conservation Easement Database to the next version of PADUS that will be released in June 2012. The individual ecoregional assessments of The Nature Conservancy (available in report form at www.conserveonline.org) provide that crucial piece of information and some of the most important data from those assessments are now available to NPS and others in a national,

geo-referenced database (see Maps.tnc.org/USpriorityAreas or <http://50.18.62.210/USpriorityAreas/>). This database includes information on potential conservation areas that have been identified in each ecoregional assessment as well as the biodiversity features (including ecological systems and targeted species) that occur within each of these areas. State wildlife action plans (www.statewildlifeaction.org) may also serve as a statewide or regional source of information for geo-referenced areas that are important for key wildlife habitats (some state wildlife action plans use “ecological systems” as the basis for wildlife habitats) and species of greatest conservation need (a state wildlife agency term).

One disadvantage to the gap analyses that use only the national land cover dataset on ecological systems and the PADUS database is that there is little or no information about the ecological quality or integrity of the ecological systems. Many of the ecoregional assessments of TNC have taken this into consideration to a limited degree through the inclusion of a “cost layer” in the data sets – usually some surrogate index of landscape integrity that includes such variables as roads, cities, electrical infrastructure, railroads, and other variables related to human use. Such data have been applied globally (Sanderson et al. 2002) – referred to as the Human Footprint index – and can be adopted for regional and national analyses (e.g., Woolmer et al. 2008; Leu et al. 2008).

Other data layers that can be helpful in these sorts of analyses are those that provide some indication of environmental variability. In an era of climate change, conserving the range of environmental variability over which elements of biodiversity (e.g. ecological systems) occur has long been considered a sound conservation approach. Several researchers have proposed using geophysical features such as elevation, soils, soil productivity, slope, and other variables to represent environmental variability. Elevation data sets can be obtained from the National Elevation Dataset [<http://ned.usgs.gov>] [USGS 2006] The NED data can be arranged into classes at intervals that best meet the needs of the user. Soil productivity classes for the conterminous United States may be obtained from STATSGO data (<http://soils.usda.gov/survey/geography/statsgo/>). An additional data source is the Soil Survey Geographic (SSURGO) Database (<http://soils.usda.gov/survey/geography/ssurgo>) that provides significantly improved and more locally relevant soils variables than available in STATSGO. It's based on county soil surveys and there is coverage over most of the US. These features can serve as coarse filter targets in their own right in a gap analysis or as targets used in relation to a climate adaptation approach that is focused on conserving environmental variability (the metaphorical stage) in contrast with species diversity (the actors) (e.g. Pressey 1995; Hunter et al. 1998; Scott et al. 2001c; Beier & Brost 2010). Later in the section on regional approaches we discuss the use of geophysical features at more detailed scales of resolution (Anderson et al. 2011) to assess and plan for conservation of natural resources. Finally, the PRISM database at Oregon State University (<http://www.prism.oregonstate.edu/>) contains variables on monthly precipitation, dew point, and monthly min and max temperature, and these data can be used to understand the how climate variability and change shapes current and future conservation opportunities. The conservation related questions that can be asked using these data sets are similar to those listed above for terrestrial ecosystems.

Freshwater ecosystems and gap analysis

Any NPS analysis of ecological representation should also focus attention on freshwater and marine systems as well as terrestrial. For freshwater ecosystems, there are several classifications, all with various advantages and disadvantages. Overlap between freshwater and terrestrial ecosystems in terms of representation is poor, so it is necessary to look separately at freshwater ecosystems. A good starting point for classifications is *Freshwater Ecoregions of the World* (<http://www.feow.org>) – a joint product of The Nature Conservancy and the World Wildlife Fund. This classification system is driven by the distribution of fish and amphibians. Jonathan Higgins and colleagues (2005) took this classification system a bit further by subdividing each freshwater ecoregion into ecological drainage units (EDU) and freshwater ecological systems. EDU's have been mapped nationally through the National Fish Habitat Action Plan, and there is a USGS spatial database of EDUs at: <http://ecosystems.usgs.gov/fishhabitat>. This national fish habitat action plan ranks each EDU for risk of degradation to native fishes. These EDUs could be used in a freshwater gap analysis by NPS, and questions similar to those posed for terrestrial systems could be addressed.

Gap analyses for marine ecosystems

In the marine world, there is a different classification system for ecosystems known as the *Coastal and Marine Ecological Classification Standard: A National Standard to Support Ecosystem-Based Resource Management*. Detailed information about this classification is available at: <http://www.csc.noaa.gov/benthic/cmecs>. This classification has been adopted as a federal data standard by the US government. Additionally, PADUS has information on marine protected areas taken from NOAA (<http://www.mpa.gov/dataanalysis/mpainventory/>).

Although this classification exists, it has not been widely applied to develop a geospatial map of marine ecosystems that can be used for any national level gap analysis. Nor has this database been used with the marine protected area data base to conduct gap analyses of marine ecosystems. Although The Nature Conservancy's marine program has published a guide (Corrigan et al. 2007) to doing marine gap analyses, there are few published examples. Good examples of marine system gap analyses include California (Gleason et al. 2006) and Ecuador (Teran et al. 2006). Because marine ecosystems have not been mapped nationally, it is probably not feasible for NPS to do any sort of national-level gap analysis of marine ecosystems but they could be done for select NPS administrative regions for which marine ecosystems are particularly important or threatened. There may also be opportunities for NPS to help protect the marine environment adjacent to coastal (and largely terrestrial) national park units and help develop a national map of marine ecosystems.

Regional approaches

There may be cases where it will make sense for the NPS to conduct gap analyses on a regional scale. There also may be specific NPS regions of Landscape Conservation Cooperatives (<http://www.fws.gov/science/shc/lcc.html>) where it is either a priority to improve ecological representation or there are opportunities to do so which do not exist in other regions. The advantage of doing analyses at the regional scale is that it can provide a more direct link with

policy and management, and there will often be higher quality data sets with which to conduct the assessments. For example, Mark Anderson and his colleagues have developed many useful datasets for these sorts of analyses in the northeastern U.S. In particular, they have produced a number of environmental or biophysical data layers including the definition of 17 broad geophysical settings for the region based on elevation, geological classes, and landforms. Within geophysical settings, they also estimated landscape complexity and permeability within each 30 x 30 m grid cell. In one set of analyses, they overlaid this information with locations of state Species of Greatest Conservation Need to identify those populations of species that are most likely to be resilient over the long term in the face of climate change (Anderson et al. 2011). In a separate but related set of analyses, they identified the most resilient sites for terrestrial conservation (irrespective of the locations of species of greatest conservation need) based on a classification of geophysical settings, the same analyses of landscape complexity and permeability, and key linkage areas for climate-induced regional movements (Anderson et al. 2012).

Similar environmental data layers are being developed by Nature Conservancy, academic, state, and federal agency teams in the southeastern and northwestern United States. The availability of these data sets allows the NPS to do some gap analyses at the regional scale that would include the representation of environmental variability as well as ecological systems.

Species approaches

National data sets on species occurrences are only available for certain species groups – primarily at-risk plant and animal species as defined by State Natural Heritage Programs and Nature Serve (www.natureserve.org). Their classifications of at-risk species are widely used by the Interior Department, other federal natural resource agencies, the Gap Analysis Program, and many state wildlife agencies. Any gap analysis focused on individual species faces a technical challenge related to the lack of seamless spatially explicit data for species occurrences. At least for some species, efforts are underway to overcome this hurdle (see Cornell University e-bird atlas: <http://bird.atlasing.org/>). GAP is working towards creating national range maps and distribution models for over 2000 species over their entire range (see gapanalysis.usgs.gov and look for species viewer).

Many of these species are listed as threatened or endangered under the US Endangered Species Act and may be listed as Species of Greatest Conservation Need within State Wildlife Action Plans (Meretsky et al. 2012). It is possible to use these national datasets on at-risk species occurrences in gap analyses related to ecological representation of the NPS system. Because 84% of listed species with recovery plans are conservation reliant, the inclusion of these species in any future national park plan or park expansion strongly implies that the NPS will be obligated to specific management interventions for many of these species (Scott et al 2010) for the foreseeable future. The basic questions that species-specific analysis could address are:

1. How well does the current Informal National System of Conservation Areas capture occurrences of at-risk species?
2. How well does the current NPS system capture occurrences of these species?

3. Where do opportunities exist for future NPS holdings to include greater representation of these occurrences and which of these opportunities may be most critical for the conservation of specific at-risk species?
4. Where do opportunities exist for the NPS to collaborate more effectively with adjacent land owners/managers to manage at risk species in existing parks?

In addition to these sorts of gap analyses for at-risk species conservation, the NPS may wish to undertake species-specific analyses for other selected species. For example, the NPS could conduct a range wide assessment of spatial variation for particular species occurrences in conservation areas (Scott et al. 2001b). Sanderson and colleagues (2002) have outlined methods for conducting range-wide assessments of species, especially wide-ranging species whose conservation will not usually be adequately covered by ecoregional assessments or individual state wildlife action plans. The methods were pioneered for tigers (*Panthera tigris*) and have now been published for jaguars (*Panthera onca*) and bison (*Bison bison*) as well. The most important features of the range-wide approach include planning for species conservation across the entire range of a species; accounting for the different types of knowledge and certainty that we have about species distribution and population status; limiting recommendations to what is definitively known; and basing recommendations on ecogeographic priorities – that is, a consideration of ecologically distinct populations. Redford and others (2011) have more recently expanded on this range-wide assessment effort to better articulate what it means to successfully conserve a species (i.e., throughout its range).

There are opportunities for linking the results of gap analyses conducted for ecological systems with those conducted for individual or groups of species. For example, Aycrigg et al. (in press) found that grasslands were one of the least protected ecological systems in the lower 48 states. While others (Noss et al. 1995) identified grasslands as endangered nationally and regionally and the 2011 State of the Bird Report (NABCI 2011) reported that 97% of the native grasslands of the United States have been lost and grassland birds have declined from historic levels more than any other continental group of bird species and currently are among the most consistently declining species in the United States. Additionally there are ongoing efforts to conserve and restore the American Prairie (<http://www.americanprairie.org/>).

These intersections of a declining species whose habitat is at risk and underrepresented in conservation areas and potential cooperators provides an opportunity to fill a conservation gap through strategic growth of the NPS System that is enhanced by strategic partnerships in the state, federal, tribal and private sector. Along a similar line, the NPS has recently launched a migratory species initiative (Elaine Leslie, NPS, pers. communication), and it is likely that this initiative will identify additional lands and waters critical to the conservation of species that currently occur within park boundaries but also migrate beyond them and provides opportunities for new conservation partnerships with partners in Flight and other groups (http://www.climateconservation.org/images/Papers_and_Reports/Recent-progress-on-wildlife-corridor.pdf).

One tenth of one percent of the 518 ecological ecosystems in the United states are not found in any protected area, while 68% fall below the 17% conservation target set by the Convention of Biological Diversity (<http://www.cbd.int/sp/targets>) The majority of under protected ecological systems are found on low elevations and on moderate to high productivity soils (Aycrigg et al. in press).

These underrepresented ecological systems especially the least protected systems such as Edwards Plateau Mesic Canyon, Tamaulipan Clay Grasslands' and central Appalachian Riparian (Aycrigg et al. in press) represent opportunities to fill gaps strategically in the National Park System and the INSCA. In summary, there are many available methods, tools, data sets and partners with which NPS can analyze the representation of ecological systems, important species, and geophysical features (conservation targets) in its current system and the larger INSCA to identify opportunities for strategic growth of the park system. It would also be important to assess ability of proposed new parks to fill gaps (Wright et al. 1994). **The NPS could use gap analyses to assess its current system of park units for representation of conservation targets across terrestrial, freshwater, and selected marine realms and within LCCs and National Park Service administrative regions (Aycrigg et al. in press).**

1) Opportunities for ecological analysis include: Using gap analyses to address a specific set of questions related to the vision and goals of NPS (i.e., which ecological systems and/or species are most important to NPS) and identify important gaps for individual parks and the National Park System that a future NPS System could address with strategic growth.

2) To the degree possible, tying these gap analyses to other appropriate initiatives and assessments of other state (e.g., State Wildlife Action Plans, Joint Ventures, endangered species recovery plans , etc) ,proposed new national parks (Wright et al. 1994) and federal natural resource agencies or within Interior itself (e.g., migratory species initiative. Leopold Report 2012 within NPS).

National Park Operations in the Context of Larger Landscapes

The mandate of land management agencies to date, including NPS, largely has been to focus on management within the boundaries of any particular jurisdiction. In the 21st century, two major pressures are pushing to expand this mandate. First, as we mentioned at the beginning of this report, a large body of science is suggesting that existing parks and conservation areas are inadequate to address the conservation of biodiversity in a changing world. This means that conserving a species within any particular park may require working in the context of a much larger landscape. Second, as a result of these findings, land management agencies are beginning to shift their focus from management within the bounds of a jurisdiction to engage in the context of the larger landscape with other entities to achieve conservation. This section will briefly a) discuss frameworks in which to assess and engage in the landscape context, b) provide

a brief overview of how climate change adaptation fits within this landscape context, and c) offer an overview of how DOI Landscape Conservation Cooperatives (LCC) may play a role.

Existing frameworks in which to assess the landscape context

The previous Conservation Planning section discussed ways to assess representation nationally as well as regionally, which could be in the context of a larger policy-relevant landscape such as an LCC. Ensuring adequate core conservation areas that are representative of the landscape is obviously important. Equally important is how the larger landscape (or seascape or watershed) within which these conservation areas occur is managed. The sections below offer an abbreviated review of resources emphasizing or evaluating the landscape context. Some frameworks and tools focus more on buffering existing national parks within the context of a larger landscape while others focus on the question of connecting national parks to other core protected areas. While these two concepts of buffering and connectivity can be interrelated, we suggest that the National Park Service consider both of these in the context of larger national parks system planning and individual park unit planning in the 21st century.

Resources for assessing landscape-level threats

One set of existing datasets and analyses focus on threats or potential threats in the form of levels of human activity surrounding parks. The previously mentioned “Human Footprint”, is one example of such an existing analysis (see Conservation Planning). This modeling approach can be downscaled to a region or landscape and already has been for the Northern Appalachian ecoregion (Woolmer et al. 2008) and the West (Leu et al. 2008). Another recent analysis examined one of the most pervasive US threats, residential development, in buffer zones adjacent to national parks across the lower 48 states and found that residential development has occurred preferentially near national parks and that this trend is forecast to continue (Wade and Theobald 2010). This increases the chances for incompatible land use practices in areas adjacent national parks (Svancara 2010). Additional data sets that could prove helpful include housing density maps that were prepared for use in looking at wildland-urban interfaces. Volker Radeloff’s work (Radeloff et al. 2010) is quite good and their data are readily available through their U of Wisconsin website (<http://silvis.forest.wisc.edu/maps/wui/state>). Another candidate is Dave Theobald’s work on future housing density. More on this data set is available at:

<http://cfpub.epa.gov/ncea/global/recordisplay.cfm?deid=203458#Download>

Finally, current development can be identified using the USGS National Land Cover Dataset (NLCD) impervious surface layer. While NLCD is already mentioned the impervious surface layer may be a useful stand-alone source for information on development threats. Additionally both the human footprint and buffer zone analyses may be useful for the NPS to assess what parks might already be highly impacted by surrounding human activities as well as areas that remain ecologically intact. Such analyses could also point to priority lands to target to ensure adequate buffers around parks that may be threatened in the near future (Svancara 2010).

Response to these threats could range from landowner incentive programs to collaborative management agreements, conservation easement programs, park expansion, or other stewardship activities with neighboring property managers. Such efforts may promote connectivity to other protected areas and/or enabling species to utilize lands or waters beyond the boundaries of the protected area(s). Although datasets such as the Human Footprint are useful for terrestrial analyses, they are of limited utility for freshwater considerations and virtually of no use for marine gap analyses.

Why connectivity is an important consideration

A wide variety of private and public effort is currently expended on protecting and restoring natural or semi-natural passageways to maintain and enhance connectivity. These range from creation of wildlife friendly road crossing structures to proposals to link continental ranges to conservation of migratory pathways for ungulates (Hilty et al. 2006). These are a result of an increasingly fragmented natural environment where relatively small protected areas are increasingly isolated from one another. An increasing body of science shows that smaller and more isolated protected areas are more likely to lose species over time. Given this, an important consideration for individual parks and for the configuration of the park system in the context of other protected areas, is the question of park size and current and potential future isolation. Given that species ranges change in time and space, exacerbated by climate change, considering connectivity at the landscape scale is important (Svancara 2010). In the table below, we briefly summarize the levels of biodiversity, scale, and goals which must be addressed when planning for connectivity (from Hilty et al. 2006):

Levels of biodiversity

Individual (of a species)

Deme (of a species)

Species

Community

Landscape

Spatial Scale (of linkage)

Local (e.g., underpass)

Regional (e.g., river corridor)

Continental or cross-continental (e.g., mountain range)

Potential Goals

Daily movement (e.g., access to daily resources)

Seasonal movement (e.g., migration)

Dispersal (e.g., genetic exchange, mate finding)

Habitat (e.g. wide greenway corridor)

Long-term species persistence (e.g., adapt to global warming)

As suggested in the conservation planning section, being clear on the target is important and for any one park or complex of parks and other protected areas, there may be a range of connectivity goals.

Some examples of existing landscape and seascape-level prioritizations and connectivity exercises

Other datasets, analyses, and landscape conservation priorities that the NPS may want to examine are those led by non-governmental organizations (NGOs) often with substantial engagement of scientists. For example, one of the older and better known landscape-level visions is the Yellowstone to Yukon (Y2Y) mountain corridor, which remains one of the most intact mountain ecosystems in the world but is experiencing significant levels of development including increased housing, recreation, and natural resource extraction. The Y2Y NGO envisions a series of core protected areas, often with the cores anchored in one or more national parks, connected by a series of corridors (www.y2y.net). The proposed landscape level design, the downscaled local planning and action, and analyses and priorities of actions around potential threats such as climate change are based in various scientific analyses (Chester and Hilty 2012).

The collaborative science and planning for the Two Countries One Forest Region (2C1F) in the northeastern US and Canada is another example of regional data layers, scientific analyses, and planning priorities that have been produced under the umbrella of an NGO and associated science partners. Their interactive map Atlas (<http://www.2c1forest.org/atlas/index.html>) offers three ways to examine the human footprint, a few different types of connectivity analyses, and other information that contribute to examining parks and protected areas in the region in the context of the larger landscape. The Wild Lands Network (www.twp.org), which seeks to conserve continental corridors across North America, has conducted a series of connectivity assessments, the latest of which focuses on permeability analyses as a means to map landscape connectivity (Theobald et al. 2012). The Nature Conservancy ecoregional plans, mentioned previously, incorporate gap analyses, some connectivity analyses, as well as identifying place-based priorities, and most of these assessments can be accessed online (http://east.tnc.org/reports/all_assessment_docs). These and other resources from the conservation and science community could serve as data sources, already completed analyses, and types of analyses that the NPS may want to use as they consider priority places to engage across larger landscapes.

Additional resources are available at the state level. The Western Governors Association passed a resolution a few years ago (<http://www.westgov.org/wildlife>) mandating all states to begin identifying and protecting corridors throughout their states. All western states now have connectivity maps. One of the more thorough analyses was conducted in the state of Washington (e.g., http://www.dfw.state.or.us/conservationstrategy/docs/pac_nw_wl_connections_ws_102008/Wildlife%20Habitat%20Connectivity%20in%20Washington.pdf).

Many states have also conducted various other helpful analyses. One example worth highlighting is in the state of Vermont where they examined the transportation network to understand the potential current and future bottlenecks for wildlife created by the road network (Beckmann et al. 2010).

Examples of existing large landscape conservation initiatives

In addition to the planning and prioritization examples provided above, there are also several good examples of functioning landscape-level initiatives that the NPS could evaluate as potential models for some of its future efforts.

- Within Department of Interior, the National Wildlife Refuge System has been successful in conserving its target of migratory waterfowl through a stepping-stone network of conservation lands and waters (<http://www.fws.gov/refuges/>; Pidgorna 2007; Rupp 2009). Given the decline of songbird populations as well as their popularity with the birding community (NABCI 2011), one suggestion for the NPS to consider is whether the NPS System could place an emphasis on conservation of migratory songbirds as a target for future growth of the National Park System? This may be particularly important in under-protected regions such as the Great Plains. There are many resources on migratory bird species that could be helpful: a) the North American Bird Conservation initiative (www.nabci-us.org/), b) conservation plans developed for Landbird - www.partnersinflight.org/content/plan/ ; for waterfowl www.fws.gov/birdhabitat/NAWMP/index.shtm; for shorebirds www.fws.gov/shorebirdplan/USShorebird.htm ; and for waterbirds www.waterbirdconservation.org/, c) the State of the Birds Reports (stateofthebirds.org) or recovery plans for an endangered species (<http://www.fws.gov/endangered/species/recovery-plans.html>).
- The management of grizzly bears and the recovery plan in the Greater Yellowstone Area (GYA), which mandated coordination and collaborative management across a patchwork of multi-jurisdictional lands across the region (www.fws.gov/mountain-prairie/species/mammals/grizzly) is a successful model of landscape collaboration for single species. Given the decline of difficult-to-manage larger species, particularly carnivores and ungulates, the NPS may be able to catalyze similar collaborations in other areas where suites of such species could be conserved.
- The Adirondacks State Park offers a unique example of integrating public and private land management under one plan. The Adirondack State Park is the largest park in the contiguous U.S. and more than half is owned privately. The Adirondack Park Agency oversees development plans of all private land-owners as well as activities within the state owned Forest Preserve to ensure that all activities are compatible with the park vision (<http://visitadirondacks.com/adirondack-mountains/adirondack-park.html>; <http://apa.ny.gov/>). This model is compelling because it proactively defines a functional park as an area that includes private and public lands and manages activities on all lands in accordance with a conservation vision regardless of the land type. Are there other

places where the NPS could serve as a catalyst for a unified landscape plan with similar type mechanisms that would help maintain the integrity of the park and surrounding landscape?

- Appalachian National Scenic Trail works across swaths of public land, state land and private lands and interacts with local private clubs, state and multiple federal agencies while under the management of the NPS. While this example is focused on recreation, it offers an example of how the NPS successfully works across multiple jurisdictions and with different partners (<http://www.nps.gov/appa/index.htm> <http://www.appalachiantrail.org/>). Where multiple national parks and/or other protected areas serve as core areas and where connectivity for wildlife is deemed important, could the model of the Appalachian Trail management(<http://www.nps.gov/appa/index.htm>) be used to manage wildlife corridors across multiple jurisdictions?
- The endangered Florida manatee (*Trichechus manatus*) found in freshwater, brackish and saltwater of Biscayne and Everglades National Park and several wildlife refuges provides an example of a trans-boundary species that receives management support outside the Park comparable to those found inside. Beyond the park, marine sanctuaries, wildlife refuges, counties and municipalities enforce protection for species as does the US Endangered Species Act (<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A007>) while the United Nations Environmental Program provides guidance for management activates throughout the range of the Florida manatee regardless of the jurisdiction a manatee finds itself in (Deutsch et al. 2003; <http://www.cep.unep.org/meetings-events/vi-spaw-cop/manatee-report-1.pdf>).

Managing existing park units within the landscapes in which they occur may be as important to conserving the biological resources within the NPS System as strategic growth of the system. **To that end, the action items we identify below include opportunities for NPS to:**

- 1. Identify where land-use adjacent to park may compromise the biological integrity of a park:**
 - a. Identify park units for which land-use activities adjacent to the parks are known to currently pose significant threats to biological resources within the parks.**
 - b. Conduct scenario analyses and development forecasting for park units that are likely to be impacted in the future by significant land-use activities adjacent to their borders.**
- 2. Identify where there may be opportunities to mitigate these impacts**

- a. Using one or more of the landscape-level tools identified in this report (e.g., human footprint, development forecasting, and connectivity analyses), analyze and evaluate what sorts of activities (and where) the NPS might undertake collaboratively with private and public partners to improve the management of matrix lands and waters adjacent to these parks.
 - b. Identify where there may be opportunities to undertake activities that could mitigate or abate current and/or future negative impacts.
 - c. Explore the examples mentioned in this report as well as others of successful landscape-level initiatives to determine if any could serve as a model for replicating elsewhere within the National Park System.
3. Identify sets of parks where maintaining connectivity may increase the probability of species persistence or maintenance of particular processes.
- a. Use geospatial analyses to identify best routes for conserving ecological connectivity over the long term
 - b. Develop mechanisms to work across various land ownership categories to maintain and/or restore priority connectivity areas.
 - c. Expansion of the national park system or other protected areas may be a tool for consideration to enhance a functional protected area network within a region.

In addition we identified several lessons learned from multi-party management of matrix lands. These include:

1. Private and public partners can improve the management of matrix lands and waters adjacent to parks.
2. There is a benefit to conducting scenario analyses and development forecasting for park units that are likely to be impacted in the future by significant land-use activities adjacent to their borders.
3. There are opportunities to explore the examples mentioned in this report as well as others of successful landscape-level initiatives to determine if any could serve as a model for replicating elsewhere within the National Park System.

Considering Climate Change

Although this subcommittee was asked to consider how climate change and the related topic of connectivity should be considered in assessing the adequacy of ecological representation in the National Park System, we wish to acknowledge at the outset that there have been previous efforts to do this (Baron et al. 2008a,b and Svancara 2010) and there are numerous efforts underway in the NPS and other agencies that address this issue to some degree. For example, the NPS is already engaged in adaptation planning

(<http://www.nature.nps.gov/climatechange/docs/AdaptationBrief.pdf>) that involves, among other objectives, re-framing park management goals in the face of climate change, scenario planning in several pilot park units, risk assessment for park units facing immediate impacts such as sea-level rise, and increasing monitoring efforts focused on climate change impacts. In addition, NPS staff members are engaged in a USFWS-led national strategy on adaptation (*National Fish, Wildlife, and Plants Climate Adaptation Strategy January 2012*) that is currently available for public review (<http://www.wildlifeadaptationstrategy.gov/public-review-draft.php>). Additionally, the Environmental Protection Agency conducted an assessment of adaptations for climate sensitive ecosystems and resources in national parks and other public lands (West et al. 2009; Baron et al 2008a, b). As a result, the management actions we identify and opportunities for making a difference that we suggest here will be brief and are meant to supplement and complement the adaptation efforts already underway within the NPS. In particular, we will focus on a few new publications related to adaptation that could enhance ongoing efforts of the NPS, especially in relation to the topic of strategic growth of the NPS to mitigate the effects of climate change on parks and their natural resources. .

Changes in species distributions, shifts in date of arrivals of migrants and onset of breeding as well as alteration of consistent with climate change projections have occurred. . The details of these and other impacts have been documented elsewhere (e.g., Inter-governmental Panel on Climate Change reports (<http://www.ipcc.ch/>)). Here we focus on how to plan for climate change in the context of large landscape conservation. What has changed in conservation and management because of climate change? While one can debate a long list of changes, two fundamental shifts are irrefutable: 1) we can no longer manage for past baselines of species distributions and habitats; we know that species are moving, systems are changing we need to be managing for resilience and transformation, and 2) we are moving toward management within the context of larger landscapes and conservation networks. Landscape level connectivity discussed above is one of the major opportunities for helping species and systems cope with climate change (Heller and Zavaleta 2009), and there are also a suite of other tools and considerations that the NPS may want to consider in planning for a well-connected and resilient system of National Parks within the context of larger landscape engagement and climate change.

Responding to the threat of climate change

A number of scientists have published recommendations on climate change adaptation. Below is a relatively high level summary of what these reviews ultimately recommend (from Chester et al. 2012):

- Protect appropriate and adequate space:
 - Maintain/enhance connectivity between those areas
 - Protect climate refugia (e.g., those areas least likely to undergo significant climate induced changes, or those areas that will likely house suitable climate conditions in the future but are not currently occupied).
 - Make conservation planning more dynamic by taking shifting species ranges into account

when designing reserve networks

- Insure that the full geographical, geophysical and ecological range of a species is represented in conservation areas.

- Increase the size and number of conservation areas
 - Reduce non-climate stressors:
- Repulse invasive species, pests, and diseases
- Sustain ecosystem processes and functions
- Implement ecological restoration
- Plan for human responses to climate change that may entail additional threats to biodiversity
 - Adopt adaptive management:
- Study management interventions and species responses
- Monitor changes and interventions
- Implement ecosystem-based adaptation (EBA) practices
 - Consider species-specific interventions
- Protect and create essential habitat and connectivity areas
- Consider translocation (also called assisted migration, assisted colonization and managed relocation) and/or captive breeding
- Reduce non-climate related threats.

In addition to this brief summary, Groves and colleagues (2012) have made several overlapping recommendations for how to revise existing regional and landscape conservation plans as well as initiate new ones that incorporate adaptation. Their approaches include:

1) Conserving the geophysical stage (see Mark Anderson 2011 and work discussed under earlier conservation planning section), 2) protecting climatic refugia, 3) enhancing regional connectivity, 4) Sustaining ecosystem process and function, and 5) capitalizing on opportunities emerging in response to climate change such as carbon markets. The strength of these approaches is that they are relatively robust to the uncertainties associated with climate change.

Along similar lines, an interagency and inter-organizational task force of adaptation experts has recently developed a framework for incorporating adaptation into existing landscape conservation plans. This framework, available at www.databasin.org/yale, focuses on mapping data layers that can be useful to conservation planners concerned about adaptation and also provides links to existing data layers that NPS planners and others could utilize.

Finally, Cross and colleagues (2012) have advanced a useful framework for developing landscape-specific adaptation strategies – the ACT or Adaptation for Conservation Targets framework – especially for use in natural resource management planning and decision making. This framework has been tested with federal and state agencies in the southwestern U.S. and elsewhere and is likely to be a useful approach to adaptation planning for many national park units.

Key Points on and Opportunities for Adaptation

While these new frameworks and summary reviews may enhance current NPS adaptation efforts, there are a few key additional points to consider. Below, we elaborate these points with opportunities in bold:

- One of the most important approaches we can take is to increase a system's resilience to change and the probability that species within the system will survive into the next century. The first step in increasing the chances of this happening is to secure a species' habitat in conservation areas across the full range of its geographical, geophysical and ecological distribution. **This securing of habitat is a possible goal for the National Park Service to focus on for a select set of species (i.e., for the conservation target species NPS might select as part of its long-term conservation vision) and in conjunction with the INSCA.** Climate change adaptation planning requires this identification of focal features of concern, such as target species or ecological processes, and the setting of goals for these features.
- Under any set of circumstances, there is a large degree of uncertainty associated with climate change impacts and adaptation planning. One of the most effective tools to enable priority management and planning actions to occur where there are high levels of uncertainty is scenario planning (Cross et al. 2012). Scenario planning allows stakeholders to assess whether a management action would be a priority even given different scenarios of climate change, for example, and therefore can be very effective at moving folks beyond 'climate change paralysis'. Doing scenario analyses across multiple jurisdictions can be challenging, however, as different land owners often have different goals. That said scenario planning can, when used in a participatory context, provide a bridge from which to engage in multi-jurisdictional management plans. **Fortunately, the NPS is already engaged in scenario planning at a set of pilot park units (<http://www.nature.nps.gov/climatechange/docs/SPlanningOverview.pdf>) and may be able to expand this effort to other units as lessons are learned from pilots and resources allow.**
- **It is critical that the NPS does not artificially try to retain park unit's in particular static conditions if climate change is resulting in the redistribution of species beyond boundaries.** It is for this reason alone the NPS must look at conservation in the larger landscape context. If there are other places that are better suited in the long term for a species or ecosystem to persist, the NPS may not need to focus resources to those species or that ecosystem or it may need to help transition a species to a new range of distribution. For example, Sprague's pipit (*Anthus spragueii*) is a sensitive grassland bird whose summer breeding temperature parameters appears to be shifting north. It may be possible across a large landscape such as the northern Great Plains to change grazing regimes north of current habitat that could help facilitate a shifting or breeding habitat northward (K. Ellison,

personal comm.). For each jurisdiction within a larger landscape to consider only what falls within their bounds will fail to address both species shifting out of those boundaries as well as species that may shift in. Ultimately, long-term management in the context of shifting climates must address these matters for the National Park System and the U.S. as a whole at multiple spatial, temporal and ecological scales to proactively conserve biodiversity during this time of climate change.

Potential Role of LCCs

As science increasingly points to the need to plan for conservation at a landscape scale, the DOI has created Landscape Conservation Cooperatives to support work at this broader scale. Landscape Conservation Cooperatives (LCCs) within DOI include 22 large landscapes that cover the United States but also spill over into neighboring countries. LCCs “seek to identify best practices, connect efforts, identify gaps, and avoid duplication through improved conservation planning and design. The LCC’s provide a forum where “Partner agencies and organizations coordinate with each other while working within their existing authorities and jurisdictions.” (<http://www.fws.gov/science/shc/lcc.html>). LCCs could play a number of potential roles in assisting the NPS to work at larger landscapes and across multiple jurisdictions (Meretsky et al. 2012). For example, LCCs could be useful for pulling together relevant stakeholders to identify research priorities (Fleishman et al. 2011) and conduct planning and prioritization across the landscapes they represent. They also could become collaborative units where agencies interact and agree on loosely knit priorities and approaches to undertake across multiple jurisdictions, perhaps something like the Greater Yellowstone Coordinating Committee (<http://fedgycc.org/>). NPS is already engaged with LCCs, supporting five full-time positions that focus on some of the most climate-vulnerable park resources (<http://www.nature.nps.gov/climatechange/docs/AdaptationBrief.pdf>). In addition, LCCs are funding targeted research and are one mechanism to help fund the limited research capacity that exists within NPS. Finally, LCCs also offer a policy forum in which the research results that point to needed management actions could be scaled up or down as conditions warranted. Depending on how these early engagements with LCCs develop, the NPS may want to consider further engagement with LCCs to help with the science and implementation of adaptation planning.

Conclusions

The National Park Service's second century will be one of unprecedented environmental challenges and opportunities that require management and policy responses at scales from local to global. Park managers will need to manage threats to park natural resources outside as well as within park boundaries. In this report we have identified the tools and data sets that will be needed to develop a vision for the future of the National Park System and maintain the ecological resilience, diversity and environmental health of individual parks and the National Park System in the context of the larger informal system of conservation areas. However, meeting these new challenges will require new partnerships, new skill sets and new ways of thinking. New partnerships between land managers and researchers will be required to identify policy and management relevant questions at multiple scales and conduct the research needed to answer the questions and implement needed management actions in an adaptive management framework that allows everyone to learn while doing.

We purposely have not identified specific areas for new national parks. It is not for lack of ideas on our part. However, we believe that development of a detailed vision containing specific areas for strategic growth of the National Park System should come from a transparent analysis of available information to identify gaps in the current system and from opinions of interested parties gathered together in a systematic and objective fashion. That said, we have identified species, geophysical features and ecological systems under-represented in the National Park System and the tools, processes and data sets needed to further assess representation, redundancy and resiliency of natural resources in national parks as well as the projected effects of climate and land-use change on the integrity, diversity and health of natural resources in the parks. Finally, we have provided guiding principles (Representation, Redundancy, Resilience and Restoration) and tools by which the National Park Service might develop a vision for what the National Park System and a more informal national network of conservation areas for the US might look like in 2116, the 200th anniversary of the National Park Service. We have also documented methods by which conservation planning and assessment might be conducted to identify and fill the gaps in the National Park System. These tools, principles and processes may also be used to assess, evaluate and prioritize proposals for new parks or expansion of existing parks. Such planning and assessments are needed to maintain a National Park System that will contain the scenery, natural objects and wildlife of 22nd century America for the future enjoyment of the American people.

References

- Aune, K., P. Beier, J. Hilty, and F. Shilling. 2011. Assessment and planning for ecological connectivity: a practical guide. Wildlife Conservation Society, Bozeman, MT.
- Anderson, M. G., M. Clark, and A. O. Sheldon. 2011. Resilient sites for species conservation in the Northeast and Mid-Atlantic Region. . The Nature Conservancy, Eastern Conservation Science Arlington, VA.

- Anderson, M. G., M. Clark, and A. O. Sheldon. 2012. Resilient sites for terrestrial conservation in the Northeast and Mid-Atlantic Region. . The Nature Conservancy, Eastern Conservation Science Arlington, VA
- Aune, K., P. Beier, J. Hilty, and F. Shilling. 2011. Assessment and planning for ecological connectivity: a practical guide. Wildlife Conservation Society, Bozeman, MT
- Aycrigg, J. A. Davidson, J.K. Svancara, K.J. Gergely, A. McKerrow and J.M. Scott in Press Conservation of ecological systems in the continental United States: is there room for Improvement PLOS Biology,
- Baron, J.S. CD Allen E. Fleishman, L. Gunderson, D. Mckernzie, L. Meyerson, J. Oropezaa, N. Stephenson 2008a. National Parks parks Chapter 4 pages 1-35 in Preliminary review of adaptation options for climate sensitive ecosystems and resources S.H. Julius and J.M. West eds. SAP 4.4 U*IS Environmental protection Agency Washington DC
- Baron, J.S., S.H. Julius, J.M. West, L.A. Joyce, G. Blate, C.H. Peterson, M. Palmer, B.D. Keller, P. Kareiva, J.M. Scott and B. Griffith. 2008b. Some guidelines for helping natural resources adapt to climate change. *International Human Dimensions Programme on Global Environmental Change Update*. 2:46-52\
- Beir, P. & B. Brost 2010 Use of land facets to plan for climate change: considering the areas, not the players Conservation Biology : 24:701-710.
- Chester, C., J.A. Hilty and S.C. Trombulak 2012. Climate change science, impacts and opportunities and Conservation Climate and Conservation Part 1, 3-15
- Convention on Biological Diversity Strategic Plan for Biodiversity 2011-2020 including Aichi Biodiversity Targets. <http://www.cbd.int/sp/targets>. Accessed 2012 February 29.
- Corrigan, C., J. Ervin, P. Kramer, and Z. Ferdaña. 2007. A Quick Guide to Conducting Marine Gap Assessments. The Nature Conservancy, Arlington, VA.
- Craigie, I.D., J.M. Baillie, A. Balmford, B. Collar & J. Hutton 2010 Large mammal population declines in Africa's protected areas. *Biological Conservation* 143:2221-2228.
- Cross, M. S., E. S. Zavaleta, D. Bachelet, M. L. Brooks, C. A. F. Enquist, E. Fleishman, L. Graumlich, C. R. Groves, L. Hannah, L. J. Hansen, G. Hayward, M. Koopman, J. Lawler, J. Malcolm, J. Nordgren, B. Petersen, E. Rolwand, D. Scott, S. L. Shaffer, M. R. Shaw, and G. Tabor. 2012. The Adaptation for Conservation Targets (ACT) framework: a tool for incorporating climate change into natural resource management. *Environmental Management* **In Press**

- Deutsch, C.J., J.P. Reid, R. Bond, D.E. Eeston, H. Kochman & T.J. O'Shea. Seasonal movements, migratory behavior and site fidelity of West Indian manatees. 2003. *Wildlife Monographs* 151:1-77.
- Fleishman, E., D.A. Blockstein, J.A. Hall et al. 2011. Top 40 priorities for science to inform US conservation and management policy. *BioScience* 61:290-300
- Gergely, K., J. M. Scott, and D. Goble. 2000. A new direction for the U.S. National Wildlife Refuges: the National Wildlife Refuge System Improvement Act of 1997. *Natural Areas Journal* 20:107-118.
- Gleason, M. G., M. S. Merrifield, C. Cook, A. L. Davenport, and R. Shaw. 2006. Assessing gaps in marine conservation in California. *Frontiers in Ecology and the Environment* 4:249-258.
- Groves, C. 2003. *Drafting a Conservation Blueprint: A Practitioner's Guide to Planning for Biodiversity*. Island Press Washington, DC.
- Groves, C., E. Game, M. Anderson, M. Cross, C. Enquist, Z. Ferdaña, E. Girvetz, A. Gondor, K. Hall, J. Higgins, R. Marshall, K. Popper, S. Schill, and S. Shafer. 2012. Incorporating climate change into systematic conservation planning. *Biodiversity and Conservation*:1-21.
- Groves, C. R., D. B. Jensen, L. L. Valutis, K. H. Redford, M. L. Shaffer, J. M. Scott, J. V. Baumgartner, J. V. Higgins, M. W. Beck, and M. G. Anderson. 2002. Planning for Biodiversity Conservation: Putting Conservation Science into Practice. *BioScience* 52:499-512.
- Heller, N.E. & E.S. Zavaleta. 2009. Biodiversity management in the face of climate change: a review of 22 years of recommendations. *Biological Conservation* 142:14-32.
- Higgins, J. V., M. T. Bryer, M. L. Khoury, and T. W. Fitzhugh. 2005. A freshwater classification approach for biodiversity conservation planning. *Conservation Biology* 19:432-445.
- Hilty, J., A., W.Z. Lindecker and A.M. Merenlender. 2006. *Corridor ecology: linking landscapes for biodiversity conservation*. Island Press, Washington D.C.
- Hunter, M.L., G. Jacobsen, and T. Webb. 1988. Paleoeology and coarse filter approach to maintaining biological diversity. *Conservation Biology* 2:375-385.
- Inman, R.M., M.L. Packila, K.H. Inman, A.J. Mccue, G.C. White, J. Persson, B.C. Aber, M.L. Orme, B. C., Alt, K.L., Cain, S.L., Fredrick, J.A., Oakleaf B.J. and Sartorius, S.S. 2011. Spatial ecology of wolverines at the southern periphery of distribution. *The Journal of Wildlife Management* 76:778-792.

- Kareiva, P., H. Tallis, T. Ricketts, G. Daily, and S. Polasky. 2011. *Natural Capital: Theory and Practice of Mapping Ecosystem Services*. Oxford University Press, Oxford, UK.
- Klein, C. J., N. C. Ban, B. S. Halpern, M. Beger, E. T. Game, H. S. Grantham, A. Green, T. J. Klein, S. Kininmonth, E. Treml, K. Wilson, and H. P. Possingham. 2010. Prioritizing Land and Sea Conservation Investments to Protect Coral Reefs. *PLoS ONE* **5**:e12431.
- Leu, M., S.E. Hansen & S.T. Knick 2008. The human footprint in the west: a large scale analysis of anthropogenic impacts. *Ecological Applications* **18**:1119-1139.
- Meretsky, V.J., L.A. Maguire, F.W. Davis, D.M. Stoms, J.M. Scott, J.M. Scott, D. Figg, D.D. Goble, B. Griffith, S.E. Hende, J. VAughn, S.L. Yaffee, 2012 A state based national network for effective wildlife conservation *BioScience* **62**(11): IN Press
- Margules, C. R. and R. L. Pressey. 2000. Systematic conservation planning. *Nature* **405**:243-25
- NABCI North American Bird Conservation Initiative ,US Committee 2011. The state of the birds 2011 Report on public lands and waters. US Department of Interior: Washington, DC
- National Parks Second century Commission National Parks Second century Commission Report 2009a. Advancing the National Park Idea. National Parks Conservation Association, Washington, D.C.
- Colwell, R. S Earle, T. Knowles, G. Long, P.M. Senge 2009. National Parks Second century Commission National Parks Second century Commission Science and Natural Resources Committee Report . National Parks Conservation Association, Washington, D.C.
- Galvin, D.P. J. Fahey, B. Faustinos, G. Long, J.L. Rogers and M Wheatley 2009 National Parks Second century Commission National Parks Second century Commission Future shape of the National Park System Committee Report Report 2009. National Parks Conservation Association, Washington, D.C.
- Nel, J. L., D. J. Roux, R. Abell, P. J. Ashton, R. M. Cowling, J. V. Higgins, M. Thieme, and J. H. Viers. 2009. Progress and challenges in freshwater conservation planning. *Aquatic Conservation: Marine and Freshwater Ecosystems* **19**:474-485.
- Newmark, W.D. 1987 A land-bridge perspective on mammalian extinctions in western North American parks. *Nature* **325**:430-432.
- Newmark, W. D. 1995 Extinction of mammal populations in Western North American parks. *Conservation Biology* **9**:512- 526.

NABCI North American Bird Conservation Initiative ,US Committee 2011. The state of the birds 2011 Report on public lands and waters. US Department of Interior: Washington,DC

Noss, R.F., T.E. LaRoe III, and J.M. Scott. 1995. Endangered ecosystems of the United States: A preliminary assessment of loss and degradation. *National Biological Service Biological Report*, 28:58 pp.

Pidgorna A. 2007 Representation of waterfowl in the U.S. Fish and Wildlife Service National Wildlife Refuge System UnpublISHED dissertation University of Idaho, Moscow Idaho

Pressey,R.L. 1994. Ad Hoc reservations: forward orr backward ssteps in developing representative reserve sssystems *Conservation Biology* 8:662-668

Pressey, R. L., M. Cabeza, M. E. Watts, R. M. Cowling, and K. A. Wilson. 2007. Conservation planning in a changing world. *Trends in Ecology & Evolution* **22**:583-592.

Radeloff, V. C., S. I. Stewart, T. J. Hawbaker, U. Gimmi, A. M. Pidgeon, C. H. Flather, R. B. Hammer, and D. Helmers. 2010. Housing growth in and near United States' protected areas limits their conservation value. *Proceedings of the National Academy of Sciences*, 107(2): 940-945.

Redford, K. H., G. Amato, J. Baillie, P. Beldomenico, E. L. Bennett, N. Clum, R. Cook, G. Fonseca, S. Hedges, F. Launay, S. Lieberman, G. M. Mace, A. Murayama, A. Putnam, J. G. Robinson, H. Rosenbaum, E. W. Sanderson, S. N. Stuart, P. Thomas, and J. Thorbjarnarson. 2011. What does it mean to successfully conserve a (vertebrate) species? *BioScience* **16**:39-48.

Redford, K. H., P. Coppolillo, E. W. Sanderson, G. A. B. Da Fonseca, E. Dinerstein, C. Groves, G. Mace, S. Maginnis, R. A. Mittermeier, R. Noss, D. Olson, J. G. Robinson, A. Vedder, and M. Wright. 2003. Mapping the Conservation Landscape. *Conservation Biology* **17**:116-131.

Rodrigues, A. S. L., S. J. Andelman, M. I. Bakarr, L. Boitani, T. M. Brooks, R. M. Cowling, L. D. C. Fishpool, G. A. B. da Fonseca, K. J. Gaston, M. Hoffmann, J. S. Long, P. A. Marquet, J. D. Pilgrim, R. L. Pressey, J. Schipper, W. Sechrest, S. N. Stuart, L. G. Underhill, R. W. Waller, M. E. J. Watts, and X. Yan. 2004. Effectiveness of the global protected area network in representing species diversity. *Nature* **428**:640-643.

- Rupp,D. 2009. The strategic role of the National Wildlife Refuge System in coordinated bird conservation in the United States. Unpublished thesis University of Idaho Moscow ,Idaho
- Sanderson, E. W., M. Jaiteh, M. A. Levy, K. H. Redford, A. V. Wannebo, and G. Woolmer. 2002. The Human Footprint and the Last of the Wild. *BioScience* **52**:891-904.
- Sayre,R. ,L. Benson and J. Nations 2012, Ecosystems and protected areas-A national gap analysis US Geological Survey, Reston VA Unpublished report.
- Schwartz,M.K.,J.P. Copeland,N.J. Anderson,J.R. Squires,R.M. Inman,K.S. Mckelvey, K.L.Pilgram, L.P. Waits and S.A. Ciushman.t 2009 Wolverine gene flow across a narrow climate niche *Ecology* **90**:3222-3232.
- Scott, J. M., F. Davis, B. Csuti, R. Noss, B. Butterfield, C. Groves, H. Anderson, S. Caicco, F. D'Erchia, T. C. Edwards, Jr., J. Ulliman, and R. G. Wright. 1993. Gap Analysis: A Geographic Approach to Protection of Biological Diversity. *Wildlife Monograph* **123**:41
- Scott, J.M., R.J.F. Abbitt and C.R. Groves. 2001a. The United States Conservation Portfolio: What are we protecting? *Conservation Biology in Practice*, **2**:18-19.
- Scott, J.M., D. Murray, R.G. Wright, B. Csuti, P. Morgan, and R.L. Pressey. 2001b. Representation of natural vegetation in protected areas: Capturing the geographic range. *Biodiversity and Conservation* **10**:1297-1301
- Scott, J. M., F. Davis, B. Csuti, R. Noss, B. Butterfield, C. Groves, H. Anderson, S. Caicco, F. D'Erchia, T. C. Edwards, Jr., J. Ulliman, and R. G. Wright. 1993. Gap Analysis: A Geographic Approach to Protection of Biological Diversity. *Wildlife Monographs*:3-41.
- Scott, J.M., F.W. Davis, G. McGhie, R.G. Wright, C. Groves and J. Estes. 2001c. Nature reserves: Do they capture the full range of America's biological diversity? *Ecological Applications*, **11**:999-1007.
- Scott.,J.M., D.D. Goble, A. Haines , J. ,A. Wiens and M. Neel 2010 Conservation reliant species and the future of conservation. *Conservation Letter* **3**:91-97.
- Svancara ,L. 2010 Ecological content and context of the U.S. National Park System Unpublished Dissertation University of Idaho Moscow Idaho
- Svancara, Leona K, J. Michael Scott, Thomas R. Loveland and Anna B. Pidgorna. 2009. Assessing the landscape context and conversion risk of protected areas using remote-sensing derived data. *Remote Sensing and the Environment* **113**:1357-1369.

Teran, M. C., K. Clark, C. Suarez, F. Campos, J. Denkinger, D. Ruiz, and P. Jimenez. 2006. Analisis de Vacios e Identificacion de Areas Prioritarias para la Conservacion de la Biodiversidad Marino-Costera en el Ecuador Continental. Ministerio del Ambiente, Quito, Ecuador.

Theobald, DM, SE Reed, K Fields, and M Soule. *In press*. Connecting natural landscapes using a landscape permeability model to prioritize conservation activities in the US. *Conservation Letters*.

Wade, A.A., Theobald ,D.M. 2010. Residential development encroachment on U.S.protected areas. *Conservation Biology* 24:151-161.

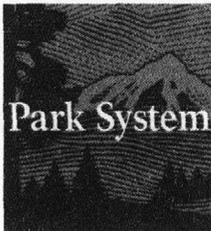
Walker, B. D. Salt 2012 Resilience in practice Island Press, Covelo, CA

West, J.M., S.H. Julius, P. Kareiva, C. Enquist, J.J. Lawler, B. Peterson, Ayana E. Johnson and M. R. Shaw 2009. U.S. Natural resources and climate change: concepts and approaches for management adaptation *Environment and Management* 44:1001-1021.

Wilson, K. A., J. Carwardine, and H. P. Possingham. 2009. Setting Conservation Priorities. *Annals of the New York Academy of Sciences* **1162**:237-264.

Woolmer, G. S. C. Trombulaak, J.C. Ray 2008 Rescaling the human footprint for conservation planning at an ecoregional scale *Landscape and Urban planning* 87:432-53. 2008

National Park System Advisory Board



Citizen advisors chartered by Congress to help the National Park Service care for special places saved by the American people so that all may experience our heritage.

Appendix C

Cultural Resources Subcommittee Report

National Park System Advisory Board

Planning Committee

November 2012

**National Park System Advisory Board
Planning Committee Report
Contributions from the Cultural Resources Subcommittee
Laura Feller, Dwight Pitcaithley, Ray Rast, and Quintard Taylor**

The Challenge

In 1989, Ed Chappell wrote of history museums in the United States

At their worst, they make evil in the past seem romantic and inequality in the present seem inevitable. At their best, museums help people to understand the rifts that separate us from one another. The time has come to stop adjusting the furniture and begin reforming our essential presentations of the past.¹

Today, this challenge still resonates not only for museums but also for custodians of historic sites like the National Park Service. As a steward of historic places, the NPS has opportunities to help the American public engage in critical thinking about the past and about how the past shapes the present and future. For many engaged in historic preservation, telling more honest, inclusive, stories is a beginning. The real prize is making historic places major sites where Americans can meet for conversations about where we, as a society, a nation and communities, can and should go from here. Historic sites can help visitors attempt the leap of imagination toward understanding the historical experiences of people whose lives have been different from their own. In an era when commercial messages occupy so much public and private space, parks and other protected areas can be important places for promoting more informed, tolerant, respectful and humane dialogue among American citizens. The “rifts” that Ed Chappell noted will never disappear, but understanding history can help us try to talk across those gulfs.

Parks can foster civic engagement and civil dialogue. Thus, NPS seeks to build a National Park System that reflects not only the voices of the disfranchised and disadvantaged, but also the historic development of fundamental structures of our society and economy. In the recent past, NPS has made strides in developing more variety and diversity in its range of historic and archeological sites and the interpretation of those sites. Still, the Service has enormous untapped potential for promoting and facilitating critical and contextual thinking about the past and its implications for civic engagement-- nationwide and in local communities.

Let's start by acknowledging some of the obstacles to, and opportunities for, reaching that potential in planning for a twenty-first century National Park System.

¹ Edward A. Chappell, “Social Responsibility and the American History Museum,” *Winterthur Portfolio* 24 (1989): 265.

- For decades, as a basis for National Park System planning for history and archeology, NPS used a taxonomic thematic framework that emphasized politics, military history, and architecture as high-style design. It also stressed the notion of “westward expansion” in interpreting European-American colonization and U.S. nation-building— in ways that excluded honest perspectives on colonialism, the dispossession of Native Americans, and the institution of slavery. The result was a park system skewed toward elites and singular political events; the system lacked comparable representation of some fundamental cultural, social, and economic underpinnings of the nation and of the experiences of its many peoples. In 1994, the NPS adopted a new thematic framework designed to reflect trends in the best of current historical and anthropological scholarship. [See it at www.nps.gov/history/history/categrs/thematic.pdf.] This new framework focuses on eight fundamental processes, from “peopling places” to “developing the American economy.” It embraces broad contexts for thinking about society, culture, politics, the environment and the economy. The old taxonomic framework shaped the National Park System for many years, and the new one has yet to be exploited fully for National Park System planning and for interpretation and education within existing NPS units. NPS has the opportunity to use this new thematic framework as a tool for more comprehensive, contextual thinking about building a representative National Park System. This tool can also serve to help existing parks re-interpret their histories using new scholarship and broader contexts.
- Some NPS managers and staff lack some of the skills and training to take advantage of this new thematic framework’s possibilities and to incorporate current scholarship into NPS cultural-resources and interpretive programs. Many are understandably concerned about engaging “controversial” and painful topics. For some, history is a recitation of a single uncontested and unchanging narrative, rather than a critical and dynamic investigation of the past from multiple points of view. There is a need to promote understanding within NPS that history is a process in which we constantly explore new and familiar evidence, and that our understanding of the meanings of that evidence changes over time. Opportunities exist for helping NPS employees build not only skills that will help them take advantage of current scholarship, but also partnerships to engage elders, scholars, and nearby communities in this work. Development of NPS-specific training “academies” is underway. NPS should also do more to encourage NPS employees to further their educations at colleges and universities. A recent report by the Organization of American Historians, *Imperiled Promise: The State of History in the National Park Service*, [www.oah.org/programs/nps/imperiled_promise.html] outlines proposals for history that may also be useful in NPS programs for archeology and ethnography.
- NPS manages important programs—the National Register of Historic Places and the National Historic Landmarks Program—that position NPS centrally within a national network for recognition of historic places outside the National Park System. Some in

NPS do not fully embrace those “external” programs, despite widespread recognition that NPS has a critical role to play as a focal point in a national system of protected areas. There is, though, long-time and growing awareness within the NPS that the National Park System alone is not an adequate tool for representing this nation’s cultural and natural diversity, and that National Park System units today need the public support that can be fostered by broad systems for recognition of resources, conservation and preservation. Respect and protection for biodiversity and cultural diversity depend upon expansive public understanding and advocacy. Because the National Register is built around a local-state-tribal-federal partnership that is the source of Register nominations, the National Register and NHL programs also provide a framework for advocacy, by local communities and national organizations, for conservation and preservation, including new NPS units and a range of other partnerships.

- NPS has tended to “stovepipe” its research, operations, and staffing in ways that divide cultural and natural resources into mutually exclusive categories. However, within NPS there has been increasing recognition that cultural and natural values often attach to the same resources. Increasing sophistication within NPS about the concept and implementation of programs for cultural landscapes and ethnographic resources, in particular, offers bridges across the outmoded natural-cultural divide.
- In the past, NPS people have tended to view and interpret individual units of the National Park System in isolation. There are opportunities for parks to band together and build interpretive programming around major themes and contexts that they share. For example, since the late 1990s, the superintendents of Civil War battlefields, in recognition of common issues that they face, have sponsored meetings and developed strategic goals in order to move all NPS Civil War battlefields forward. Efforts to build similar park clusters on other topics could be expanded, in the service of exploring “so what?” questions about the many meanings of park resources. While place-specific stories are a major and joyous aspect of visiting parks, many visitors also appreciate and want broader perspectives and fresh insights that illuminate shared concerns that face us all today.

Findings and Recommendations:

A. Gaps

NPS already has some excellent tools for identifying gaps in the National Park System. For example, the National Register and National Historic Landmarks programs reach far beyond the universe of properties that might feasibly be managed within the National Park System. Those programs already tap a wide range of stakeholders in a national system for recognition of historic properties. The National Register is founded upon nominations that arise from the expertise and enthusiasm of individuals, communities, local governments, State Historic Preservation Officers and Tribal Historic Preservation Officers. NHLs are a pool of resources

already found to meet criteria of “national significance” requisite for inclusion in the National Park System. Emphasizing those programs, this report focuses on some sources and methods for identifying gaps in the System, rather than naming individual properties that could be studied as potential new units of the NPS.

As suggested above, the current NPS thematic framework provides a broad conceptual umbrella that can guide this effort. The originators of the thematic framework in 1994 emphasized that race and ethnicity, class and gender are not only fundamental to understanding each of the eight broad process-oriented themes they identified, but also are foundational, cross-cutting threads integral to the fabric of each theme. The thematic framework is also intended to encourage cross-disciplinary and multi-disciplinary thinking and analysis.

In an effort to help initiate a longer conversation about the uses of the thematic framework, this subcommittee proposes a few preliminary thoughts:

THEME 1: Peopling Places. Here, and also related to theme eight, NPS could look harder at the history of immigration and federal immigration policy. While NPS includes Ellis Island, the Lowell National Historical Park, and a range of sites related to European-American colonization, NPS has done comparatively little with other, more recent histories of migration and mobility within the U.S. These might include the 20th-century “great migration” of African Americans northward, or the movements of New England farmers to the west and Midwest before that, as well as the multi-faceted histories of Hispanic immigration and mobility. Certainly, the history of changing norms in family structures is rich, and NPS should think about the kinds of sites that shed light on that.

THEME 2: Creating Social Institutions and Movements. There has been good work in the NHL program on various civil rights movements. Ed Linenthal, a historian and editor of the *Journal of American History*, might emphasize that the history of churches, synagogues, and mosques is too often neglected in the preservation world. San Antonio Missions is a place where NPS is navigating those waters. The Mary McLeod Bethune site reminds us that the histories of professional organizations, fraternal orders and women’s organizations are a field that could be explored further, too.

THEME 3: Expressing Cultural Values. Here, NPS could think about the history of education, from the growth of public schools and the increased importance of the high-school diploma, to the development of our much-valued systems of higher education. What should the American public understand about the history of education opportunity in this country?

THEME 4: Shaping the Political Landscape. Especially since the NHL program has looked at voting rights, there is an opportunity to explore further the history of who votes and who

doesn't, and who becomes a citizen and who doesn't. It could also be productive to think about the history of political campaigning (especially the intersections of media and money) in America.

THEME 5: Developing the American Economy. Industrialization and de-industrialization, unionization and de-unionization, are hugely influential and important. NPS has a significant number of early industrial sites like Saugus and Hopewell Furnaces, and some sites like the Homestead national monument, where industry and agriculture are framed in relatively bucolic settings. NPS could look harder at the rise and decline of heavy industry like big steel, and the rise of big “industrialized” agriculture. NPS has already done work on steel plants in the Pittsburgh area. Also neglected and important is the history of extraction of natural resources—mines, oil, lumbering, and natural gas.

THEME 6: Expanding Science and Technology. Telecommunications and the development of the computer loom large in this area. It may be too early for NPS to look at the history of the Internet, but NPS could help illuminate the historic, technological contexts for the beginnings of the current communications explosion.

THEME 7: Transforming the Environment. There's some overlap here with the extractive-industry and big-agriculture histories NPS might consider. Of course, the histories of land conservation and environmental awareness merit more attention. This is an opportunity for NPS to examine its own contributions in critical, contextual ways.

THEME 8: Changing Role of the U.S. in the World Community. Besides immigration as mentioned above, this topic involves questions surrounding the history of when and how the U.S. decides to go to war, and when and how the U.S. has supported the notion of a standing army. It seems that there's relatively little space in the national parks right now where NPS addresses the history of American diplomacy.

With the thematic framework in mind, NPS can also employ a number of other existing programs to address gaps in the System's representations of U.S. history. For example, this subcommittee recommends that NPS also consider and analyze the following:

- Listings of National Register properties, NHLs and National Park System areas that classify those historic properties according to the “areas of significance” categories developed for the National Register. The National Register list, in particular, can help NPS identify and understand trends in NR listings over time to illuminate SHPO and THPO priorities and how they may shift and develop.
- State Historic Preservation Plans
- Tribal Historic Preservation Officers' nominations to the National Register.

To address further questions such as gaps in the representation of sites of importance to minority populations, NPS should reach out to leading scholars in those fields of study, engage them in sustained

conversations, and make available to them the lists of relevant resources that are already represented in the National Register, National Park System, and National Historic Landmarks program. Existing relationships with groups such as the Organization of American Historians will be helpful in making contacts and building advisory groups.

B. Integrity; standard and practice

In thinking about institutional obstacles to broader recognition and better representation of American history and culture, this subcommittee has discussed application of NR and NHL standards for integrity of historic properties, standards that are part of the system for evaluating historical significance. Based upon his experiences working with sites connected with Cesar Chavez, Ray Rast has joined others in identifying as a problem the rigid interpretation of the criterion of “integrity” in evaluating the significance of properties for National Register and NHL eligibility. He says “The emphasis that the National Register, NHL Program, and NPS Management Policies place on integrity privileges bricks and mortar over historical meaning and social value.”² Integrity in the NR and NHL programs generally means “the ability of a property to convey its significance” and “the authenticity of a property’s historic identity, evidenced by the survival of physical characteristics that existed during the property’s prehistoric or historic period.” Properties connected with social movements, painful events, and non-elite lives often have been at a disadvantage in garnering official, private and local attention and protections that would lead to the kinds of initial and long-term formal preservation efforts that take into account official notions of “integrity.” As a result, such properties may also start at a disadvantage in the search for NR and NHL recognition. This can have the unintended consequence of discouraging the kind of local and “grassroots” activity that is crucial if the NR and NHL programs are to be tools for community empowerment and strengthening community identities. As Dr. Rast has said of stakeholders in the Cesar Chavez study,

When they realized, in some cases, that their efforts to modify buildings in order to perpetuate their use actually compromised the integrity of those buildings, they expressed deep frustration with an agency that seemed to “punish” them for maintaining their buildings in the manner their needs and resources allowed. In other cases, they pointed out that certain properties were modified because they were *not* under their control. Ultimately they expressed disappointment in an agency that asked for their support but seemed disinclined to acknowledge, respect, and serve their needs.³

It is also true that the protection and treatment of physical fabric is a cornerstone of the responsibilities of federal agencies under Section 106 of the National Historic Preservation Act. The section 106 process requires of federal agencies certain types of review and planning that many federal officials might consider onerous if applied to sites where no historic fabric remains.

² Ray Rast, “Beyond Bricks and Mortar: Notes on Integrity” (draft paper presented to the National Park System Advisory Board, August 14, 2012), 14.

³ *Ibid.*, 6.

This subcommittee makes the following recommendations about this question:

- National Register and NHL managers should review existing guidance on evaluation of integrity. Current managers note that integrity standards require flexibility in their application, taking into account the nature of the property and property type, and its rarity or representativeness. They note that there has been progress in this area, and acknowledge that judging integrity is a subjective process, though it must be based on good precedents and best practices. An open, inclusive review of guidelines on integrity could make that flexibility explicitly clear, while also outlining principles that will prevent this aspect of the process from seeming arbitrary and capricious.
- A related term of art in the NR and NHL programs is “period of significance.” This requires a sophisticated analysis of what should be considered the time when a given property achieved its significance for NR and NHL purposes. This subcommittee suggests that NR and NHL managers place renewed emphasis, since historic properties do change over time, on recognition that layers of changes may deserve consideration in establishing a period of significance that is thoughtful, informed by good scholarship, responsible and inclusive. Many recognize that a continuum of use may indeed be historically significant, compared to one moment in time or the date of initial construction. This recognition can and should be expanded and more institutionalized.
- NPS should also continue its efforts to coordinate National Environmental Policy Act reviews with Section 106 processes, in cooperation with the Advisory Council on Historic Preservation. Some preservationists, including some SHPOs, see NEPA as a tool more flexible than Section 106 for embracing a range of issues and values in the human environment, including “intangible” aspects of cultural expression and sacred sites.
- NPS should continue to use and develop tools and methods for identifying, evaluating and protecting cultural landscapes and ethnographic resources. Those resource types provide opportunities and sophisticated models for evaluating change over time (and thus integrity questions) as well as the relationships of tangible and intangible resource values and stories.

C. Interpretation, Education, Outreach

Ray Rast’s points about integrity raise the larger question: how best can specific sites and “brick and mortar” venues be linked to larger stories and fundamental social, cultural, and economic themes? This subcommittee recommends, as suggested above, that NPS further pursue opportunities to enhance and diversify stories told at existing NPS units. Models for this include not only the initiative of the Civil War battlefield superintendents, but also NPS participation in the International Coalition of Sites of Conscience by the Northeast Region of the NPS. The thematic framework lists contexts that can help individual parks review their current interpretive plans and operations. Among the types of programs that could be further developed and supported, to help NPS in this area, are the site-visit program sponsored by the Organization of American Historians, academic field schools in parks, scholars-in-residence, and less formal connections

with cultural organizations and academic institutions who might conduct research in parks, sponsor lectures and other events, or participate in the training of seasonal interpreters.

Finally, this subcommittee recommends that NPS exploit emerging interpretive and educational media and partnerships that have enormous potential to address the challenge that Dr. Rast has posed about “historical meaning and social value.” For a variety of reasons, some important stories do not neatly fit within NPS’ traditional systems for recognition of historic properties that meet NR and NHL criteria. The reasons for this may include losses of historic places and fabric, and the fact that some stories involve intangible more than built, physical aspects of human experiences, aspirations, and endeavors. NPS already assists partners with interpretive planning through some existing programs such as the American Battlefield Protection Program, and National Heritage Areas. Some parks, like the Keweenaw National Historical Park in its listings of Keweenaw Heritage Sites, have reached out to neighboring historic places that interpret history related to the park’s stories.

NPS already manages programs, as well as parks, that illuminate major stories of broad geographical sweep, such as the Underground Railroad Network to Freedom. One interpretive possibility is development of more interactive, electronic, broad-based mapping of some major historical themes and trends. New interpretive technologies might make it more feasible to present to the public mapping of important stories such as early 20th-century migrations of African Americans north and west, or World War II migration of blacks to the West Coast, or the routes of Latino migrant workers as they harvested crops from Texas to Washington and back. “Follow the trail” approaches might even be applied to “movements” as varied as the march of individual states to ratify women’s suffrage before 1920, or the expansion of national networks including railroads, telephones, television and radio, electricity and interstate highways. The subcommittee recommends that NPS look at the possibilities of new interpretive media to link sites connected with such broad themes.

We also recommend that NPS cultivate local allies to help tell these stories, such as libraries, museums, colleges and universities, and historical societies. “Virtual” mapping could be appealing to organizations that are on or near mapped routes. Such institutions could advise on development of interpretive media, and also help distribute literature, and information about NPS educational materials and other educational resources such as the website www.blackpast.org. Not all such local institutions would embrace this role or accept the themes pursued, but NPS could ally with those who do.

The NPS is justly proud of its preservation/conservation mission and its responsibilities as a key part of a national network of protected places. That mission and those responsibilities are for NPS to serve and guard staunchly. NPS also has opportunities to participate in partnerships for interpretive and educational programs. The voices of those involved in commemorative aspects of cultural heritage programs, and new-media possibilities for interpretive programs, deserve more NPS attention.

NHL's by Significance Topic Categories in the National Register Data Base

The following list was developed by John Byrne, National Register Database Manager. It reflects an inquiry of the data base for areas of significance for National Historic Landmarks. The results do not reflect a complete contemporary analysis of all the significance topics that might be represented by existing NHL's: many of the entries are decades old, and a given NHL can have multiple areas of significance, so the totals exceed the actual number of NHL's.

AGRICULTURE	64
ARCHITECTURE	1096
ART	136
ASIAN	10
BLACK	92
COMMERCE	233
COMMUNICATIONS	43
COMMUNITY PLANNING AND DEVELOPMENT	53
CONSERVATION	68
ECONOMICS	21
EDUCATION	150
ENGINEERING	167
ENTERTAINMENT/RECREATION	88
EUROPEAN	21
EXPLORATION/SETTLEMENT	213
HEALTH/MEDICINE	34
HISPANIC	8
HISTORIC - ABORIGINAL	77
HISTORIC - NON-ABORIGINAL	67
INDUSTRY	178
INVENTION	54
LANDSCAPE ARCHITECTURE	116
LAW	33
LITERATURE	108
MARITIME HISTORY	75
MILITARY	374
NATIVE AMERICAN	51
OTHER	21
OTHER-ETHNIC	1
PACIFIC-ISLANDER	7
PERFORMING ARTS	48
PHILOSOPHY	7
POLITICS/GOVERNMENT	448
PREHISTORIC	162
RELIGION	94
SCIENCE	132
SOCIAL HISTORY	304
TRANSPORTATION	190

Total 5044
(reflects counting some NHL's for more than one topic)

**Parks listed by Historical Themes As They Appear on the NPS Park History Website
Compiled by Warren Brown, February, 2012**

Notes:

- the first 6 themes include a list of subthemes, but then subtheme listings stop.
- the lists include a mix of NPS units along with some heritage areas, affiliated areas, and trails.
- the parks listed under “government-constitution” and “government-foreign relations” are the same. This appears to be an error as the list under foreign relations does not match the narrative.
- the link to the maritime theme goes to the NPS maritime history program that lists both NHL’s and units by state. The NPS units have been extracted from that list for this summary.
- the link to military-civil war goes to the civil war 150 website, and does not seem to provide a list of parks.
- the number of sites listed under individual themes range from just one: Independence NHP under Economics to 69 under Ethnic Heritage- Native American..
- this list of parks by theme was reported to have been compiled around 1999, but has been periodically updated to reflect new authorizations.

•Agriculture (6)

- A.Era of Adaptation, 1607-1763
- B.Plantation Agriculture, 1607-1860
- C.Era of Subsistence Agriculture, 1763-1820
- D.The Plantation Breaks up, Sharecropping, and Tenant Farming, 1860-
- E.Mechanical Agriculture as Business Enterprise Beyond Self-Sufficiency, 1820-
- F.Farming on the East Coast for Local Markets (Dairying, Fruits, and Vegetables)

- Ebey's Landing National Historical Reserve
- Grant-Kohrs Ranch National Historic Site
- Green Springs Historic District*
- Homestead National Monument of America
- Tallgrass Prairie National Preserve
- Timucuan Ecological and Historic Preserve: Kingsley Plantation

•Architecture (36)

- A. Colonial (1600-1730)
- B. Georgian (1730-1780)
- C. Federal (1780-1820)

D. Greek Revival (1820-1840)
E. Gothic Revival (1830-1915)
F. Romanesque Revival (1840-1900)
G. Renaissance Revival (1810-1920)
H. Exotic Revivals (1830-1860)
I. Second Empire (1850-1890)
J. Stick Style (1860-1890)
K. Queen Anne-Eastlake (1880-1900)
L. Shingle Style
M. Period Revivals (1870-1940)
N. Commercial (1890-1915)
O. Sullivanesque (1890-1915)
P. Prairie (1890-1915)
Q. Bungalow (1890-1940)
R. Craftsman (1890-1915)
S. Wrightian (1887-present)
T. Moderne-Art Deco (1920-1945)
U. International (1915-1945)
V. Historic District (multiple styles and dates)
W. Regional and Urban Planning
X. Vernacular Architecture
Y. Rustic Architecture

- Adams National Historic Park
- Arlington House, The Robert E. Lee Memorial
- Bandelier National Monument
- Boston National Historical Park
- Bryce Canyon National Park
- Christiansted National Historic Site
- Colonial National Historical Park
- Crater Lake National Park
- Federal Hall National Memorial
- Glacier National Park
- Gloria Dei Church National Historic Site*
- Golden Gate National Recreation Area
- Grand Canyon National Park
- Green Springs Historic District*
- Hampton National Historic Site
- Hot Springs National Park
- Independence National Historical Park
- Jefferson National Expansion Memorial
- Lincoln Memorial
- Longfellow National Historic Site
- Martin Van Buren National Historic Site
- Mesa Verde National Park
- Morristown National Historical Park

- Mount Rainier National Park
- Oregon Caves National Monument
- Petrified Forest National Park
- Salem Maritime National Historic Site
- San Antonio Missions National Historical Park
- Sitka National Historical Park
- Touro Synagogue National Historic Site*
- Tumacacori National Historical Park
- Vanderbilt Mansion National Historic Site
- Washington Monument
- White House
- Yellowstone National Park
- Yosemite National Park

•**Art (7)**

- A. Early American Provincial Painting, 1676-1726
- B. Baroque in America, 1720-1776
- C. Neoclassicism, 1780-1820
- D. Romanticism
- E. European Influences, 1876-1920
- F. Realism, 1850-1926
- G. Historical Painting and Sculpture: Memory and Dreams, 1876-1908
- H. The 20th Century, 1900-1930
- I. The Second Generation, 1920-
- J. World War II to the Present, 1939-
- K. Supporting Institutions

- Gettysburg National Military Park
- Mount Rushmore National Memorial
- National Capital Parks- Central
- Saint-Gaudens National Historic Site
- Statue of Liberty National Monument
- Vicksburg National Military Park
- Weir Farm National Historic Site

•**Commemoration (13)**

- Abraham Lincoln Birthplace National Historic Site
- Boston National Historical Park
- Chickamauga and Chattanooga National Military Park
- General Grant National Memorial
- Gettysburg National Military Park
- Jefferson National Expansion Memorial
- Lincoln Memorial
- Mount Rushmore National Memorial
- National Capital Parks- Central
- Perry's Victory and International Peace Memorial

- Statue of Liberty National Monument
- Vicksburg National Military Park
- Washington Monument

•**Commerce (12)**

- A. Extractive or Mining Industries
- B. Manufacturing Organizations
- C. Construction and Housing
- D. Trade
- E. Finance and Banking
- F. Insurance
- G. Service Industry
- H. Power and Lighting
- I. Accounting
- J. Defense
- K. Business Organization
- L. Shipping and Transportation
- M. Supporting Institutions

- Bent's Old Fort National Historic Site
- Chicago Portage National Historic Site*
- Fort Union Trading Post National Historic Site
- Fort Vancouver National Historic Site
- Grand Portage National Monument
- Hubbell Trading Post National Historic Site
- Indiana Dunes National Lakeshore
- Keweenaw National Historical Park
- McLoughlin House National Historic Site
- Salem Maritime National Historic Site
- San Francisco Maritime National Historical Park
- Santa Fe National Historic Trail

•**Communications (4)**

- A. Written Word (Newspapers and Periodicals)
- B. Mail Service (Overland, Water, and Air Routes)
- C. Telegraph and Telephone
- D. Radio
- E. Television
- F. Post World War II Electronic
- G. Spoken Word (Oratory and Public Speaking)

- Cape Cod National Seashore
- Pipe Spring National Monument
- Pony Express National Historic Trail
- Scotts Bluff National Monument

•Community (14)

- A. Slavery and Plantation Life
- B. Farming Communities
- C. Industrial Towns
- D. Urban Life
- E. Ethnic Communities (including the Immigration Phenomenon)
- F. Industrial Wealth of the Last Half of 19th Century
- G. Consumer Society of the 20th Century
- H. Suburban Life
- I. Domesticity and Family Life
- J. Occupational and Economic Classes

- Blackstone River Valley National Heritage Corridor*
- Boston African American National Historic Site
- Boston National Historical Park
- Cane River Creole National Historical Park
- Colonial National Historical Park
- Jean Lafitte National Historical Park and Preserve
- Kalaupapa National Historical Park
- Klondike Gold Rush National Historical Park
- Lowell National Historical Park
- Maggie L. Walker National Historic Site
- Manzanar National Historic Site
- Natchez National Historical Park
- Nicodemus National Historic Site
- Pu'uhonua O Honaunau National Historical Park

•Economics (1)

- Independence National Historical Park

•Education (4)

- Booker T. Washington National Monument
- Brown v. Board of Education National Historic Site
- Harpers Ferry National Historic Park
- Tuskegee Institute National Historic Site

•Entertainment/Performing Arts (4)

- Castle Clinton National Monument
- Eugene O'Neill National Historic Site
- New Orleans Jazz National Historical Park
- Wolf Trap Farm Park for the Performing Arts

•Environmental Conservation: Historic Preservation (5)

- Casa Grande Ruins National Monument
- Chickamauga and Chattanooga National Military Park
- Colonial National Historical Park
- Independence National Historical Park
- Lincoln Home National Historic Site

•Environmental Conservation: Natural Conservation (11)

- Acadia National Park
- Denali National Park and Preserve
- Everglades National Park
- Frederick Law Olmsted National Historic Site
- Great Smoky Mountains National Park
- John Muir National Historic Site
- Marsh-Billings National Historical Park
- Sagamore Hill National Historic Site
- Shenandoah National Park
- Yellowstone National Park
- Yosemite National Park

•Ethnic Heritage: African American (28)

- Booker T. Washington National Monument
- Boston African American National Historic Site
- Brown v. Board of Education National Historic Site
- Cane River Creole National Historical Park
- Colonial National Historical Park
- Dayton Aviation Heritage National Historical Park
- Fort Davis National Historic Site
- Fort Scott National Historic Site
- Frederick Douglass National Historic Site
- George Washington Carver National Monument
- Hampton National Historic Site
- Harpers Ferry National Historical Park
- Jean Lafitte National Historical Park and Preserve
- Lincoln Memorial
- Little Rock Central High School
- Maggie L. Walker National Historic Site
- Martin Luther King, Jr., National Historic Site
- Mary McLeod Bethune Council House National Historic Site
- New Orleans Jazz National Historical Park
- Nicodemus National Historic Site
- Perry's Victory and International Peace Memorial
- Petersburg National Battlefield
- Port Chicago Naval Magazine National Memorial
- Richmond National Battlefield Park

- Selma to Montgomery National Historic Trail
- Timucuan Ecological and Historic Preserve
- Tuskegee Institute National Historic Site
- Virgin Islands National Park

•Ethnic Heritage: Alaska Native (5)

- Bering Land Bridge National Preserve
- Katmai National Park and Preserve
- Northwest Alaska Areas
- Lake Clark National Park and Preserve
- Sitka National Historical Park

•Ethnic Heritage: American Indian (70)

- Alibates Flint Quarries National Monument
- Aztec Ruins National Monument
- Bandelier National Monument
- Bent's Old Fort National Historic Site
- Bering Land Bridge National Preserve
- Big Cypress National Preserve
- Big Hole National Battlefield
- Bighorn Canyon National Recreation Area
- Canyon de Chelly National Monument
- Casa Grande Ruins National Monument
- Chaco Culture National Historical Park
- Colonial National Historical Park
- Delaware Water Gap National Recreation Area
- Effigy Mounds National Monument
- El Malpais National Monument
- Everglades National Park
- Fort Bowie National Historic Site
- Fort Laramie National Historic Site
- Fort Larned National Historic Site
- Fort Raleigh National Historic Site
- Fort Scott National Historic Site
- Fort Smith National Historic Site
- Fort Stanwix National Monument
- Fort Union Trading Post National Historic Site
- Gates of the Arctic National Park and Preserve
- Gila Cliff Dwellings National Monument
- Grand Portage National Monument
- Great Smoky Mountains National Park
- Hohokam Pima National Monument

- Hopewell Culture National Historical Park
- Horseshoe Bend National Military Park
- Hovenweep National Monument
- Hubbell Trading Post National Historic Site
- Jefferson National Expansion Memorial
- Katmai National Park and Preserve
- Knife River Indian Villages National Historic Site
- Lake Clark National Park and Preserve
- Lake Roosevelt National Recreation Area
- Lava Beds National Monument
- Little Bighorn Battlefield National Monument
- Mesa Verde National Park
- Montezuma Castle National Monument>
- Natchez Trace Parkway
- Navajo National Monument
- Nez Perce National Historical Park
- Northwest Alaska Areas
- Ocmulgee National Monument
- Pea Ridge National Military Park
- Pecos National Historical Park
- Petroglyph National Monument
- Pipestone National Monument
- Piscataway Park
- Poverty Point National Monument
- Russell Cave National Monument
- Salinas Pueblo Missions National Monument
- San Antonio Missions National Historical Park
- Sand Creek Massacre National Historic Site
- Shiloh National Military Park
- Sitka National Historical Park
- Timucuan Ecological and Historic Preserve
- Tonto National Monument
- Trail of Tears National Historic Trail
- Tumacacori National Historical Park
- Tuzigoot National Monument
- Walnut Canyon National Monument
- Washita Battlefield National Historic Site
- Whitman Mission National Historic Site
- Wupatki National Monument
- Yosemite National Park
- Yucca House National Monument

•**Ethnic Heritage: Asian American (3)**

- Golden Spike National Historic Site
- Manzanar National Historic Site

- Minidoka Internment National Historic Site

•Ethnic Heritage: European (25)

- Arkansas Post National Memorial
- Blackstone River Valley National Heritage Corridor*
- Castle Clinton National Monument
- Chesapeake and Ohio Canal National Historical Park
- Christiansted National Historic Site
- Colonial National Historical Park
- Father Marquette National Memorial*
- Fort Caroline National Memorial
- Fort Frederica National Monument
- Fort Necessity National Battlefield
- Fort Raleigh National Historic Site
- Gloria Dei Church National Historic Site*
- Grand Portage National Monument
- Jamestown National Historic Site*
- Jean Lafitte National Historical Park and Preserve
- Keweenaw National Historical Park
- Lowell National Historical Park
- Natchez National Historical Park
- Roger Williams National Memorial
- Saint Croix Island International Historic Site
- Sitka National Historical Park
- Statue of Liberty National Monument
- Timucuan Ecological and Historic Preserve
- Virgin Islands National Park
- Voyageurs National Park

•Ethnic Heritage: Hispanic (20)

- Cabrillo National Monument
- Castillo de San Marcos National Monument
- Chamizal National Memorial
- Coronado National Memorial
- DeSoto National Memorial
- Dry Tortugas National Park
- El Morro National Monument
- Fort Matanzas National Monument
- Golden Gate National Recreation Area
- Gulf Islands National Seashore
- Juan Bautista de Anza National Historic Trail
- Padre Island National Seashore
- Palo Alto Battlefield National Historic Site

- Pecos National Historical Park
- Salinas Pueblo Missions National Monument
- Salt River Bay National Historical Park and Ecological Preserve
- San Antonio Missions National Historical Park
- San Juan National Historic Site
- Santa Fe National Historic Trail
- Tumacacori National Historical Park

•Ethnic Heritage: Pacific Islander (6)

- Hawaii Volcanoes National Park
- Kalaupapa National Historical Park
- Kaloko-Honokohau National Historical Park
- Pu'uhonua O Honaunau National Historical Park
- Puukohola Heiau National Historic Site
- War in the Pacific National Historical Park

•Exploration (15)

- Cabrillo National Monument
- Chicago Portage National Historic Site
- Coronado National Memorial
- Cumberland Gap National Historical Park
- DeSoto National Memorial
- El Morro National Monument
- Father Marquette National Memorial
- Fort Clatsop National Memorial
- Fort Smith National Historic Site
- Grand Portage National Monument
- Knife River Indian Villages National Historic Site
- Lewis and Clark National Historic Trail
- Nez Perce National Historical Park
- Pipe Spring National Monument
- Salt River Bay National Historical Park and Ecological Preserve

•Government (7)

- Federal Hall National Memorial
- Friendship Hill National Historic Site
- Homestead National Monument of America
- Independence National Historical Park
- National Capital Parks- Central
- Red Hill Patrick Henry National Memorial
- Thomas Stone National Historic Site

•Government: Constitution (7)

- Brown v. Board of Education National Historic Site
- Charles Pinckney National Historic Site
- Fire Island National Seashore
- Hamilton Grange National Memorial
- Independence National Historical Park
- Manzanar National Historic Site
- William Howard Taft

•Government: Foreign Relations (same list as constitution appears on website) ????

- Brown v. Board of Education National Historic Site
- Charles Pinckney National Historic Site
- Fire Island National Seashore
- Hamilton Grange National Memorial
- Independence National Historical Park
- Manzanar National Historic Site
- William Howard Taft National Historic Site

•Government: Law (4)

- Boston National Historical Park
- Fort Smith National Historic Site
- Golden Gate National Recreation Area
- Independence National Historical Park

•Government: Politics (7)

- Benjamin Franklin National Memorial
- Boston National Historical Park
- Charles Pinckney National Historic Site
- Fort Scott National Historic Site
- Frederick Douglass National Historic Site
- Sewall-Belmont House National Historic Site*
- Women's Rights National Historical Park

•Government: Presidents (35)

- Abraham Lincoln Birthplace National Historic Site
- Adams National Historic Site
- Andrew Johnson National Historic Site
- Eisenhower National Historic Site

- Eleanor Roosevelt National Historic Site
- Ford's Theatre National Historic Site
- First Ladies National Historic Site
- Franklin D. Roosevelt Memorial
- General Grant National Memorial
- George Washington Birthplace National Monument
- Harry S. Truman National Historic Site
- Herbert Hoover National Historic Site
- Home of Franklin D. Roosevelt National Historic Site
- James A. Garfield National Historic Site
- Jimmy Carter National Historic Site
- John Fitzgerald Kennedy National Historic Site
- Lincoln Boyhood National Memorial
- Lincoln Home National Historic Site
- Lincoln Memorial
- Lyndon B. Johnson National Historical Park
- Lyndon Baines Johnson Memorial Grove on the Potomac
- Martin Van Buren National Historic Site
- Mount Rushmore National Memorial
- Roosevelt Campobello International Park*
- Sagamore Hill National Historic Site
- Shenandoah National Park: Camp Hoover
- Theodore Roosevelt Birthplace National Historic Site
- Theodore Roosevelt Inaugural National Historic Site
- Theodore Roosevelt Island
- Theodore Roosevelt National Park: Elkhorn Ranch
- Thomas Jefferson Memorial
- Ulysses S. Grant National Historic Site
- Washington Monument
- White House
- William Howard Taft National Historic Site

•Health/Medicine (3)

- Clara Barton National Historic Site
- Hot Springs National Park
- Kalaupapa National Historical Park

•Immigration (3)

- Bering Land Bridge National Preserve
- Castle Clinton National Monument
- Statue of Liberty National Monument

•Industry (12)

- Blackstone River Valley National Heritage Corridor*

- Boston National Historical Park
- Edison National Historic Site
- Harpers Ferry National Historical Park
- Hopewell Furnace National Historic Site
- Keweenaw National Historical Park
- Klondike Gold Rush National Historical Park
- Lowell National Historical Park
- New Bedford Whaling National Historical Park
- Saugus Iron Works National Historic Site
- Springfield Armory National Historic Site
- Wrangell–St. Elias National Park and Preserve

•Intellectual Philosophy (2)

- Delaware Water Gap National Recreation Area
- Independence National Historical Park

•Labor (4)

- Keweenaw National Historical Park
- Lowell National Historical Park
- Saugus Iron Works National Historic Site
- Timucuan Ecological and Historic Preserve

•Landscape Architecture (12)

- Blackstone River Valley National Heritage Corridor
- Acadia National Park
- Blue Ridge Parkway
- Frederick Law Olmsted National Historic Site
- George Washington Memorial Parkway
- Glacier National Park
- Grand Canyon National Park
- Mount Rainier National Park
- National Capital Parks- Central
- National Mall
- Pennsylvania Avenue National Historic Site
- Vanderbilt Mansion National Historic Site

•Literature (9)

- Adams National Historic Site
- Carl Sandburg Home National Historic Site
- Dayton Aviation Heritage National Historical Park
- Edgar Allan Poe National Historic Site
- Eugene O'Neill National Historic Site
- John Muir National Historic Site
- Longfellow National Historic Site

- Minute Man National Historical Park
- Upper Delaware Scenic and Recreational River
- Maritime** (62) (website links to Maritime History program and a list of NHL's along with units by state- NHL's deleted from the list that follows)
 - Aleutian World War II National Historic Area
 - Cabrillo National Monument
 - Channel Islands National Park
 - Fort Point National Historic Site
 - Golden Gate National Recreation Area
 - Point Reyes National Seashore
 - Port Chicago Naval Magazine National Memorial
 - San Francisco Maritime National Historic Park
 - Biscayne National Park
 - Canaveral National Seashore
 - Castillo de San Marcos National Monument
 - De Soto National Memorial
 - Dry Tortugas National Park
 - Fort Caroline National Memorial
 - Cumberland Island National Seashore
 - Fort Frederica National Monument
 - Fort Pulaski National Monument
 - War in the Pacific National Memorial
 - Kalaupapa National Historical Park
 - USS Arizona Memorial
 - Illinois and Michigan Canal National Heritage Corridor
 - Indiana Dunes National Lakeshore
 - Acadia National Park
 - St. Croix Island International Historic Site
 - Assateague Island National Seashore
 - Fort McHenry National Monument and Historic Shrine
 - Fort Washington Park (National Capital Parks - East)
 - Boston Harbor Islands National Recreation Area
 - Boston National Historic Park
 - Charlestown Navy Yard
 - Cape Cod National Seashore
 - Essex National Heritage Area
 - New Bedford Whaling National Historical Park
 - Salem Maritime National Historic Site
 - Isle Royale National Park
 - Pictured Rocks National Lakeshore
 - Sleeping Bear Dunes National Lakeshore
 - Vicksburg National Military Park
 - Chesapeake and Ohio Canal National Historical Park - Potomac River, DC, MD, WV
 - Chesapeake Bay Gateways Network - Chesapeake Bay Watershed, DC, MD, NY, PA, VA, WV
 - Gulf Islands National Seashore - FL & MS

Gateway National Recreation Area, Sandy Hook Unit
New Jersey Coastal Heritage Trail Route
Castle Clinton National Monument
Fire Island National Seashore
Gateway National Recreation Area, Staten Island Unit
Statue of Liberty National Monument
Cape Hatteras National Seashore
Cape Lookout National Seashore
Fort Raleigh National Historic Site
Perry's Victory and International Peace Memorial
San Juan National Historic Site
Fort Moultrie National Monument
Fort Sumter National Monument
Fort Donelson National Battlefield
Padre Island National Seashore
Christiansted National Historic Site
Assateague Island National Seashore
Colonial National Historical Park
George Washington Memorial Parkway
Ebey's Landing National Historical Reserve
Apostle Islands National Lakeshore

•**Military (17)**

- Boston National Historical Park
- Castillo de San Marcos National Monument
- Castle Clinton National Monument
- Dry Tortugas National Park
- Fort Laramie National Historic Site
- Fort Smith National Historic Site
- Fort Point National Historic Site
- Fort Union National Monument
- Fort Washington Park
- Gateway National Recreation Area
- Golden Gate National Recreation Area
- Gulf Islands National Seashore
- Minuteman Missile NHS (web page under construction)
- San Juan Island National Historical Park
- San Juan National Historic Site
- Sitka National Historical Park
- Springfield Armory National Historic Site

•**Military: Civil War** (links to Civil War 150 website, not a list, but (53) appear on NPS website under Civil War)

•**Military: Colonial Wars (4)**

- Castillo de San Marcos National Monument
- Fort Frederica National Monument
- Fort Matanzas National Monument
- Fort Necessity National Battlefield

•**Military: Korean War (2)**

- Harry S. Truman National Historic Site
- Korean War Veterans Memorial

•**Military: Mexican War (1)**

- Palo Alto Battlefield National Historic Site

•**Military: Military-Indian Conflicts (11)**

- Big Hole National Battlefield
- Fort Bowie National Historic Site
- Fort Davis National Historic Site
- Fort Laramie National Historic Site
- Fort Larned National Historic Site
- Horseshoe Bend National Military Park
- Lava Beds National Monument
- Little Bighorn Battlefield National Monument
- Nez Perce National Historic Trail*
- Nez Perce National Historical Park
- Washita Battlefield National Historic Site

•**Military: Revolutionary War (20)**

- Adams National Historic Site
- Boston National Historical Park
- Colonial National Historical Park: Yorktown
- Cowpens National Battlefield
- Fort Stanwix National Monument
- Historic Camden*
- George Rogers Clark National Historical Park
- Guilford Courthouse National Military Park
- Independence National Historical Park
- Kings Mountain National Military Park
- Longfellow National Historic Site
- Minute Man National Historical Park
- Moores Creek National Battlefield
- Morristown National Historical Park
- Ninety Six National Historic Site
- Overmountain Victory National Historic Trail*

- Saint Paul's Church National Historic Site
- Saratoga National Historical Park
- Thaddeus Kosciuszko National Memorial
- Valley Forge National Historical Park

•Military: Vietnam War (2)

- Lyndon B. Johnson National Historical Park
- Vietnam Veterans Memorial

Military: War of 1812 (4)

- Fort McHenry National Monument and Historic Shrine
- Horseshoe Bend National Military Park
- Jean Lafitte National Historical Park and Preserve
- Perry's Victory and International Peace Memorial

•Military: World War II (17)

- Aleutian World War II National Historic Area
- American Memorial Park
- Boston National Historical Park
- Eisenhower National Historic Site
- Fort Moultrie National Monument
- Fort Point National Historic Site
- Golden Gate National Recreation Area
- Gulf Islands National Seashore
- Harry S. Truman National Historic Site
- Home of Franklin D. Roosevelt National Historic Site
- Manzanar National Historic Site
- Minidoka Internment National Monument
- Port Chicago Naval Magazine National Memorial
- Rosie the Riveter WW II Home Front National Historical Park
- Tuskegee Airmen National Historic Site
- USS Arizona Memorial
- War in the Pacific National Historical Park

•Recreation (6)

- Acadia National Park
- Appalachian National Scenic Trail
- Hot Springs National Park
- John Muir National Historic Site
- Lake Mead National Recreation Area
- Mount Rainier National Park: Paradise Inn

•Religion (14)

- Boston African American National Historic Site
- Father Marquette National Memorial
- Independence National Historical Park
- Mormon Pioneer National Historic Trail*
- Ocmulgee National Monument
- Pecos National Historical Park
- Pipe Spring National Monument
- Puukohola Heiau National Historic Site
- Roger Williams National Memorial
- Salinas Pueblo Missions National Monument
- San Antonio Missions National Historical Park
- Touro Synagogue National Historic Site*
- Tumacacori National Historical Park
- Whitman Mission National Historic Site

•Science (5)

- Agate Fossil Beds National Monument
- Dinosaur National Monument
- Edison National Historic Site
- Independence National Historical Park
- John Day Fossil Beds National Monument

•Settlement/Migration (46)

- Arkansas Post National Memorial
- Bent's Old Fort National Historic Site
- California National Historic Trail*
- Castillo de San Marcos National Monument
- Chimney Rock National Historic Site*
- Christiansted National Historic Site
- City of Rocks National Reserve
- Colonial National Historical Park
- Cumberland Gap National Historical Park
- Ebey's Landing National Historical Reserve
- Fort Caroline National Memorial
- Fort Davis National Historic Site
- Fort Frederica National Monument
- Fort Laramie National Historic Site
- Fort Larned National Historic Site
- Fort Raleigh National Historic Site
- Fort Scott National Historic Site

- Fort Smith National Historic Site
- Fort Union National Monument
- Fort Vancouver National Historic Site
- Golden Gate National Recreation Area
- Grant-Kohrs Ranch National Historic Site
- Homestead National Monument of America
- Illinois and Michigan Canal National Heritage Corridor*
- Indiana Dunes National Lakeshore
- Jamestown National Historic Site
- Jefferson National Expansion Memorial
- Juan Bautista de Anza National Historic Trail
- Klondike Gold Rush National Historical Park
- McLoughlin House National Historic Site
- Mormon Pioneer National Historic Trail*
- Nicodemus National Historic Site
- Oregon National Historic Trail*
- Pecos National Historical Park
- Pipe Spring National Monument
- Roger Williams National Memorial
- Saint Croix Island International Historic Site
- Salinas Pueblo Missions National Monument
- San Antonio Missions National Historical Park
- San Juan Island National Historical Park
- Scotts Bluff National Monument
- Sitka National Historical Park
- Trail of Tears National Historic Trail
- Tumacacori National Historical Park
- Voyageurs National Park
- Whitman Mission National Historic Site

•Social and Humanitarian Movements (11)

- Boston National Historical Park
- Brown v. Board of Education National Historic Site
- Clara Barton National Historic Site
- Eleanor Roosevelt National Historic Site
- Frederick Douglass National Historic Site
- Harpers Ferry National Historical Park
- Johnstown Flood National Memorial
- Martin Luther King, Jr., National Historic Site
- Mary McLeod Bethune Council House National Historic Site
- Sewall-Belmont House National Historic Site
- Women's Rights National Historical Park

•Technology and Engineering (18)

- Alibates Flint Quarries National Monument
- Benjamin Franklin National Memorial
- Boston National Historical Park
- Cape Cod National Seashore
- Dayton Aviation Heritage National Historical Park
- Edison National Historic Site
- Gateway National Recreation Area
- George Washington Memorial Parkway
- Golden Spike National Historic Site
- Jefferson National Expansion Memorial
- Keweenaw National Historical Park
- Lowell National Historical Park
- Minuteman Missile National Historic Site
- San Antonio Missions National Historical Park
- Saugus Iron Works National Historic Site
- Springfield Armory National Historic Site
- Upper Delaware Scenic and Recreational River
- Wright Brothers National Memorial

•**Tourism (5)**

- Glacier National Park
- Grand Canyon National Park
- Hot Springs National Park
- Yellowstone National Park
- Yosemite National Park

•**Transportation (17)**

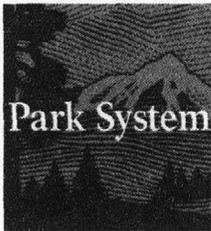
- Allegheny Portage Railroad National Historic Site
- Boston National Historical Park
- Chesapeake and Ohio Canal National Historical Park
- Chicago Portage National Historic Site*
- Cumberland Gap National Historical Park
- Cuyahoga Valley National Park
- Dayton Aviation Heritage National Historical Park
- Delaware Water Gap National Recreation Area*
- Fort Necessity National Battlefield
- Golden Spike National Historic Site
- Grand Portage National Monument
- Illinois and Michigan Canal National Heritage Corridor*
- Klondike Gold Rush National Historical Park
- Salem Maritime National Historic Site
- San Francisco Maritime National Historical Park
- Steamtown National Historic Site

- Wright Brothers National Memorial

- Women (10)**

- Clara Barton National Historic Site
- Eleanor Roosevelt National Historic Site
- Johnstown Flood National Memorial
- Lowell National Historical Park
- Maggie L. Walker National Historic Site
- Mary McLeod Bethune Council House National Historic Site
- Pipe Spring National Memorial
- Sewall-Belmont House National Historic Site
- Whitman Mission National Historic Site
- Women's Rights National Historical Park

National Park System Advisory Board



Citizen advisors chartered by Congress to help the National Park Service care for special places saved by the American people so that all may experience our heritage.

Appendix D

Large Landscape Conservation Case Studies

National Park System Advisory Board

Planning Committee

November 2012

**National Park System Advisory Board
Planning Committee
Large Landscape Conservation Case Study
Boston Harbor Islands National Recreation Area
Gretchen Long**

What It Is and Why It Started

Boston Harbor Islands National Recreation Area was established in the mid nineties as an outgrowth of the clean up of Boston Harbor. Located one mile from downtown Boston, it is a mosaic of islands and peninsulas throughout the harbor which comprise the recreation area. Each of the 34 islands is quite distinctive and represents individual histories and differing resources. Only a partial number of the islands are open to the public, available by scheduled ferry transportation. The park service is evident primarily at Georges Island and Spectacle Island. The NPS owns only a small fraction of the property, specifically Long Island, with a light house. The Massachusetts Department of Conservation and Recreation owns 16 of the islands. Other owners include the Trustees of Reservations and Outward Bound.

Managed by a variety of government, non profit and for profit entities, the BOHA is a unique national park, successful because of the sustained efforts of the partners who hold a shared vision, and influenced by the NPS. It is an urban park within marine resources.

Its Goals and Purposes

BOHA offers recreational, cultural and historical resources to the greater Boston area, and sets a standard for stewardship of these once overlooked islands. That it became a unit of the National park System in 1996 greatly increased the visibility and sense of inspiration of the resource.

The islands and the harbor waters are now considered a great amenity of Boston, and as such attract visitors from around the country and the world. Located closely to Quincy Market and the downtown Fanueil Hall historic district, near to the Boston Aquarium, it is part of the economic engine of a revitalized city of Boston.

BOHA is increasingly active in engaging urban youth, both through the educational program at Thompson Island, run by Outward Bound, and by the free services offered by the Island Alliance which over time has offered free admissions to 15,000.

How It Is Structured or Organized

BOHA is comprised of a standing partnership composed of twelve members representing DCR, MWRA, Mass Port, the Coast Guard, BRA, City of Boston, the Trustees of Reservations, Outward Bound, the Island Alliance and a two representatives of a 30 person Islands Advisory Council -- and NPS.

The DCR owns half of the islands and contributes approximately \$5 million operating costs per year to an annual budget of \$9-12 million.

Thompson Island Outward Bound has an annual Operating budget of \$4.7 million, and educates and serves 6,500 youth annually, many in its summer wilderness courses, but also in its Family Learning Center and its Connections program. Additionally, Outward Bound cosponsors a youth jobs program with the NPS. It correctly promotes itself as "Boston's Island Classroom."

The NPS contributes \$1 million annually, as well as its leadership role in management, stewardship, interpretation etc. BOHA is technically a NPS unit, but not treated so consistently for funding purposes. Consequently some programs say they are not eligible because there is no NPS ownership.

The Island Alliance has responsibility for contracts with the water transportation and food operations. Over the last 8 years it has contributed \$14-15 million in capital expenses, and approximately \$300-400,000 annually for marketing, kids for free, etc.

Among the partners there seems to be agreed recognition that the principle drivers are the DCR, the Island Alliance, and the NPS. Basic to their success has been a shared group vision and the continuity of the individual leaders. Their sense of commitment is highly evident, and as they have been working together for many years, there is a solid basis of trust and reliability among them. In addition to the principle drivers, the 12 member partnership is small enough that it encourages people to really communicate with each other.

Perhaps less effective is the Advisory Council composed of 30 representatives representing public involvement. Council members are appointed by the Secretary of Interior through the Director of NPS. The park superintendent is the federal official that oversees the Council's operation.

When there are differences of direction, the main drivers of the group go and "hammer it out" over time with the other entities. A particularly complex example of this was getting approval of a visitor pavilion at the entrance of the wharf that is the transportation site for the islands. This took five to six years and hundreds and hundreds of hours to accomplish. When everyone feels they have a special stake in an initiative, it is very time consuming and expensive to get a resolution.

Its Accomplishments

BOHA is, fifteen years from its inception, a well regarded and accepted urban park. The stewardship level of management practices of the islands has been greatly enhanced, even though the NPS has had no direct authority. The shared goals of a recreational/ educational resource have been sustained. While once a neglected harbor, BOHA has transformed the area to a desirable destination. For a small amount of investment the NPS has been pivotal in bringing about this change.

Problems That Have Arisen or Limitations

To a certain extent, you get what you pay for. NPS has leveraged a lot with it's relatively small share of the costs. It does, however, own little and has no clear authority over the entirety. It manages by influence. As the superintendent states, NPS leads from behind; as facilitator, catalyst, convener.

Because it is a partnership, the distinctive branding of NPS is in little evidence. While called a park, there is virtually no evidence that it is a national park per se. One does not feel "the national park experience." It is a branding dilemma.

Since BOHA works through the partners, much of the interpretation comes from beyond the park service, and seems to be of less quality that is typically expected from the park service.

Because of its unique partnership structure, most of the NPS attention goes to maintaining and assisting the partnership. There seems to be little connection with other park units or NHAs in the area, and no coordinated interpretation with them.

While there is recognition of the potential of BOHA to be part of the fabric of Boston city life, and its youth, with the exception of the Thompson Island effort, most of the visitation comes from the surrounding suburbs.

**National Park System Advisory Board
Planning Committee
Large Landscape Conservation Case Study
Chesapeake Bay Watershed**
Warren Brown, Jonathan Doherty and John Maounis

What It is and Why It Started:

A broad collaborative effort is taking place throughout the Chesapeake watershed to restore water quality, revive and sustain natural resources, protect cultural landscapes and provide more locations for water access and outdoor recreation. Federal, state and local governments and non-governmental organizations work together toward goals to protect treasured landscapes, expand public access, restore large areas of wetlands and riparian forests, restore fisheries and other wildlife species, and achieve major water pollution reductions, all by 2025. Large landscape conservation is vital to these comprehensive stewardship goals.

The Chesapeake Bay is the largest estuary in North America. Its shorelines extend more than 11,000 miles and its watershed encompasses 64,000 square miles in 6 states and the District of Columbia and is home to some 17 million people. The watershed – the Chesapeake Bay, the major tributaries, and the surrounding landscapes -- has long been regarded as an ecological, cultural, and recreational treasure of national and international importance.

Collaborative efforts to conserve the Chesapeake landscape have evolved over time, as has the role of the National Park Service. Two distinctive trends have influenced this:

- There is a long-standing public demand for protecting special regional landscapes for outdoor recreation and natural and cultural heritage; this has manifested in a mosaic of focused landscape conservation efforts within the watershed and exceptional state programs.
- Public concern over the ecological health of the Chesapeake Bay, originally focused exclusively on pollution reduction, has grown to recognize the importance of land conservation.

The Chesapeake region has been a hot spot of state-level innovations in landscape protection for decades. The [Virginia Outdoors Foundation](#), established as a public body in 1966, has protected more than 600,000 acres through conservation easements, many facilitated by the state's groundbreaking Land Preservation Tax Credit Program. [Maryland's Program Open Space](#) was founded in 1969 as a dedicated funding source for land conservation; it has protected over 350,000 acres. Pennsylvania's Farmland Preservation Program, regarded as a national leader, has protected over 435,000 acres since 1989.

Pennsylvania and Maryland have also been leaders in focusing on distinctive large landscapes within the region, establishing state heritage area programs in [1989 \(PA\)](#) and [1996 \(MD\)](#). Pennsylvania also established a [Conservation Landscapes Initiative](#) in 2005. Other federal agencies have evolved toward a landscape focus as well, including the US Fish & Wildlife Service, most notably at the Rappahannock River Valley NWR, established in 1996.

The National Park Service began managing lands in the Chesapeake region in the 1920s and 1930s and now owns a total over 320,000 acres in the watershed, making it the second largest federal agency landholder (after the US Forest Service). Existing NPS units in the watershed generally represent individual sites or features of historical or cultural significance, most quite distant from the Bay proper. Arguably, only three of the existing units address or conserve large Chesapeake landscapes: Shenandoah, the C&O Canal and the Appalachian Trail.

National Park Service involvement in large landscape conservation in the Chesapeake has grown in the past two decades, driven by the continuing expansion of national heritage areas and an interest in having more Chesapeake parks and public access to the water. The [Shenandoah Valley Battlefields National Heritage Area](#) was established in 1996 and the 3.4 million acre [Journey Through Hallowed Ground National Heritage Area and Scenic Byway](#) in 2006, both entirely within the Chesapeake watershed.

Interest in a possible Chesapeake focused unit of the National Park System dates back some two decades. NPS conducted a special resource study in 1994 that highlighted opportunities for technical assistance and interpretation to connect people to the bay's natural and cultural history. In 1998 Congress authorized the [Chesapeake Bay Gateways and Watertrails Network](#), giving NPS authority to provide technical assistance and make matching grants to state and local governments and non-governmental organizations. Over a period of years, this resulted in a partnership network of over 170 designated sites and 3,000 miles of designated water trails. In 2004, at the request of Congress, NPS completed a second special resource study; it found Chesapeake Bay to be nationally significant and determined that one or more of several concepts could make significant contributions to the protection and public enjoyment of the Chesapeake and invited local recommendations for a specific location.

Since that time, two national historic trails have been designated on the Chesapeake; both are administered by the NPS. The 3,000 mile [Captain John Smith Chesapeake NHT](#) (2006) traces the largely water routes of Smith's voyages exploring the Bay and its tributaries in 1607-1609. The 560 mile [Star-Spangled Banner NHT](#) commemorates the Chesapeake campaign of the War of 1812, including the invasion of Washington and Baltimore. The NPS also administers other national trails in the watershed, including the Potomac Heritage National Scenic Trail, Appalachian National Scenic Trail and Washington-Rochambeau Revolutionary Route NHT. Most recently, the designation of Fort Monroe National Monument in 2011 creates a new NPS unit directly fronting on the Chesapeake Bay.

Concurrent with the growth and evolution of landscape conservation in the region, there has been a three decade effort to address water pollution led by the Environmental Protection Agency and the states through the [Chesapeake Bay Program](#). In this context, most attention has been placed on practices to reduce nutrient and sediment flows to the Bay. Only in 2000 did the program formally recognize the importance of land protection to water quality, setting a goal of protecting 20% of the watershed by 2010. That goal was reached, with an average of 125,000 acres being protected each year between 2000 and 2009, mostly through state and local land protection programs and non-profit land trusts. By 2010, 7.8 million acres in the watershed were permanently protected.

In 2009, President Obama signed [Executive Order 13508](#) declaring “The Chesapeake Bay is a national treasure constituting the largest estuary in the United States and one of the largest and most biologically productive estuaries in the world. The Federal Government has nationally significant assets in the Chesapeake Bay and its watershed in the form of public lands, facilities, military installations, parks, forests, wildlife refuges, monuments, and museums.” The order called for development of a strategy for protecting and restoring the Chesapeake, as well as annual progress reports and action plans. This further stimulated efforts towards multiple conservation goals, including collaboration on large landscape conservation.

Goals and Purposes:

The [Strategy for Protecting and Restoring the Chesapeake Bay Watershed](#) was released in 2010 in response to EO 13508. It outlines a common vision of a watershed with swimmable, fishable waters; healthy populations of land and aquatic wildlife; habitats that are resilient to development and climate change; abundant forests and thriving farms; conserved lands that protect natural and cultural heritage; ample access to outdoor resources; and widespread citizen stewardship.

The National Park Service coordinated development of the strategies on land conservation and public access among a broad set of NGO, state and federal partners. They defined a goal to: “Conserve landscapes treasured by citizens to maintain water quality and habitat; sustain working forests, farms and maritime communities; and conserve lands of cultural, indigenous and community value. Expand public access to the Bay and its tributaries through existing and new local, state and federal parks, refuges, reserves, trails and partner sites.”

More specifically the strategy set an outcome of protecting an additional two million acres and adding 300 new public access sites, all by 2025. The strategy recognizes these goals will only be achieved through the collaborative efforts of local, state and federal government and non-governmental organizations.

How It is Structured or Organized:

Within the Chesapeake Bay watershed are 54 national park units, 16 national wildlife refuges, 5 national trails, 2 national forests, 2 BLM management areas, dozens of state parks and wildlife management areas, 3,000 miles of designated water trails, substantial landholdings by non-governmental organizations, all or parts of 5 national heritage areas, 17 state heritage areas and 5 conservation landscape initiatives, and dozens of scenic byways.

In 2003, the NPS established a Chesapeake Bay Office to coordinate its engagement with the Bay and rivers and the many entities managing the units noted above, and to administer the Captain John Smith Chesapeake NHT, Star-Spangled Banner NHT and Chesapeake Bay Gateways and Watertrails Network. NPS has formal memoranda of understanding regarding each of these with over 200 partners.

Since 2009, the NPS Chesapeake Bay Office has served as the co-convener of a broad set of large landscape conservation partners who assemble and collaborate to achieve shared goals. Representing dozens of state and federal agencies and non-governmental organizations, these

partners have gathered multiple times to define watershed-wide goals for land conservation and public access, develop recommendations for advancing efforts to achieve these goals, establish action teams to work on specific outcomes, and most recently – in August 2012 – to share information on initiatives, and identify continuing next steps.

Simultaneously, various combinations of partners, including NPS, collaborate regularly in multiple ongoing conservation partnerships aligned around specific focus areas – large landscapes within the broader Chesapeake watershed. Examples include the Nanticoke watershed, middle Potomac, tidal Rappahannock, James River, Lower Susquehanna and Journey Through Hallowed Ground.

The NPS Chesapeake Bay Office also coordinates information and reporting on land conservation and public access for action plans and progress reports required under EO 13508, as well as for the Chesapeake Bay Program.

Efforts to improve water quality and fisheries and habitat restoration are coordinated through the Chesapeake Bay Program, the regional partnership established in 1983. The Chesapeake Bay Program partners include the states of [Maryland](#), [Pennsylvania](#) and [Virginia](#); the [District of Columbia](#); the [Chesapeake Bay Commission](#), a tri-state legislative body; the [Environmental Protection Agency](#), representing the federal government; and participating citizen advisory groups.

Accomplishments:

The National Park Service, in partnership with other agencies, states and organizations, is convening select efforts to focus additional strategic approaches to large landscape conservation. This fits the aims of the *NPS Call to Action #22 (Scaling Up)*, as well as the goals of the *America's Great Outdoors Initiative* where NPS leads three landscape level priority projects (one each in Pennsylvania, Maryland and Virginia). Moreover, it builds on the NPS role as a catalyst across a large landscape stemming from NPS's formal partnerships with well over 200 sites and trails in the Chesapeake Bay Gateways and Watertrails Network and national historic trails. These partner sites and trails are along the entire Bay and every major tributary from Cooperstown NY to Virginia Beach VA. A 2008 review of the Gateways program highlighted NPS strengths including:

- developing high quality promotional materials: maps, guides, and Web site
- bringing National Park Service prestige and expertise to the partners, which in turn reflects favorably on the participating sites
- leveraging resources by way of the matching requirement
- the expertise of NPS staff and conferences and workshops
- building the capacity and credibility of smaller, lesser known sites
- developing or strengthening connections among organizations in the region
- enhancing interpretation of Bay themes at participating sites due to interpretive planning and interpretive materials supported by NPS
- increasing access to the Bay via newly developed water trails, as well as guides for new and existing water trails

The subsequent designation, planning and implementation of the John Smith Trail and Star-Spangled Banner Trail have strengthened and expanded these capacities.

NPS is now engaged in several initiatives related to furthering large landscape conservation goals, including the following:

Establishing a Focus for Landscape Conservation on the John Smith Trail: The 3,000 mile trail traces virtually every major tidal tributary of the Bay. NPS, in partnership with the Chesapeake Conservancy and states and other federal agencies, is outlining a trail conservation strategy, the first such effort for any national historic trail. Its focus is on conserving landscapes along the trail key to maintaining or enhancing visitor experience and understanding. Due for completion in 2012, this strategy will set out a collaborative approach to conservation and detailed tools for NPS and partner use in strategically focusing protection. The states and land trusts are expected to be significant forces in conserving trail resources and values, especially the landscapes evocative of the 17th century that benefit communities and neighboring landowners. Here again, NPS is playing an important role as convener and catalyst for state and local efforts to protect lands and connect people with a resource they value.

Identifying Indigenous Cultural Landscapes: A new approach to understanding important Chesapeake resources is taking place simultaneously – the identification of Indigenous Cultural Landscapes (ICL). These landscapes generally encompass the cultural and natural resources that would have been associated with and supported the historic lifestyle and settlement patterns of American Indian peoples at the time of European contact. NPS is collaborating with multiple partners to further develop ICL criteria and pilot mapping efforts.

Expanding Public Access: To guide how to achieve the goal of adding 300 new public access sites, NPS has led a collaborative effort with watershed states to develop a public access plan. Developed with broad public input, the plan sets out public access development priorities and a strategy for implementing them. NPS is actively providing matching funding for access projects that leverage state, local, and NGO funds. Expanded access broadens the scope of landscape conservation efforts by enlarging and deepening the public interest.

Fostering Strategic Conservation: NatureServe, NPS and the U.S. Geological Survey are leading a collaborative effort with Chesapeake states and non-governmental organizations for a watershed-wide web-based tool to view and coordinate local, state and federal land conservation priorities. Building onto the existing LandScope America platform, “LandScope Chesapeake” launched in August 2012 and will be continually expanded. NPS will use the developing system as one part of efforts to facilitate collaboration among landscape conservation programs in the Chesapeake watershed. This will include identifying key focus areas where federal and state programs share mutual conservation priorities and can work together on specific projects.

Furthering Large Landscape Collaboration: NPS, the Chesapeake Conservancy, states, non-governmental organizations and other federal agencies convened in a workshop in August 2012 to consider how to strategically focus and advance conservation of the Chesapeake’s cultural and natural landscapes. The workshop allowed participants to collectively: discuss current high-level focus areas (fairly large geographies) for conservation in the Chesapeake watershed; develop the

basis for a focused rationale for large landscape conservation based on those focus areas; and identify next steps for further development of large landscape conservation in the Chesapeake.

These efforts are charting a course for large landscape conservation in the Chesapeake in general and in relation to the National Park Service in particular. For NPS, it is a course based on: Identification, protection, and interpretation of recreation corridors along the major rivers, and trails and byways – corridors that provide quality visitor experiences, increase public access, and protect viewsheds and associated land-based natural and cultural resources. These efforts recognize the layering of cultural, scenic, ecological, and other landscape values that can facilitate and leverage multiple interests in landscape conservation.

Problems That Have Arisen

The Chesapeake Bay watershed is a very large landscape; so large it must be addressed in terms of many smaller—but still large—regional landscapes. Federal, state and regional partners must be able to collaborate at multiple levels (watershed-wide, regionally and locally) to advance conservation. This requires a commitment of time and resources to leverage maximum benefits.

Not all regional landscapes within the watershed have the local or regional capacity for landscape conservation efforts. This makes it difficult to achieve results in these areas regardless of the need or significance. Attention and progress often focuses on the landscapes where multiple partners values align with the capacity.

The heavy emphasis on reducing pollutant loads to the Bay can sometimes adversely impact land protection. Water quality improvement efforts through the Chesapeake Bay Program and a Bay-wide TMDL are substantially driven by the “Bay Model,” a sophisticated computer modeling program. The TMDL and model currently provide no credit for land protection, as it does not necessarily reduce pollutant loads, only averts potential future loads. This removes a key incentive for land protection, particularly in relation to possible market-based approaches. Further, it has caused some reallocations of land protection funding to pollution reduction.

The Chesapeake Bay watershed is subject to substantial development pressures. Over 17 million people live in the watershed and growth is projected to continue. Conservationists know that funding for land acquisition and conservation easements will never be sufficient to protect all of the landscapes people value. A significant amount of conservation must occur through effective local, regional and state planning. However, differing public attitudes and state authorities make growth management a continuing challenge.

Still, the many layers of history in the Chesapeake region, the profound significance of the Bay and major rivers, and the potential role they play in the area’s quality of life are all deeply felt by many citizens. There are few regions in the nation with the combination of so many active land trusts, river groups, local transfer of development right programs, effective state programs and federal agencies all collaborating on landscape conservation.

**National Park System Advisory Board
Planning Committee
Large Landscape Conservation Case Study
Crown of the Continent
Gretchen Long and Mary Riddle**

What It Is and Why it Started:

The Crown of the Continent is an 18 million acre Rocky Mountain region bridging northern Montana, British Columbia and Alberta, Canada. It is known as one of the most intact and unique wildlife ecosystems, and distinguished by the presence in its hub of the Waterton-Glacier International Peace Park, more familiarly known in the U.S. as Glacier National Park.

It is one of the most jurisdictionally complex landscapes in North America. The ecosystem spreads across two nations, one state and two provinces; and numerous aboriginal lands, municipal authorities, public land blocks, and private properties, and includes working and protected landscapes. It is generally defined by the Rocky Mountain eco-region from the Bob Marshall wilderness complex in Montana, to the Highwood River in Alberta and the Elk Valley in British Columbia.

Around the year 2000 a State of the Parks report documented the growing negative impacts to Glacier National Park from external sources, including climate change and new land use patterns. An early coal mine threat became a focus of an advocacy organization, which brought together various members of the community. The tone was that of a middle ground, stressing the sense of a shared sense of place. This State of the Parks report was also the beginning of science driven data becoming a basis of collaborative decision making in what is now termed the Crown. The 2000 report initiated an effort to develop an awareness of the need for landscape level conservation, especially in relation to climate change strategies. Special outreach was made to non environmental constituencies within the public, as well as to professional managers. Glacier National Park, much appreciated by the vast number of people who reside in the region, became the lynchpin for the discussion of the concept of the Crown. Emphasizing "this place where we live" changed attitudes.

At the same time the economic and demographic characteristics of the region were changing. Seeing a need to change the traditional political dialogue surrounding conservation, several NGO's partnered with NPS officials and launched a Healthy Parks/Healthy Communities campaign. Local community leaders spoke out on the economic prosperity and quality of life dependent on maintaining the Crown.

Glacier and the Peace Park were seen as core to a larger, interdependent and fully integrated eco-region. The unique descriptive quality of the region made branding the Crown easier. Its size, though large (and of lesser size in the early years), gave it a scale and coherency that fit people's sense of residency. (The LCC's are considerably larger.)

It's Goals or Purposes:

The Crown of the Continent is an identified international landscape characterized as multi jurisdictional, multiple purposes, and multi stakeholders. With Glacier and Peace parks being the dramatic hub, the Crown is now viewed as an integrated eco-region worthy of conservation. The Crown of the Continent concept was created to articulate and advance a long term conservation vision for the region, while supporting sustainable and vibrant local communities. The vision is based on coordination and collaboration, and of developing a sense of a shared future. The NPS was fully involved in the discussions to develop this vision.

How It Is Structured or Organized:

The Crown involves a myriad of organizations and partnerships, and includes all the various constituencies of the area. It's strength comes from a combination of broad local community support built over the years (bottom up) and a sophisticated public policy involvement of state, provincial and national leaders (top down.) Collaboration of all the land managers has been key. The role of science and the issue of climate change as a basis for discussion of issues has been a strong contributing factor for success. The leadership role of NPS in formulating the vision, in gaining cooperation within the Crown Managers Partnership, in reaching out to the public, has been instrumental. The strategic role of private land conservation (Montana Legacy Project) has significantly increased the scale and sense of commitment to the Crown.

The major groups working within the Crown include:

America's Great Outdoors has identified the Crown of the Continent as one of the five signature landscapes. An interagency group led by Region 1 of the US Forest Service is working on a range of projects including public and private land conservation efforts.

US and Canada National Park Service.

The Crown of the Continent Ecosystem Education Consortium which develops ecosystem focused curricula, workshops and educational projects.

Flathead Basin Commission: established with members appointed by the Montana State Legislature to protect and monitor the aquatic resources in the Flathead Basin.

Crown Round Table: an effort initiated by the Center for Natural Resources and Environment Policy at the University of Montana and the Lincoln Institute of Land Policy to provide a multi-stakeholder forum to exchange ideas, build relationships, identify shared values and interests and facilitate working relationships among all interests in the Crown.

Crown of the Continent Conservation Initiative (CCCI): a group of non-governmental organizations that has developed a comprehensive conservation agenda and plan for the Crown.

National conservation organizations including The Nature Conservancy and the National Parks Conservation Association.

International Joint Commission: established by the 1909 Boundary Waters Treaty. The Commissioners follow the treaty as they try to prevent or resolve disputes in waters that lie along or flow across the border between Canada and the US. Their intervention prevented development of the Cabin Creek Mine in the 1980's.

Crown of the Continent Geotourism Project was a broad based partnership of local community and business leaders who worked with NPCA and National Geographic to create the Crown of the Continent MapGuide and interactive website. This project mapped the natural and cultural assets in the area and underscored a sense of shared values and residency.

A number of governmental and non- governmental organizations and initiatives in British Columbia and Alberta too numerous to list.

Glacier NP is only one of many entities that make up the Crown, but it has truly been the catalyst for much of the progress. The role of the National Geographic Map, showing both natural and cultural assets of the area, underscored a sense of shared values and residency.

Its Accomplishments:

The Crown articulates a vision and community values. There is majority buy in, a sense of shared understanding and awareness of this special place, a sense of residency.

The vision is comprehensive and collaborative.

Glacier National park has taken a leadership role in leading a landscape level awareness. This requires a long term commitment of time, effort, and resources. Glacier NP developed a comprehensive strategy, worked with NGO's and community interests, coordinated public events. When there was a clear threat (coal mine) to the integrity of the Crown and the park, NPS staff spoke out assertively. That was respected.

Within the Crown, Glacier NP has a clear cut and visible role, which makes it easier to rally around. The long history of parks for the people, i. e., their parks, makes the park central to public support for landscape level conservation. The park is the iconic core.

Some specific advances have occurred as a result of a landscape level effort:

The Ecological Health Project is the CMP's flagship project. The purpose of the project is to collectively define measures of ecological health and identify the adaptive capacity to meet them across border, amongst jurisdictions and with stakeholders by the end of the decade. The project entails defining what health means in the Crown context, describing the current state of the Crown, understanding the trajectories that have taken the region to this point and the likely future trajectories and their environmental implications, identifying with the broader community and stakeholders the desired state for the Crown, and collaborative and adaptive environmental and natural resource management actions.

Five themes to assess trans-boundary ecological health are being looked at: landscapes, biodiversity, water quantity and quality, air quality/climate change and invasive species. The project is exploring the extent to which changes in environmental quality related to these themes may be reflected in regional scale landscape metrics.

In 2009, the CMP formed a partnership with the University of Calgary Geography Department and the National Park Service Rocky Mountain Inventory and Monitoring Network to conduct a Landscape Analysis of the CCE. The Great Northern Landscape Conservation Cooperative joined the partnership in 2010. Solid progress has been made on collecting landscape data and developing consistent measures of habitat, habitat connectivity and human-use footprint at the scale of the CCE, that ultimately will be used to inform management, measure trends and establish indicators; including assisting managers with developing strategies for adaptation and increasing resiliency in the face of climate change. Ultimately success would include establishment of trans-boundary management protocols and coordinated action.

In 2010 the CMP hosted a Climate Change Scenario Planning Workshop for agencies in the Crown. The CMP is on the verge of creating a Trans-boundary Aquatic Invasive Species Response Plan with the State of Montana and the Province of Alberta. A pocket guide describing AIS threats to the Crown is also being developed. The CMP completed a Crown of the Continent Invasive Plant Guide and formed the Crown Invasive Plant Network for invasive species agency professionals.

Problems That Have Arisen:

While there has been much interagency progress and trans-boundary cooperation, there are still some intractable issues that come about because of the differing mandates of the agencies. It seems especially so in the differing outlooks of the state game and fish, which looks to its hunting and fishing constituency, rather than a broader ecological outlook. (A current example of that is non native fish in Flathead Lake.)

In so many regions (Greater Yellowstone), this dilemma has been so persistent over the years that it suggests there might be value in developing new tools, or requirements, for managers to consult during planning or project determinations, and sign off on an interagency coordination statement. The process is now working, for better or not, through informal collaboration. Securing science as a basis for decision making has facilitated inter-agency collaboration.

External threats still exist, and need constant attention. There is still resistance to broad scale legislation, such as the North Fork Protection Act, introduced twice, and failed.

Despite the signing of the MOU between BC and the State of Montana committing to work on trans-boundary issues and the MOU between the Province of Alberta and the State of Montana, the federal agencies have not signed these MOU's. As federal agencies manage the majority of lands in the US portion of the Crown, signing will indicate even greater political commitment to working together across this landscape and reduce the administrative difficulties that hinder collaboration.

The many and varied players and organizations listed above make for a rich basis of collaboration. Both within the public land arenas and in private negotiations, seeking a degree of compromise and taking middle ground positions appropriate to a shared future has made a substantial difference. However, much is dependent upon the individuals in these organizations, and many are dependent on political winds.

To fully realize the Crown's potential it will take institutional will and lasting commitment by individuals which under the reality of constantly changing political and social landscapes may be difficult. Yet if the sense of shared natural and cultural value is embedded within the communities, the Crown of the Continent will be one of the nation's best conserved major landscapes for years to come, adapting as necessary to the ecological changes that may be inevitable, but still essentially intact and crowned by its iconic core, Waterton-Glacier International Peace Park.

National Park System Advisory Board
Planning Committee
Case Study of the Essex National Heritage Area

April 2012

Annie C. Harris

Executive Director, Essex National Heritage Commission

What is the Essex National Heritage Area? The Essex National Heritage Area encompasses the 500 square mile region located north of Boston, MA, along the Atlantic coast. The area is home to 743,000 residents, 9,968 historic structures listed on the National Register of Historic Places, 400 historic farms, 86 significant museums, 26 National Historic Landmarks, nine State Parks, two National Park units, and one National Wildlife Refuge. The region also has four distinctive landscapes – a great salt marsh with barrier islands, a rocky coast area interspersed with historic seaports, the Merrimack River which powered some of the greatest mill cities of the American industrial revolution, and an inland region of rural farms, woodlots, and small towns clustered around New England commons.

How did it start? In 1996, the United States Congress established the Essex National Heritage Area (Essex Heritage) by including its authorization in the Omnibus Parks and Public Lands Act of 1996, but the effort to create the Essex Heritage began a decade earlier. The idea of the Essex National Heritage Area started with a NPS Special Resource Study called *The Salem Project: A Study of Alternatives* published in 1990. The study looked at 4 alternatives for interpreting the nationally significant themes of the National Park Service's Salem Maritime National Historic Site and recommended that the interpretation and visitor experience at Salem Maritime would be greatly enhanced if the numerous historic resources beyond the park's boundaries were linked to the 9 acre National Park unit. This concept was embraced by the community of Salem and especially by The Salem Partnership, a newly formed public-private economic development organization which included the city's business, cultural and elected leaders – including the superintendent of Salem Maritime, the president of the local college, presidents of the two major banks and the hospital, the mayor and other civic leaders. The Salem Partnership was based on the successful "Lowell model" and Lowell's champion, Senator Paul Tsongas, assisted in establishing the Partnership. The Partnership embraced the National Park Service from the beginning and was eager to have NPS play a larger role in the economic and cultural vitality of the city and the region. As a result of the study, the Essex Heritage Ad Hoc Commission was formed with leaders from around the region. The Ad Hoc Commission led the 6 year effort to secure the National Heritage Area designation.

To date, Congress has designated 49 National Heritages. The first was the Illinois & Michigan Canal Corridor created in 1984, and the most recent nine NHAs were designated in 2009. Each heritage area has been created through its own distinct local circumstances and each has its own unique legislation but all of the successful heritage areas grew out of very strong, grassroots citizen activism supported by the belief that communities that conserve their historic, cultural and natural assets are places that can build a stronger future for all of their citizens. Several NHAs such as Cane River are similar to Essex in that they are closely linked to a National Park unit but other NHAs have no park partner and work with NPS only at the regional level. While the lack of a strong affiliation with a park unit is unfortunate, many of these areas are successful in engaging their local citizens in large landscape conservation and cultural preservation efforts.

What are its goals and purposes? The mission of the Essex National Heritage Area is to preserve and enhance the historic, cultural and natural resources of Essex County (settled by Europeans in 1623). The legislation establishing Essex Heritage explicitly links the area to the themes and resources at Salem Maritime National Historic Site and also the Saugus Iron Works National Historic Site, the two NPS units located within the NHA. These themes/resources are defined as: early European settlement, maritime history in the great age of sail, and the early industrial revolution. The purpose of the heritage area is to engage the area's residents in conservation, preservation, education, and interpretation of the numerous heritage resources related to these three themes. The communities view the long term benefits of the NHA as fostering economic development, community revitalization, improvement of the quality of life, and regional cooperation by assisting in the careful utilization of the heritage (historic, cultural and natural) assets in the region.

How is it structured and organized? The Essex National Heritage Area is managed by the Essex National Heritage Commission, a non-profit 501-c3 corporation that promotes public-private partnerships. The commission operates with a 25 member Board of Trustees, 125 Essex Heritage Commissioners, 85+ Ex-Officio Members, and a staff of 10 full time and part time employees. Commissioners are elected at semi-annual meetings of the commission, and they are recruited around the region from leaders in business, civic, non-profit, educational and cultural institutions. The Board of Trustees is elected from the commissioners.

The Commission seeks to accomplish its work through partnerships. It has no regulatory powers and it doesn't own property or hold any other resources except a few preservation/conservation easements. The Commission performs its work by building coalitions and developing consensus for its conservation, preservation and educational programs and projects.

Funding for the NHAs comes from several sources including the Heritage Area line item in the NPS budget. All NHAs are authorized by Congress to receive up to \$1.0m/year for a fixed period, usually 15 years, but no NHAs currently receive the full authorized amount. Most receive between \$150,000 to \$700,000 annually from the NPS budget. (There are a few exceptions such as Blackstone Valley and Shenandoah which receive additional funds from other NPS line items because of special provisions in their legislation). In recent years, most NHAs have seen a steady decrease in the amount of federal funds they annually receive as congress has approved new NHAs but has not increased the Heritage Area line item. Almost all of the NHAs are required to match these federal funds dollar for dollar with non-federal funds. Most NHAs achieve much higher rates of matching with some as high as 5 to 1 (non-federal to federal dollars). NHAs achieve their matches by fundraising, from grants, by charging fees for programs, and by other means.

What are some of its accomplishments? Essex Heritage has successfully created “a regional identity organized around the natural, cultural, and historic resources of Essex County” and “has enabled Salem Maritime NHS and Saugus Iron Works NHS to connect more deeply to local communities” according to the key findings identified in the *Evaluation of The Essex National Heritage Commission Findings Report* prepared by the Center for Park Management (CPM) for the National Park Service (September 2010). This independent report is one of nine evaluations of NHAs currently being performed by CPM for the National Park Service as required in PL 110-229. Other CPM findings identify that Essex Heritage has been successful in accomplishing the following:

- Increasing the NPS Salem Maritime National Historic Site and Saugus Ironworks National Historic Site’s capacity to interpret their resources and deliver education to the public;
- Providing NPS with more direct access to local leaders, community organizations and youth;
- Providing support to NPS in marketing, fundraising, and business planning, and procuring financial and other types of resources and support for key NPS initiatives.
- Engaging ordinary residents, local organizations and communities in heritage conservation;
- Fostering intra-regional relationships, projects, and activities that preserve resources across the geographic landscapes of the heritage area;
- Supporting the three core NPS themes;
- Providing experiences that have encouraged both residents and visitors to enjoy, learn about and protect the unique resources and opportunities in the area;
- Developing educational programs that highlight the significance of the area;

- Identifying needs and priorities for preservation and conservation of the area's resources;
- Establishing a constituency for preservation and conservation;
- Enhancing and expanding the existing network of regional routes, trails, and signage.

Some of the ways in which Essex Heritage has accomplished these goals has been through on-the-ground, community focused programs such as:

- *Border to Boston Trail* – (undertaken in partnership with NPS Rivers, Trails & Conservations Assistance (RTCA) program) - supports community-based efforts to provide new, non-motorized access to schools, town centers, parks, and historic sites along long dormant rights-of-way;
- *Coastal Trail Coalition* – (undertaken with NPS RTCA program) - creates recreational opportunities for walking, hiking, and biking by connecting local trails and greenways;
- *Youth Job Corps* – (undertaken with NPS Salem Maritime and Saugus Iron Works NHS) - provides summer jobs for at-risk, urban youth at heritage resources while assisting them to develop work skills and an appreciation for the region where they live;
- *Friendship Sails!* – (undertaken with NPS Salem Maritime and Saugus Iron Works NHS) - brings maritime history alive with unique experiences for students, families, and visitors-of-all kinds aboard the tall ship *Friendship*, a replica of an East Indiaman that once sailed the oceans of the world before her capture in the War of 1812.
- *Essex Coastal Scenic Byway* – (in partnership with 13 coastal communities) - *a 85 mile patchwork of coastal roads and byways that is organized as a cultural tourism "artery,"* to highlight *the significant* historic sites, natural resources, and recreational opportunities in the area;
- *Essex LINC*s (*Local History in a National Context*) – (in partnership with the National Archives and local educational institutions) - trains teachers to use the area's primary resources and sites by helping them infuse their lessons with the stories, places, and artifacts that engage student in the rich heritage surrounding them.
- *Partnership Grants Program* – *invests funds in the conservation of nationally significant resources and related educational programs and uses these investments to leverage addition funds often at a leverage rate of 1:5 or more;*
- *Trails & Sails* – (in partnership with 125+ organizations and resource sites) - an annual, 6 day event that celebrates and familiarizes the public with the area's significant historic and natural resources by coordinating *free* access to family friendly programs throughout the region;
- *Essex Heritage Area Visitor Centers* – (undertaken with NPS Salem Maritime and Saugus Iron Works NHS) – *promotes a network of visitor centers that support regional tourism and provide local jobs and volunteer opportunities.*

- *The Caribbean Connection – (undertaken with the support of the National Park Foundation) - engages under-served, urban youth in learning about their Latino heritage.*

Accomplishments like these can be found in most of the National Heritage Areas. NHAs have an excellent track record in land conservation and environmental reclamation, education and interpretation, community partnerships and visitor services, recreation development and historic preservation. Some, such as America’s Agricultural Heritage (IA), are located in large rural landscapes while others, like Rivers of Steel (PA), are in gritty urban environments. There are NHAs that are only a few miles long (Augusta Canal NHA) and others that are hundreds of square miles (South Carolina NHA). Whatever the size and make up, most heritage areas are deeply connected throughout their communities, and they provide valuable strategies for regional revitalization, conservation and engagement.

What problems have arisen? The heritage areas are a new experiment in public-private collaboration. Most of them are less than 15 years old, but their future hangs in the balance. Twenty-five percent of the NHAs are scheduled to lose their authorization for federal support on September 30, 2012, and another fifteen percent are scheduled to “sunset” by 2015. The debate over NHA sunsets and re-authorization reflect the larger challenges and problems that the program is facing:

- **Legitimacy of the program:** The most difficult hurdle for the National Heritage Areas continues to be their uncertain place in the National Park Service “family.” Like the earliest national parks, the National Heritage Area program lacks “organic” legislation. Each NHA was created by an individual piece of legislation. This has made the NHA program a favorite target of the budget office and of some members of congress. Director Jarvis recently issued a Director’s Memorandum strongly endorsing the NHA program, but this will not head-off the upcoming sunsets. H.R. 4099, the bi-partisan bill to “Authorize a National Heritage Area Program,” was recently filed in the House. If enacted, this bill will create a national program within NPS, will standardize the creation of new areas and eliminate the immediate sunsets.
- **Short-term funding and “self-sufficiency”:** As discussed earlier, most NHAs work on long term projects that require complex partnerships. There is a mismatch between the length of time required to implement successful projects and the short term, year to year funding made available through NPS. The National Park Foundation has identified “short term” funding as a problem as well for the Park Service, but NPS units at least have certain base funding, while the NHAs do not. OMB and some members of congress insist that NHAs must be “self-sufficient” in ten to fifteen years. They misunderstand

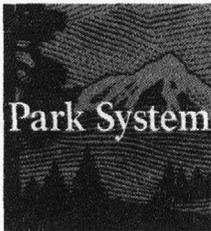
the nature of the NHAs work and its value to the Park Service. This misunderstanding has led several NHAs to seek to create a park unit within their heritage area as a means of keeping NPS involvement (and funding). Many believe that this is a much more costly and less effective strategy for working in large, lived-in landscapes (see the case study of Blackstone Valley) because park units concentrate the federal investment in a much smaller area and do not have the benefit of leveraging local matching funds.

- **Confusion about public and private roles:** The National Heritage Areas were first created during the Reagan administration and later were embraced by both the Clinton and Bush administrations as effective vehicles for a limited government in locally driven conservation. However, some groups confuse “national” with “federal ownership and/or influence.” Private property rights advocates have criticized the NHAs since their inception despite numerous impartial studies including the GAO’s *Report on the National Heritage Areas* (March 20, 2004) that stated it could not find “a single example of property rights infringement.” There is also some confusion with private funders and philanthropists who mistakenly think that NHAs are “federal entities” and therefore do not need their support.
- **Local Capacity:** The success of any NHA depends on its ability to build grassroots support, its capacity to run local programs, and its skill at leveraging matching funds. Most, but not all, of the areas have been created after years of local grass-roots advocacy. For the few NHAs that were created “top-down” by a strong political advocate, it is too early to tell if they will be successful but, at least initially, the lack of ready and able local partners is holding them back.
- **Relationship with the National Park Service:** The Director of the National Park Service has stated his staunch support of the NHAs and the value the program brings to NPS. So too have the Northeast Region and Southeast Regions of the Park Service (see *Strategic Plan for the National Heritage Areas Program*, December 2011), but within the ranks of the service there is some confusion about the program and how to work with its untraditional, non-federal partners. The entrepreneurial culture required of the NHAs can be at odds with the regulatory environment in which the Park Service operates.

What does the future hold? The National Heritage Area initiative is twenty-eight years old. It has been the subject of numerous independent reports and evaluations which overwhelmingly confirm the success of its public-private, collaborative methods. In many respects, the NHAs are already achieving many of NPS Director Jarvis’s goals set forth succinctly in “A Call to Action.” The NHAs are *connecting people to parks* and to larger landscapes with significant

natural and historic value, are *advancing education on core American values* and interpreting the diversity of the American experience, and are *preserving America's special places* in parks, communities and in broader landscapes. The immediate challenge facing the future of the NHAs is how do we sustain all that has been accomplished by this movement and incorporate it into an "official" program within the National Park Service. For those involved in the work of the NHAs, we believe to achieve the Second-Century vision for the National Park Service to "fully represent our nation's ethnically and culturally diverse communities to honor ...America's complex heritage ...(and) extend the benefits of conservation to (all) " (*A Call To Action, NPS, August 25, 2011*) that Congress must enable the Service to fully embrace and include the National Heritage Areas in the National Park Service's family of parks and programs.

National Park System Advisory Board



Citizen advisors chartered by Congress to help the National Park Service care for special places saved by the American people so that all may experience our heritage.

Appendix E

Notes on New Models for the National Park System

National Park System Advisory Board

Planning Committee

November 2012

Notes on New Models for the National Park System

Annie C. Harris, Executive Director, Essex National Heritage Commission

Future Vision for the National Parks System

The second-century vision for the National Park Service focuses on creating a service where “we will fully represent our nation’s ethnically and culturally diverse communities....(and) the National Park Service will inspire a ‘more perfect union’.” To achieve this vision, the 20th century model of stand-alone national parks must change. The future for the National Park Service cannot be all about doubling the number of parks and acreage with hard, fixed boundaries owned and managed solely by the service. People and nature do not respond well to walled-in areas, and there are simply not enough public resources for the Park Service to own everything that should be protected. Instead, the goal for the next 100 years must be to reimagine the Park Service as an agency that is fully involved in conservation, preservation, recreation, interpretation, scientific investigation and education at every level of civic engagement. To accomplish this, the Park Service has to develop and hone its skills as a convener and coalition builder; the US Congress needs to provide the authorities that permit partnerships with NPS to flourish; and the current and future national parks need to be designed as places that truly welcome and foster partnerships.

Protected Landscapes (Conservation Study Institute white paper): “The National Park Service has nearly 100 years of experience to tell us that agencies working only within their boundaries cannot preserve large scale landscapes and ensure the viability of the populations which depend on them. Their boundaries are not big enough, their pockets not deep enough. They cannot control exotic species, influence regional air and water quality, shape local land use trends, preserve adequate habitat for species survival, protect whole ecosystems, or ensure economic viability of neighboring communities. New methods of working with partners and sharing responsibilities will be necessary to meet these goals.”

The limitations of traditional national park units

The traditional model of individual, stand-alone national park units is too limited. New models are necessary because there are substantial gaps and needs in the system that are not currently being met. Some of the most obvious shortcomings are:

- Existing national parks are impacted by the communities and environment just beyond their boundaries, often in very negative ways;
- Many important landscapes are occupied and they cannot be conserved without the consent and support of local communities and private land owners ;
- Urban populations are demanding equal access to open space and recreational opportunities;
- Connectivity between parks is needed for species migrations – and also to provide access for people from where they live;

- The conservation of very large landscapes requires multi-state and multi-jurisdictional approaches. The areas are simply too large and complex for a single agency or governmental agency to do it alone.

Models for the future of the National Park System

Fortunately, there are already many programs and examples of collaborative parks and conservation partnerships that are successfully working within the auspices of the National Park Service. It is not necessary to “reinvent the wheel” – but rather – we must take these existing examples and apply them more broadly and creatively to the system as a whole. All of us (Congress, NPS, the American public) need to recognize that the value of the National Park Services lies not just in the spectacular parks like Yosemite and Yellowstone but also in the under-appreciated, small historical parks and the “external” programs that are already operating where the majority of Americans reside. The Rivers, Trails & Conservation Assistance (RTCA) program, the National Heritage Areas (NHA), and the National Register of Historic Places (NRHP) are programs that successfully engage millions of Americans. From the almost seamless collaborative partnerships such as the Golden Gate National Parks Conservancy and the Golden Gate National Recreation Area to the unusual private management system at Ebey’s Landing National Historical Reserve, many of the tools already exist that can help the Park Service evolve into the agency that truly *connects people to parks, advances the education mission, preserves America’s special places and enhances professional and organizational excellence* – the core elements of the 21st Century vision described in *A Call to Action*.

Here are suggestions of some of the programs and services that need a closer examination:

- **Urban national parks** – As more Americans become city dwellers, the importance of the National Park Service’s urban parks increases. Many of the major metropolitan areas in the USA have national park units within their boundaries but often these parks are small and have only a limited interpretive focus. The NPS should expand the mission of these urban parks and recognize that they can be important centers of collaboration located in the heart of densely populated urban areas. The basic investments have already been made. These parks are established, operating and are well positioned to reach urban populations, engage diverse audiences, and use existing NPS resources more effectively. (*Resource: Denis Galvin, NPS retired, on NPS Advisory Board Planning Committee call spring 2012*).
- **Public agency collaborative “parks”** – During the past 10 years, there have been considerable efforts to foster greater collaboration between federal agencies such as BLM, FWS, Forest Service, DOA, Army Corps, etc. This has resulted in somewhat better coordination of lands owned and managed by multiple agencies, but many believe that the National Park Service should assume a larger role in this arena. Of all the federal agencies, NPS is the best recognized and the most trusted by the American public. The confidence that Americans place in NPS provides a remarkable opportunity for the Park Service to assume a greater leadership role in complex landscape preservation – especially lands controlled and managed by multiple government agencies. The public’s almost universal recognition of the NPS ‘brand’ places the service in a unique position to garner citizen engagement and participation. However, the strategic planning systems necessary to develop greater success in this area are not well

developed within NPS. *(Resource: **Protected Landscapes**: Prepared by Park Planning and Special Studies, within directorate of Park Planning, Facilities and Lands. White paper. The PPSS planning team was composed of Patrick Gregerson, Program Manager; Tokey Boswell, Program Analyst; and Carol Cook, Program Analyst. The subjects were (1) models on which a treasured landscape initiative might be based; and (2) authorities that might be employed by the National Park Service to manage treasured landscapes.)*

- **Large landscapes** – There is growing recognition that large landscape conservation requires a hybrid approach in which public agencies and private organizations work together “at an appropriate geographic scale regardless of political and jurisdictional boundaries.” Examples of the benefits and challenges of this approach are analyzed in a recent study by Lincoln Institute of Land Policy. The Institute joined forces with the University of Montana’s Center for Natural Resources and Environmental Policy to look at seven case studies including America’s Longleaf Pine Initiative, Blackstone River Valley National Heritage Corridor, and the Everglades Restoration Plan. Other examples of places where this approach being adopted are - the Northern Great Plains Network, Northern Woods, Tall Grass Prairie, Crown of the Continent, Appalachian Mountain Trail, and the Chesapeake Gateway. In some of these examples, NPS has a large role, in others it doesn’t but the National Park Service ‘brand’ can be invaluable in bringing diverse partners together. An overall strategy should be developed for NPS to participate in these large scale initiatives because even a small role for the Service can be valuable in furthering the successful conservation of these vast resources. *(Resource - **Large Landscape Conservation: A Strategic Framework for Policy and Action**; Lincoln Institute of Land Policy by Matthew McKinney, Lynn Scarlett and Daniel Kemmis. Published by the Lincoln Institute of Cambridge MA and the University of Montana’s Center for Natural Resources and Environmental Policy. 2010.)*
- **Existing NPS Programs** – The National Park Service already has programs that offer technical and financial assistance to non-park partners. These programs such as the Rivers, Trails & Conservation Assistance (RTCA), the National Historic Landmarks (NHL), the National Register of Historic Places (NRHP) and the National Heritage Areas (NHA) should be regarded as essential to the future success of NPS. For far too long these ‘external’ programs have been the poor stepchildren to the park units. Instead we need to recognize that these programs provide very valuable services to Americans because they engage local communities and bring significant preservation and conservation expertise into every corner of American life. Embracing the ‘external’ programs and increasing their funding and authority will go a long way to enabling the Park Service to achieve its Second-Century vision. *(Resource – **National Park Service Programs: A Companion Volume to NPS Management Policies, 2012**)*
- **Partnership Programs** - Within the National Park System there already exist a number of collaborative parks. They are similar to the hybrid model for large landscapes described above but also different because these cooperative partnerships have a legislation foundation and are usually governed by a legal contract between the federal service and non-federal partner(s). A memorandum of understanding (MOU) or a cooperative agreement (CA) are typically the legal instruments that define the roles of the parties and prescribe the levels of financial involvement. These relationships often develop into highly successful collaborations that yield great benefits to the Park Service as well as to the surrounding community. There are three types of “partnership” programs – and they can be loosely defined as having these characteristics:
 - **“Internal” partnership parks** – These are national parks in which other, non-federal partners are included in the park’s legislation and the authority for NPS and the partner(s) to work together is somewhat defined. Examples of this are the Boston

Harbor Islands National Recreation Area, Golden Gate National Recreation Area, Cape Cod Seashore, Lowell National Historical Park, and the Mississippi National River & Recreation Area.

- **“Affiliated” areas:** These are areas that receive some form of financial and technical assistance from NPS and often have Park Service staff but there is usually little or no NPS ownership. Pinelands National Reserve, NJ, and Blackstone River Valley National Heritage Corridor, MA and RI are examples of these areas in which NPS has played a significant, but untraditional, role.
- **“External” partnership areas and/or programs** –These are programs where the NPS provides some limited funding and technical assistance but there is no NPS ownership and usually no NPS staff involved ‘on-the-ground.’ These include:
 - Partnerships with cooperative agreements such as the National Heritage Areas;
 - Partnership programs that are technical assistance such as the RTCA program;
 - Cultural and historic programs such as NRHP, NHL

*(Resource document: **Collaboration and Conservation: Lessons Learned from NPS Partnership Areas in the Western United States**, A Report on a Workshop, March 18-19, 2003, Santa Fe, NM; convened for the NPS Planning and Special Studies Program by the Conservation Study Institute and QLF/Atlantic Center for the Environment. By Nora Mitchell, Jacquelyn Tuxill and Jessica Brown.)*

Key Concepts for the Future:

As stated earlier, achieving the Second-Century vision requires that we look at the Park Service in a new way. The future should not be about doubling the amount of land owned by NPS; instead it should look to increasing the impact of NPS by enabling the service to do much more through affiliations and partnerships. The “old think” is park units with strict boundaries within which NPS must own, manage, maintain and operate everything. New think is “park areas” in which NPS works collaboratively with other public, private and non-profit organizations – each with a distinct role and complementary function. Here are the key concepts for achieving this new vision:

- **Larger, more porous boundaries:** The boundaries of “parks” need to be more flexible and less hard edge. The Park Service should be able to work beyond park unit boundaries and partners need to be able to work inside the boundaries too. Maybe this will be accomplished by designating boundaries much larger than the area of federal ownership. Boundaries could be drawn to encompass the whole resource area, watershed, and/or landscape and having park units be just nodes within the total park boundary region. Or perhaps boundaries will be defined as porous and within them, there are certain prescribed activities that the Park Service does but NPS isn’t required/allowed to do everything. Again, there are examples of this concept that should be studied such as Lowell National Historical Park, MA, Boston Harbor Islands NRA, MA and Santa Monica Mountains NRC, CA.
- **Bottom up:** Grassroots driven initiatives must be given a much greater role especially in cultural and historical interpretation. If the gaps in history and culture are going to be filled-in then the people whose history is being interpreted need to be part of the process and have a greater role in defining the nationally significant stories of their history. The NPS American Latino Heritage Project is a step in this direction.

- **Catalyst, not always exclusive owner:** The future Park Service should play a greater role as a catalyst and convener, and needs to be less constrained at having to be the exclusive owner and manager of nationally significant lands and resources. For example, in the Tall Grass Prairie area, the NPS cannot own all of the significant landscape areas that should be conserved but NPS can be the catalyst through its leadership and expertise and also by owning some key parcels.

Next steps

Stating that partnerships and collaboration are critical to the future of NPS does not mean that this is easy to accomplish. Even having examples of successful partnerships and collaborative programs with the National Park System does not ensure that the agency can scale them up to meet its vision. *A Call to Action* recognizes this and seeks to build success into the next century with both a bold vision and detailed plan for incremental action steps to assist the agency in bringing about the change it needs. In addition to the C2A plan, we recommend the following:

1. Study the NPS partnership parks that already exist such as:
 - **Lowell National Historical Park** – an urban park with a boundary drawn larger than the federal ownership and with legislated partnerships with local and state entities. Very successful model of partnerships.
(Resource: Discussion White Paper, Assessment of Preservation and Development in Lowell National Historical Park at its 30-Year Anniversary: Where have we been and where should we be going? Dennis Frenchman and Jonathan S. Lane1 (Heritage Preservation and Development White Paper A.pdf)
 - **John H Chaffee Blackstone River Valley National Heritage Corridor** – an early heritage area with a larger than usual amount of NPS management.
(Resources: Reflecting on the Past, Looking to the Future: A Technical Assistance Report to the John H. Chaffee Blackstone River Valley National Heritage Corridor Commission by the Conservation Study Institute 2005)
 - **Appalachian National Scenic Trail** – a very robust partnership park with a strong non-profit partner, the Appalachian Trail Conservancy (ATC), that predates Park Service’s involvement; there is extensive land area co-managed by NPS and the non-profit ATC and there is very strong grassroots involvement. Many aspects of this partnership are unique within in the NPS system but could provide important examples for the new directions that NPS needs to take.
(Resources: Appalachian National Scenic Trail, A Special Report by National Park Conservation Association, March 2010.)
 - **Chesapeake Bay Gateways Network:** A regional endeavor with extensive public-private partnerships and the role of NPS is still evolving; this is a good example of the challenges and complexities in dealing with large lived-in landscapes
(Resource - Chesapeake Treasured Landscape Initiative – coordinated by US DOI in collaboration with the US Department of Agriculture, National Oceanic and Atmospheric Administration and Department of Defense (Draft 203 Strategy-Treasured Landscape Initiative1.pdf) 3 page summary

- **National Heritage Areas:** NHAs provide a good model for a NPS program that uses partnerships to achieve resource conservation and cultural interpretation by engaging local citizens. In 2012, NPS received independent evaluations on the accomplishments of 9 NHAs. The evaluations were performed by the Center for Park Management, a division of the National Parks Conservation Association. When these evaluations are published in 2013, they will provide an excellent in-depth analysis into the benefits and challenges of this program.

*(Resources: **Charting a Future for the National Heritage Areas: A Report by the National Park System Advisory Board.** (NHAreport.pdf); **National Heritage Areas: Developing a Model for Measuring Success; 2004 US/ICOMOS International Symposium, Natchitoches, Louisiana. Summary of the benefits of the NHAs.** (NHA Developing a Model for Measuring Success.pdf); **National Heritage Areas (InfoSheet_NHAs in brief_4 2011 final.pdf)**; **Director Jarvis's Policy Memorandum 12-01 regarding the National Heritage Areas Program** <http://www.nps.gov/policy/PM-12-01.pdf>.)*

- **Other examples of collaborative models that bear further research are:**

- **Mississippi National River & Recreation Area**

*(Resource: **InsideNPS-Parks-Mississippi National River & Recreation Area – Park receives over \$1.0m for alternative transportation project by Susan Overson, January 2012. Relates this to the Call to Action-InsideNPS.docx**; **ATP Transportation Implementation Plan 2/2/2011 for Mississippi National River and Recreation Area:** This document that outlines the plan for the Mississippi River Train (MRT) from the twin cities to the Gulf of Mexico comprised of bike trails, commuter trails, motorized transit and more. Mentions the NPS Trails and Open Space Partnership (TOSP). There is 72 mile corridor in which NPS has the authority to act. MNR&RA is a partnership park in which NPS owns very little land and works with 25 local governments, several state agencies and numerous organizations to protect the ‘globally significant resources’ along 72 miles of the Mississippi River. (FINALTransportationImplementationPlan)*

- **Glacier National Park and region**

*(Resource: **Glacier National Park and its Neighbors: A Twenty-Year Assessment of Regional Resource Management** by Joseph L. Sax and Robert B. Keiter written for the George Wright Society, 2007)*

- **Other resource sites**

*(Resources: Two websites with articles about NPS and Partnerships
'<http://www.nps.gov/csi/pdf/collaboration.pdf>
<http://www.nps.gov/csi/pdf/westernCollaboration.pdf>)*

2. Determine the goals:

Everyone speaks of “gaps” in the system that need to be filled by new park units and more Park Service programs, but not everyone agrees on which gaps are the most important and the reasons for needing to fill them. It is important to understand the ‘what’ and ‘why’ as well as ‘how.’ What are the gaps in the system that need to be covered? Why are we trying to cover them? Here are some of the issues to be considered:

- Landscapes and watersheds - What is the purpose of conserving particular ones?
 - For their uniqueness
 - For their scenic and natural beauty
 - For their environmental value – clean air, clean water;
 - For environmental justice – everyone should have access to natural areas
 - To protect the environment around existing parks;
 - To preserve ways of life such as ranching and farming

- To preserve wilderness;
- For redundancy and/or future expansion especially in view of climate change;
- For quality of life and/or to deter sprawl
- Plant and animal protection – Which ones and why should NPS protect certain species and environments?
 - For their ecological value
 - For our scientific interest
 - For their medical value
 - For all the reasons listed under landscapes
- Cultural and historic parks; themes and stories - How do we decide which places to preserve and what stories to tell?
 - For their universal human interest
 - For their portrayal of unique human stories
 - For their value to historians
 - For their educational value
 - Because they are important or sacred to certain groups
- Recreational areas –Why do we want to create more recreational places?
 - For more access – especially near city centers?
 - To promote equity for urban populations?
 - To foster healthier lifestyles for all Americans
 - To create more variety of experiences where the public can hike, climb, kayak?
 - To create alternative places for people to recreate that will have less impact on fragile resources
- Corridors of conservation and of connectivity – Are our priorities people or species? Who do we want to connect to whom?
 - To allow for species migrations
 - To link existing natural or historical resources;
 - To connect existing parks
 - To create access routes for people
 - To connect urban centers with the great outdoors.

These questions and more need to be answered. It is important to understand where we want the National Park Service to go as well as how.

3. Define the challenges:

The challenges in reaching the 21st Century vision lie also within the way the National Park Service is structure and authorized. The authorities that Congress has and has not establish with NPS; the expectations of ‘national significance,’ and the culture of the Park Service are some of the hurdles.

- **NPS unit:** What is a unit? What isn’t a unit? Should the definition of a unit be expanded? Here are some of the considerations that the National Park Service and congress have to content with as they look at parks in the future:

- The *traditional model* of creating a new NPS park unit requires that a special resource study be completed which establishes the uniqueness and national significance of the proposed park unit. As part of the study a boundary is determined and legislation is passed. A new park is created in which usually the National Park Service owns, manages, maintains and polices everything inside the boundary but has no control of anything outside this legislated dividing line.
- The *new model* that we are outlining in this note will require that a ‘cooperative region’ is defined perhaps with a park unit within it or with defined role for NPS but the designation will need to allow flexibility that is very different from the traditional model. The new region will need to be allowed to grow and change over time as the partnerships/coalitions work together. The natural and/or cultural significance of the park area would not necessarily have to be ‘unique’ because we need redundancy to ensure that species and landscapes survive. The national significance may take time to define and establish because the theme(s) may not meet traditional NPS criteria or be recognized as nationally significant under the current standards which were created for the most part to support the history of white Europeans. The new model will need to be more organic and capable of growing over time. Ebey’s Landing and City of Rocks may provide role models of existing “park reserves” in which a unit is created with only a small portion of public ownership but over time more land is acquired and put in public ownership with the consent of local owners and the general public.
- **Authorities:** What authorities exist for partnerships and collaboration within NPS? Are there general authorities in place to allow more of the collaborations suggested in this note? Or are the authorities that are needed for strong partnership parks dependent on specific and unique individual park legislation? We need to investigate the current authorities and partnerships that allow such innovative areas as:
 - The public-private partners structures of Appalachian National Scenic Trail, Golden Gate and the Presidio, Boston Harbor Islands National Recreation Area and the Harbor Alliance;
 - The funding agreements, mostly cooperative agreements (CA), that enable NPS to partner with ‘external’ entities such as the National Heritage Areas;
 - And other authorities - some of which are described by CSI with examples in these resources:

*(Resource: **Protected Landscapes:** Prepared by Park Planning and Special Studies, within directorate of Park Planning, Facilities and Lands. White paper; **Collaboration and Conservation: Lessons Learned from NPS Partnership Areas in the Western United States,** A Report on a Workshop, March 18-19, 2003, Santa Fe, NM; convened for the NPS Planning and Special Studies Program by the Conservation Study Institute and QLF/Atlantic Center for the Environment)*
 - Role of US Congress: In the end it may require new laws to enable the Park Service to be fully collaborative and to change the rigid standards of significance and uniqueness. The considerations of Congress are various and not yet well aligned with this 21st Century vision as debates about budgets, private property and the role of government have grown more contentious over recently.

- **Criteria** – The current criteria for creating new parks and other NPS designations does not support many of the new goals for the Second Century such as equity, redundancy, grassroots driven, and inclusionary experiences. Current criteria require that NPS parks and programs support only the most unusual, the unique, and the best.

*(Resource: **Report on Criteria for Affiliated Areas**: submitted to the Committee on Interior and Insular Affairs House of Representatives and the Committee on Energy and Natural Resources, US Senate: Pursuant to PL 100-336; National Park Service, February 1990)*
- **Authorization without NPS ownership** - It is difficult for many people including Congress and NPS friends to understand the concept of National Parks without National Park ownership. The idea of the publically owned NPS “unit” is firmly ingrained in our national psyche. Say National Park Service and most people think of Yellowstone, Yosemite or another of the iconic parks, but as we have discussed in this note, there is great value in the other 350+ park units and the many NPS programs that provide technical and financial assistance to resources around the country. To make progress on the Second Century vision, the value of the partnership/collaborative parks needs to receive more study and attention by the premier partners and friends of the service such as the National Parks Conservation Association and the National Park Foundation as well as the National Park Service leadership. The value that NPS provide as a catalyst and a convener is as important as the agency being an owner and a manager.
- **NPS Brand** -The National Park Service ‘brand’ is respected and trusted nationally and international. The NPS is the only federal agency beloved by Americans. There are real concerns among those who highly value the National Park Service that collaborative partnerships will weaken the NPS brand by enabling less than nationally significant resources and interpretation into the system. While this is a very valid concern that requires careful study, an over preoccupation with significance and brand has served to segregate NPS from large portions of the American population and significant parts of our country - and most especially from areas with diverse populations, economic need and environmental blight. To be truly representative of the American experience means that NPS must be allowed to participate more fully in the American scene and that the standards for significance and uniqueness need to be broaden to allow more diverse points of view and redundancy.
- **NPS culture** – The current leadership of the National Park Service and many individuals in the park ranks strongly support partnerships and coalitions, but the traditional culture of the service does not make partnering easy to accomplish. Hierarchical, top down management and the current system of control and reporting requirements result in many NPS superintendents being uncomfortable and unable to deal with the give and take required in successful partnerships. This is exacerbated by Congressional requirements and inquiries and OMB’s limited interpretation of the rules and requirements. CSI has several excellent ‘white papers’ on what is required for successful partnership parks and the challenges for NPS.

*(Resources: **Collaboration and Conservation: Lessons Learned from NPS Partnership Areas in the Western United States**, A Report on a Workshop, March 18-19, 2003, Santa Fe, NM; convened for the NPS Planning and Special Studies Program by the Conservation Study Institute and QLF/Atlantic Center for the Environment. By Nora Mitchell, Jacquelyn Tuxill and Jessica Brown.*

Collaboration and Conservation: Lessons Learned in Areas managed through National Park Service Partnerships; Report on a Workshop at Marsh Billings Rockefeller National Historical Park, 2000. Principles for forging long-term partnerships, observations on the benefits, challenges of change and vision for the future. (collaboration.pdf)

Summary

New models are requirement for success in the 21st Century. As *A Call to Action* states “America has changed dramatically since the birth of the National Park Service” and the agency needs to change as well to stay relevant. What is needed is to create a culture of collaboration within the agency that allows diverse partnerships. But the Park Service must be given the authority to do this which means that Congress has a role as well. And even if Congress acts there will still be challenges around how places are selected. What criteria will be used? How will NPS maintain its brand and not lets its valued be diluted? If more partners are allowed to participate, how does the agency safeguard against private sector self-interest or, even worse, corruption? And in the end, even with the good regulations and planning, the best partnerships and collaborations depend on the people involved and the level of trust and mutual cooperation.

None of these are simple issues, but fortunately there are existing examples, case studies and research to help guide the way. This note has attempted in a small way to point towards some of the resources that are available.

Suggested readings for partnership models and large landscape conservation strategies

Compiled by Annie C. Harris for the National Park System Advisory Board's Planning Committee 2012

Models of NPS Partnership Parks and the Frameworks for Partnerships

Collaboration and Conservation: Lessons Learned from NPS Partnership Areas in the Western United States, A Report on a Workshop, March 18-19, 2003, Santa Fe, NM; convened for the NPS Planning and Special Studies Program by the Conservation Study Institute and QLF/Atlantic Center for the Environment. By Nora Mitchell, Jacquelyn Tuxill and Jessica Brown. ** Defines partnership programs nicely – including Great Sand Dunes National Monument and Preserve in CO (page 10). Case studies including Northern Rio Grande NHA and Yuma Crossing, AZ, Ebey's Landing, Rio Grande Wild and Scenic River, Redwood National and State Parks. Keys to successful partnerships: shared vision, ownership of the partnership by all, shared decision making, trust, flexibility, share control, understand different perspectives, tell stories of people and place, maintain continuity and transfer knowledge, develop ways to continually share, celebrate success. Good discussion of role of NPS – convener, catalyst and enabler of action - and role of partner – critical link to local communities and value and bridge to federal agencies. ** Look at the end of this where they describe what it takes to get a real partnership and the kind of authority, partnership culture, need to share control, etc. pages 25-33 and then Creating a Sustainable Environment for Partnerships (pages 35-38). (westernCollaboration.pdf)

Collaboration and Conservation: Lessons Learned in Areas managed through National Park Service Partnerships; Report on a Workshop at Marsh Billings Rockefeller National Historical Park, 2000. Principles for forging long-term partnerships, observations on the benefits, challenges of change and vision for the future. (collaboration.pdf)

Protected Landscapes: Prepared by Park Planning and Special Studies, within directorate of Park Planning, Facilities and Lands. White paper. The PPSS planning team was composed of Patrick Gregerson, Program Manager; Tokey Boswell, Program Analyst; and Carol Cook, Program Analyst. The subjects were 1) models on which a treasured landscape initiative might be based; and (2) authorities that might be employed by the National Park Service to manage treasured landscapes. Outlines key concepts for large landscape preservation – these are: As the Department of the Interior looks for new ways to protect large scale, inhabited landscapes with natural and cultural resources, our study effort has found evidence that several key concepts should be considered as new programs are built, new areas designated or existing efforts renewed.

1. Go where invited
2. Make long-term commitments
3. Work from a strong foundation
4. Manage by network; lead partnerships
5. Have the right staff for the job

And then lists case studies: Cuyahoga Valley National Recreation Area, OH, Ebey's Landing National Historical Reserve, WA, City of Rocks National Reserve, ID, Grant-Kohrs National Historic Site, MN (ranching reserve). Mississippi National River and Recreation Area, MN, **and** also Affiliated Areas: Pinelands National Reserve, NJ, and Biosphere Reserve, Blackstone River Valley National Heritage Corridor, MA and RI, **and** Partnership Wild and Scenic Rivers: Eight Mile Partnership Wild and Scenic River, CT, **and** National Heritage Areas and RTCA program and Land and Water Conservation Fund State Assistance Program.

This White Paper also discussed **Case Studies** – Federal, State and other Agency Models: Lake Tahoe Basin Management Unit, Nevada and CA with US Forest Service, Adirondack Park Agency, NY State, NJ Pinelands Commission, Pennsylvania Heritage Areas Program. And Case Studies – non-governmental Agency Models: Malpai Borderlands Group, Southeastern Arizona and Southwestern New Mexico, Undaunted Stewardship, Montana, (includes BLM and Univ of Montana);

And Land Trusts: Franklin Land Trust, Western Massachusetts, (with MA Agricultural Preservation Restriction program), Skagitians to Preserve Farmland, Skagit Valley, WA, And Case Studies – International Models: Biosphere Reserves, International Case Studies: National Scenic Areas and Areas of Natural Beauty, UK; Good bibliography list at the end. (proteclandscapes-psss.docx)

Leading in a Collaborative Environment: Six Case Studies Involving Collaboration and Civic Engagement by NPS Conservation Study Institute. 2010 Publication 17 lists some of the other reports and their pdf files. Six case studies African Burial Ground National Monument, Big Cypress National Preserve, Lowell National Historical Park, Marsh-Billings-Rockefeller National Historical Park, Saguaro National Park, Santa Monica Mountains National Recreation Area (CSI Report [Leading_in_a_Collaborative_Environment.pdf](#))

Redwood National and State Parks

- **New Horizons for Cooperative Management and Collaborative Partnership: Redwood National and State Parks, CA 1994-2010** by Joe Seney and Steve Chaney: short document (3 pages) about the successful partnership between NPS and the state of CA. This paper has good list of what it takes to make such a partnership work – namely that it take work! (1152seney.pdf)
- **Center for State of the Parks – Redwood National and state Park.** 2 page summary of this partnership. Prepared by the NPCA. (REDW_fact_sheet.pdf)

Mississippi National River and Recreation Area

- **ATP Transportation Implementation Plan 2/2/2011 for Mississippi National River and Recreation Area:** 66 page document that outlines the plan for the Mississippi River Train (MRT) from the twin cities to the Gulf of Mexico comprised of bike trails, commuter trails, motorized transit and more. Mentions the NPS Trails and Open Space Partnership (TOSP). Involved the

Denver Service Center and NPS staff and partners. There is 72 mile corridor in which NPS has the authority to act. MNR&RA is a partnership park in which NPS owns very little land and works with 25 local governments, several state agencies and numerous organizations to protect the ‘globally significant resources’ along 72 miles of the Mississippi River. Interesting purposes: (1) protect and enhance the MI corridor, (2) encourage coordination of federal, state and local programs, (3) provide a management framework to assist the state of Minnesota and units of government in the development and implementation of integrated resources management programs and ensure orderly public and private development of the area. Interesting purpose to save MI river which is a corridor of critical area – part of a 10 state non-profit for trail planning along the entire river. Identifying the route and providing signage.
(FINALTransportationImplementationPlan)

- **InsideNPS-Parks-Mississippi National River & Recreation Area** – Park Receives over \$1.0m for alternative transportation project by Susan Overson, January 2012. Relates this to the Call to Action (InsideNPS.docx)

Chesapeake Treasured Landscape Initiative – coordinated by US DOI in collaboration with the US Department of Agriculture, National Oceanic and Atmospheric Administration and Department of Defense (Draft 203 Strategy-Treasured Landscape Initiative1.pdf) 3 page summary

Discussion White Paper, Assessment of Preservation and Development in Lowell National Historical Park at its 30-Year Anniversary: Where have we been and where should we be going?
Dennis Frenchman and Jonathan S. Lane1 (Heritage Preservation and Development White Paper A.pdf)

Two websites with articles about NPS and Partnerships

<http://www.nps.gov/csi/pdf/collaboration.pdf>

<http://www.nps.gov/csi/pdf/westernCollaboration.pdf>

Miscellaneous Notes on Other NPS Partnership Resources

NPS unit managed by a non-profit (Teddy Roosevelt Inaugural Park.doc)

Historic Chattahoochee Commission (HCC), created by laws passed in Alabama and Georgia with concurrence by Congress to operate the commission as an interstate compact, funded in part by appropriations from both signatory states. The HCC is applying to become the local coordinating entity of the potential Chattahoochee Trace National Heritage Corridor. Although no findings have been reached for the feasibility study, this type of an arrangement could be looked at for park units that may cross state boundaries.

St Croix Riverway - GMP compared different partnership approaches for managing the river-way and look at sections of the St. Croix National Heritage Area Feasibility Study that provide an analysis of management options. Source - Barbara J. (BJ) Johnson, Division Chief, National Park Service, Denver Service Center Planning, 12795 West Alameda Parkway, Lakewood, Colorado 80228.

- St-Croix-FINA:-FS-Criterion 3.pdf

- St-Croix-FINA:-FS Management Alts Chapter.pdf
- St-Croix-FINA:-FS-Criterion 6.pdf
- St-Croix-FINA:-FS-Criterion 10.pdf

Manhattan Project Sites: Special Resource Study and EIS for Los Alamos, NM, Hanford, WA, Oak Ridge, TN, Dayton, OH (MAPR_FONSI_11-15-10.pdf)

The National Parks: Index 2009-2011 www.nps.gov/history/online_books/nps/index2009_11.pdf

Other writings on the National Park Service

Advancing the National Park Idea – National Parks Second Century Commission Report (Commission_Report.pdf). Important report on visioning the future of NPS

Coming soon - National Park Service Programs: A Companion Volume to NPS Management Policies. A Review of NP Service programs that extend the benefits of natural and cultural resource conservation and outdoor recreation throughout America and the world. Draft January 24, 2012.

“While it is common knowledge that the NPS manages units of the national park system, it is not common knowledge that the NPS also manages programs that reach far beyond national park boundaries. Although these programs operate mainly outside the national parks, they form a vital part of the NPS mission and help sustain and enhance the quality of life throughout America. This volume describes these programs and the various roles they play in helping the NPS extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.”

“For a graphic, State-by-State illustration of the extent to which these programs are serving America, visit the interactive “State Pages Project” website at [www.nps.gov/\[name of state\].](http://www.nps.gov/[name of state].)”

National Park Service Authorized Studies 12/5/11 – a list of authorized studies (NPS Studies.pdf)

Report on Criteria for Affiliated Areas: submitted to the Committee on Interior and Insular Affairs House of Representatives and the Committee on Energy and Natural Resources, US Senate: Pursuant to PL 100-336; National Park Service, February 1990. This is an old report but it makes some interesting points about the criteria for establishing parks that need to be addressed. Law directs DOI to report on criteria for national significance. There is no consistent system. Report recommends that “affiliated area” be applied to a select group of nationally significant areas that have a formal cooperative relationship with NPS; and should NOT be considered as a ‘stepping stone’ toward becoming a unit of NP system and not be used simply as a way to provide funding. Criteria: (1) outstanding example, (2) possesses exceptional value or quality, (3) offer superlative opportunity, (4) retains a high degree of integrity – plus suitability/feasibility and management alternatives (criteria for management differ from NPS because these are not managed by NPS) . *Note – most of these criteria are very much at odds with trying to ensure redundancy and critical mass.* Some examples of affiliated areas: Boston African

American National Historic Site (privately owned but NPS administers), Pinelands National Reserve, Ice Age National Scenic Trail and Ice Age National Scientific Reserve. Suggests a designation process and national criteria. (1990ReportAffiliatedAreas.pdf)

Papers on Large Landscape Conservation

Large Landscape Conservation: A Strategic Framework for Policy and Action; Lincoln Institute of Land Policy by Matthew McKinney, Lynn Scarlett and Daniel Kemmis. Published by the Lincoln Institute of Cambridge MA and the University of Montana's Center for Natural Resources and Environmental Policy. 2010; 60+ pages. Dealing with the scale of large landscapes. No single entity; need to create formal and informal ways to work across boundaries, focus on land and water problems at the appropriate scale. Keys: Share information, encourage networks, establish national grants, improve policy tool kit, facilitate innovative funding. Seven case studies including Blackstone and Lake Tahoe. Also identifies the barriers to large landscape approaches. Look at some of this for recommendations to NPS. (Large Landscape Conservation final.pdf)

How to Treasure a Landscape: What is the Role of the National Park Service? by Brenda Barrett, CRM: The Journal of Heritage Stewardship; Vol 7, Number 1, Winter 2010. (How to Treasure a Landscape CRM Journal.pdf)

Ecological Integrity and Canada's National Parks by Stephan Woodley. Forwarded by Mike Scott. (272woodley.pdf)

Climate change, biodiversity conservation and protected area planning in Canada by Lemieux and Scott, forwarded by Mike Scott (Lemieux_scott.pdf)

Ecological Urbanism for the 21st Century by Jon Christensen, Robert McDonald, and Carrie Denning; January 22, 2012, (Ecological_Urbanism_21st Century.docx)

National Heritage Areas and Large Landscape Conservation

Charting a Future for the National Heritage Areas: A Report by the National Park System Advisory Board. (NHAreport.pdf)

Director Jarvis's Policy Memorandum 12-01 regarding the National Heritage Areas Program
<http://www.nps.gov/policy/PM-12-01.pdf>.

Roots for the National Heritage Area Family Tree by Brenda Barrett, 2003, George Wright Forum. Describes the Pinelands and other partnership parks. (George Wright reprint)

Congressional Research Service: Heritage Areas: Background, Proposals and Current Issues by Carol Hardy Vincent, January 7, 2010 (CRS Report on NHAs.pdf)

National Heritage Areas: Developing a Model for Measuring Success; 2004 US/ICOMOS International Symposium, Natchitoches, Louisiana. Summary of the benefits of the NHAs. (NHA Developing a Model for Measuring Success.pdf)

National Heritage Areas and the National Park Service: Protecting Investment and Sustaining a Public-Private Partnership for the Future. White Paper by Alliance of National Heritage Areas (National Heritage areas: Case_final.pdf)

Best Practices in Heritage Development from the National Heritage Areas Fall 2005

Completed for the National Park Service and the Alliance of National Heritage Areas by Rosemary Prola, University of Maryland (Best Practices.pdf)

The National Park Service and the National Heritage Area Program Brief description by Annie C. Harris, Executive Director of the Essex National Heritage Area (National Heritage Area summary rev3a.doc)

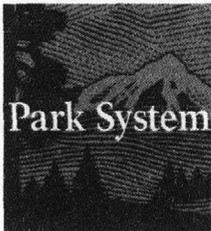
Economic Impact of Six National Heritage Areas; December 2010 (revised 2008 Economic Impact 6 National Heritage Areas MGM2 by ANHA.doc)

National Heritage Areas (InfoSheet_NHAs in brief_4 2011 final.pdf)

Alliance of National Heritage Areas Annual Report (AnnualReport2010.pdf)

Alliance of National Heritage Areas Annual Report (AnnualReport2009.pdf)

National Park System Advisory Board



Citizen advisors chartered by Congress to help the National Park Service care for special places saved by the American people so that all may experience our heritage.

Appendix F

Urban Sub Group Report

National Park System Advisory Board

Planning Committee

November 2012

NATIONAL PARK SYSTEM ADVISORY BOARD
Planning Committee,
Urban Sub Group Report
October 15, 2012

Sub Group Members: Belinda Faustinos, Honorable Ed Reyes (Alternate: Lupe Vela), and Dr. Jennifer Wolch.

Background

Connecting urban populations to NPS parks and programs has been a focal point of the Second Century Commission, America's Great Outdoors Initiative and the NPS Advisory Board. The issue of connection to urban communities is extremely critical since more than 87% of the U.S. population will be living in cities by 2030. In order to address this issue an Urban Sub Group was formed within the NPS Advisory Board Planning Committee to make recommendations on how to improve the National Park System in order to provide enriched connections for urban populations with the natural environment, recreation, public health, economic, cultural history, civic engagement, and other benefits of National Parks and Programs. Over the course of the last 18 months the sub group reviewed various reports and articles and conducted numerous conference calls to discuss and formulate recommendations to the full committee. One particular quote from the President & Chief Executive Officer of the Trust for Public Land summarizes why the NPS must take action on this issue:

September 2009, Will Rogers in the Huffington Post stated that:

"The National Park system is also incomplete in that it needs to grow to keep pace with the recreational needs of our ever-increasing population. If we don't grow the system, we risk losing to death the parks that we have. And nowhere is this truer than in and around cities, where most of us live. We need new and expanded national parks, especially in our urban areas."

A general conclusion drawn from our research and identified by many of the leading environmental organizations is that the NPS must engage with urban communities to establish positive lifelong connection between Americans and their national parks, trails, waterways, and natural and cultural heritage. In addition, the NPS should take a leadership role to help address the increasing instance of environmental injustice and barriers between communities and parks and open space. This leadership role must be implemented in a way that facilitates the vision, ideas and strategies of the community and other partners and does not feel like a "top down" process. There are many cases where the vision stems from the local community and/or the partner organizations. In that case, it would be great for NPS to provide simply effective support for community based initiatives. There are many things that a large, competent, billion-dollar agency can do that a small, local, non-profit cannot. Often the vision is less important than the effectiveness -- power -- to get an idea to reality.

Together the NPS, its partners, sister agencies, stakeholders and community members can play a significant role in ensuring that densely populated diverse communities across the country support connections to parks and open spaces, however it is important to recognize that these relationships, in order to be reciprocal, must be transparent and focus on those areas where NPS can be an equal partner with the community. Reciprocal and sustainable long terms community relationships are even

more critical if NPS is serious about taking a leadership role to help address the increasing instance of environmental injustice and this leadership role will get much of its energy from the collaborative action that results from sustained reciprocal relationships.

This definition and practical implementation of “reciprocal relationships” merits a facilitated conversation with some of NPS’s actual and potential partners in urban areas. From the sub group’s collective experience and discussions with actual partners, some outside organizations do not feel that partnerships with NPS always operate on a two-way street basis. There are occasions when the Park Service rejects an idea or a proposal on the grounds that approving it would come in conflict with precedents established for large rural or wilderness national parks, i.e. establishing parks in urban areas where habitat may be fragmented or in need of restoration. There is often recognition that, while a particular action is appropriate in an urban setting, it cannot be supported because it might set a poor precedent elsewhere for the Park Service. This is probably the single most common reason for strife between the Park Service and its potential partners in urban areas. This problem does not seem insoluble, but the Park Service would need to explicitly set up internal structures to deal with it.

Therefore, it is critical that the NPS establish an urban parks strategy that embraces *all NPS resources* including national parks and highly effective NPS programs such as the Rivers, Trails and Conservation Assistance Program and the National Historic Landmarks Program to build on and enhance community engagement that improves urban connections and access. This strategy must include considering opportunities to update or revise current criteria, policies and guidelines used in evaluating potential new national parks and landmarks in the urban context. For example, current guidelines regarding “integrity” seem to focus on substantial architectural features, overlooking sites that represent stories of recent immigrants and the working population; a factor that was identified by the American Latino Heritage Scholars panel as a primary reason for the extremely low numbers of Latino National Heritage Landmarks. For natural areas, current integrity criteria also would preclude favorable consideration of damaged urban sites with potential for restoration; guidelines related to national significance determinations could better recognize the challenges for communities where the most important resources may not be substantial structures. This strategy must also include the complimentary recommendations of the Relevancy, Education and Science committees to insure that all new initiatives pursued by NPS are leveraged to the fullest extent possible. This is also a chance to assess re-allocation of resources as aids to best practices once both the assessment of existing urban parks and programs is completed and successful models are more thoroughly understood.

The sub group focused its work on two areas consistent with the framework for this committee, *gaps and models*. Over the last six months the sub group has also joined with the Directors’ “Champions” for his Parks for People goal under the Five Year Action Plan to collaborate on mutual goals.

The sub group has an overall recommendation to the Advisory Board that the Chair appoint an Urban Panel to continue the work initiated with the Planning Committee.

The Urban Panel should be comprised of at least 7 members representing urban/metropolitan areas who: 1) have nationally recognized experience/knowledge of urban/metropolitan park and open space issues and 2) are geographically diverse. Further consideration should be given to insure that the panel members as a whole will have the following qualifications:

1. Community Based Organization Partner (at least three of the members, one of which should represent areas that do not have a NPS unit within 50 miles)
2. National Private Organization Partner
3. Youth Organization Partner
4. Civic Leader/Local Agency Partner
5. Academic

Further, it is essential that the Panel, if appointed, continue to work with the NPS staff designated as “Champions” for his Parks for People goal under the Five Year Action Plan to collaborate on mutual goals. The sub group also recommends that the Director’s identified Urban Champions should be expanded to include self-selected representatives of existing major urban NPS units, preferably with geographic diversity and representatives of existing partner based programs such as the Diverse Outdoor Leadership Institute Program (DOLI) in the Pacific Region. The work of this group should be conducted consistent with the Director’s Organizational Development Community of Practice principles. It is also recommended that when considering appointments to the Panel that not only the make-up of the participants is important but that reflection on the characteristics of successful models stated below be reviewed in clarifying the mandate for the panel in terms of practices and planning.

The Urban Panel would provide further guidance to the Director on implementation of the gap analysis and model recommendations identified below.

GAP ANALYSIS RECOMMENDATIONS

A review of literature on the issue of urban area park/open space gaps found that while there is significant published information related to urban parks they focus primarily on the delivery of municipal type recreation services such as the Trust for Public Land’s Urban Parks report. However, this report and others should be used to help the NPS identify and prioritize next steps related to communities with the least access to park and recreational resources, poor physical environments, poor health factors, as well as, civil rights and environmental justice barriers to parks and open space.

The working committee agreed to use the US Census to identify the largest 50 Metropolitan areas in the Nation (Exhibit A) as the starting point for identifying how to proceed with a gap analysis recommendation. NPS staff was able to identify the national park units located within a 50 mile radius (one/two hour car drive) of each metropolitan area (Exhibit B). It is noted that there are 10 metropolitan areas where there is no NPS unit presence within 50 miles: Dallas-Fort Worth-Arlington, TX, Houston-Sugar Land-Bayton, TX, Riverside-San Bernardino-Ontario, CA, Sacramento-Arden-Arcade-Roseville, CA, Indianapolis-Carmel, IN, Austin-Round Rock, TX, Milwaukee-Waukesa-West Allis, WI, Memphis, TN, Birmingham-Hoover, AL, and Raleigh-Cary, NC.

Park Units within a 50 Mile Radius of Metro/Urban Areas

Committee members agreed that the Park Service should focus initial efforts on identifying how well the existing NPS 40 units within a 50 mile radius serve adjacent urban communities. As recently as ten years ago a survey of Santa Monica Mountains NRA generated the following conclusion:

“Findings show park visitors were predominantly white, affluent, and lived nearby. People of colour travelled further, were significantly less likely to be return visitors, and were less inclined to use the park for active recreation. Seemingly, this park fails to meet the needs of the disadvantaged urban

communities for whom it was created, a problem that may also affect other parks in the United States and potentially parks in other countries.” (Byrne, Jason; Wolch, Jennifer and Zhang, Jin (2009) 'Planning for environmental justice in an urban national park', Journal of Environmental Planning and Management, 52: 3, 365 — 392)

Since that survey was conducted the SMMNRA has become well known and even a poster child for successful partnership programs that have increased connections with surrounding diverse urban communities, however physical and social barriers are still of concern. Given limited resources to conduct a comprehensive survey of all 40 urban park units it is recommended that a trial group of 3 -5 park units undertake a survey of not only the factors studied by Bryne, Wolch and Zhang but also such elements as:

1. Need and Interest of Communities: Data on community needs and the level of existing park and community connections should be analyzed from existing studies, reports (e.g., AGO Listening Sessions) and location-based anecdotal information. Reports from the Relevancy Committee at Cuyahoga NP will be particularly insightful and it is recommended that to the extent future Urban Park sites are selected by the committee that there is collaboration in order to leverage each committee’s work.
2. Access to a Park/NPS Office: 50 Mile radius does not equate to an NPS presence near all major urban areas; there are both physical and social barriers to park access. The survey should identify local barriers, some of which will likely be unique to each location.
3. Capacity of Parks for Meaningful Engagement: Capacity constraints the ability of parks to provide community engagement, recreational and interpretive services within and for urban areas. For example the difference between a small national monument site and a national recreation area typically in staffing levels is but one of these elements. Again, the survey developed by the Relevancy Committee for Cuyahoga is a good example of the data that should be collected.
4. External Programs: To what extent does the Park Unit or Office engage with diverse/impacted communities in its geographic region? Examples of other park providers (local/state/federal). Identify characteristics of successful programs.
5. Transportation: To what extent does the Park Unit or local jurisdictions provide transportation for urban communities?
6. Programming: Is the Park programming developed to meet the needs of diverse urban communities? Coordination with the Education Committee on this topic is critical.
7. Long Term Engagement: Programs that seek to engage diverse urban populations are not new to the Park Service. The gap analysis must identify the key elements of long term sustained engagement and prioritize essential strategies to achieve this goal.
8. Park history and organizational culture:Crucial to all of the points above. The history of how the park has previously engaged with the diverse urban populations surrounding the parks could be a starting point for engagement – either interrupting historic patterns of oppression or building on patterns of support that have languished.

Priority for these surveys should be for those park units adjacent to communities that have the least access to park and recreational resources, poor physical environments, poor health factors, civil rights and environmental justice barriers to parks and open space.

The Park Units that may be appropriate for this survey are: Santa Monica Mountains National Recreation Area, Lowell National Historic Park, Biscayne National Park, National Parks of New York Harbor, Indiana Dunes National Lakeshore and Trail of Tears National Historic Trail. The key recommendation is that the units selected should be representative of traditional park units, recreation areas, historic and cultural sites.

No Park Units in 50 Mile Radius

The Five Year Action Plan places a significant emphasis on the Rivers, Trails and Conservation Assistance Program (RTCA) as the most strategically poised program within the Park System to positively impact urban communities due to its historical success in urban areas. However, as noted previously, it must be considered as part of a host of opportunities and traditional park unit designations must play a significant role if we are to address the unmet park and program needs of urban communities.

The following recommendations for a gap analysis of the 10 largest metropolitan areas are preliminary ideas related to this topic and will be finalized as part of the next series of sub group meetings:

1. How can the RTCA program be expanded to meet the long term needs of urban areas, i.e., RTCA projects are usually limited to a maximum three year, life span. Partnering with existing urban partnership efforts, i.e., river/watershed revitalization efforts such as the Trinity River, Dallas could benefit from the sustained long term participation of NPS technical assistance such as the RTCA program and meet a critical major metro area gap.
2. How can NPS resources be positioned to strategically benefit urban communities, i.e., should the RTCA program direct a significant portion of its program to the 10 urban areas without a NPS unit. How can the Land, Water Conservation Fund, Urban Park and Recreation Recovery Act, National Historic Landmarks and other cultural resource program funding be utilized to further urban goals and programs?
3. The NPS must strategically analyze completed or in process Special Resource Studies in Urban areas to prioritize those which would leverage strong local community support.
4. Analyze the cost benefit of establishing relatively permanent NPS "Service Centers" in those urban areas where there are no park units, or where existing parks lack capacity to engage the community on other opportunities. The wide variety of park service expertise including cultural resources, Science and Education would build on the RTCA program. The "Service Centers" have the benefit of providing long term sustained community based services that are near impossible to achieve from large regional offices. Part of the process for establishing these services centers must include a community based participatory processes.

The results of the gap analysis will also inform the development of new urban National Park models.

MODELS

Models and best practices for urban national park and community connections

The Committee has started to gather information on successful urban connection and community access models. The group discussed NPS models such as National Recreation Areas, Heritage Areas, Networks

and those outside the NPS. Some of the characteristics of successful models that have been identified as common indicators of success are:

1. Community support and buy-in resulting from strong reciprocal relationships.
2. Strong local partners
3. Visionary NPS leadership
4. Long term commitments
5. Reciprocal relationships with diverse community members
6. Partnerships with other federal, state, local, non-profit entities to leverage synergistic opportunities such as the Groundworks program, AGO, local conservation corps, river parkway programs, etc.
7. Partnerships with local health priorities, i.e., programs to address obesity, diabetes
8. Partnerships with schools, youth groups
9. Partnerships with prominent local community organizations such as churches
10. Programs that build community engagement capacity
11. Sustained investment of NPS (or other government) resources
12. A sustained program for staff development which facilitates community engagement
13. Strong interpretive programs which promote the stories of indigenous and immigrant peoples will provide a relevant context for community engagement.

These factors will be used to identify a series of signature models across the nation. The models are expected to include at least three types of park units: historical, recreation area and a traditional park unit. Two to four programs will also be selected including the RTCA Program. These projects may range from adding capacity for existing programs to supporting new efforts. The intent will be to support and illuminate successful urban community relationships that can be used as models by other parks and programs. The key finding of the sub group is that strong partnerships are essential to a successful NPS Urban program.

Lastly, the sub group has joined with NPS Champion Steve Whitesell to recommend the need to reposition the Director's Call to Action Plan to address two issues:

1. Number of Communities: Team recommends the Action drop the "in at least 50" communities target and instead focus on a smaller number of communities to ensure greater success, value, and impact.
2. Include Parks and Other NPS Programs: The Team recommends expanding the Action to include Parks and other NPS programs (along with RTCA) to ensure long term success of the Action.

Members of the sub group look forward to cooperating with NPS in implementing these recommendations as part of progress with the Director's Call to Action in the years ahead.