



# Building Capacity for Civic Engagement in Natural Resource Management in the National Park Service

Natural Resource Report NPS/NRSS/BRD/NRR—2016/1292



**ON THE COVER**

“Pop Up” Meeting for Transportation Plan at Acadia National Park  
NPS Photo by John Kelly

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# **Building Capacity for Civic Engagement in Natural Resource Management in the National Park Service**

Natural Resource Report NPS/NRSS/BRD/NRR—2016/1292

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## Executive Summary

The National Park Service (NPS) has a unique position among federal agencies in that its mission includes preservation and public use. Fulfilment of these two aspects of the conservation and compliance with federal laws such as the National Environmental Policy Act (NEPA) requires that NPS engage with publics from diverse backgrounds and who may hold a range of different relationships to the resources protected in parks. Director's Order (DO) 75A expresses a commitment by NPS to engaging publics in natural and cultural resource management. DO-75A implies that civic engagement prior to a NEPA process can support NPS goals of reduced planning timeframes, better community relations and other ways of "connecting people to parks". Although some resources are available, specific guidance and examples of tools and processes for natural resources are lacking.

The purpose of this project was to assess the current role of civic engagement in NPS activities in the context of increasingly complex resource management challenges and diverse publics with increasing interest in and access to resource management decision-making. Specifically, the connection between civic engagement and formal NEPA planning was assessed along with perceived benefits and barriers to use of civic engagement, especially before the NEPA process.

Semi-structured informal interviews were conducted with NPS employees with significant experience implementing civic engagement activities. Interviewees discussed the definition of and experiences with civic engagement; best practices/barriers for civic engagement in general and for natural resource management; the relationship between civic engagement and NEPA input; and available and desired resources.

Interviewees provided diverse perspectives on uses of civic engagement and the benefits of effective civic engagement. They also identified barriers that hinder productive civic engagement. Interviewees indicated perspectives that could be categorized along the entire public engagement spectrum from information provision to full collaborative decision-making and community empowerment.

Interviews reflected a general feeling that civic engagement is beneficial, but specific benefits were hard for interviewees to articulate. However, several general categories of benefit did emerge from interviews. There was a sense that the need for civic engagement is not only the result of social and ecological transformations, but also has the potential to transform how natural resource issues are perceived and addressed.

There was also recognition that there is great, but unrealized, potential for civic engagement to contribute to formal NEPA planning. Civic engagement can build relationships and channels for communication that can be leveraged in planning and can act as an early warning system for issues may become controversial. Civic engagement also can build trust between parties, which can facilitate NEPA planning and prevent litigation, and can also help NPS decision-makers access different sources of knowledge that may facilitate NEPA planning. This, according to interviewees, could lead to decisions that better meet both social and ecological management goals and are more resilient to legal challenge.

Interviewees recognized several challenges that hinder development of civic engagement activities. They employed varying definitions of civic engagement and the activities that relate to engaging publics in NPS resource management activities. Their definitions reflected different public involvement and governance paradigms. Multiple definitions and unstated paradigmatic differences create the potential for miscommunication and frustration in elaborating the goals of a civic engagement process, threatening its success.

A wide range of fear and uncertainties were also mentioned in interviews. Chief among these is the fear of overstepping legal and administrative boundaries by abdicating NPS decision-making responsibilities or establishing unrealistic expectations by the publics being engaged. There were also fears and frustrations related to involvement in civic engagement around contentious issues that would have both personal and professional consequences.

Interviewees indicated that, while they felt empowered by the provisions of DO-75A, the document fails to provide guidance on how civic engagement is to be done. Although interviewees recognized that there are a number of extant training opportunities that include some civic engagement capacity building, many such efforts are targeted at cultural resource and, agency-wide, there is little commitment to building capacity for civic engagement, although this is beginning to improve.

The study concludes that there is clear evidence of growing momentum for civic engagement for natural resource management in NPS. The required authorities have been developed, and the next stage in realizing an institutional commitment to civic engagement is to develop a common vision for civic engagement, including developing understanding of effects of differing paradigms on how civic engagement is implemented.

Fully institutionalizing civic engagement requires a more detailed framework that helps identify the role of civic engagement in routine operations of NPS units, contentious natural resource management challenges and everything in between. Such a framework would offer guidance/resources that would:

- Provide a unified vision of civic engagement;
- Clarify who is responsible for driving civic engagement;
- Better integrate social and natural sciences in the adaptive management cycle;
- Centralize access to existing tools and techniques for civic engagement, in a natural resources context;
- Develop staff capacity to select and implement the most appropriate public participation tool for their situation;
- Improve training and coaching to assist staff in honing their public participation skills;
- Provide a bridge between on-going civic engagement and NEPA-related public involvement.

Future efforts will need to develop techniques that will help managers design effective civic engagement processes, collect useful data, and build partnerships that help managers develop a clear statement of the problem and strengthen natural resource management. It is our hope that good civic engagement will lead to more collaborative and less contentious planning processes.

## Acknowledgments

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# Introduction

“The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The park service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.” - *National Park Service Mission*

The National Park Service (NPS) has a unique position among federal agencies in that its mission includes both conservation and public use. The agency protects natural and cultural resources while also allowing the American people to enjoy those resources. As a result, the agency earns trust and legitimacy by providing services as well as information (Morgeson & Petrescu, 2011). In the nearly 100 years since NPS was created, the publics served by NPS and the stressors affecting natural resources in parks have changed dramatically. While parks once could be managed as islands of protected habitat, there is now increasing recognition that parks are a part of a broader land/seascape and that sociological and ecological systems interact to affect park resources (National Park System Advisory Board, 2012). Concurrent with increasingly complex resource management challenges, NPS publics have diversified, enjoy greater access to information, and, more and more, desire opportunities to be involved in agency decisions (Wondolleck & Yaffee, 2000). It is in the context of multiple, and often competing, public expectations that NPS units now manage natural resources (Leong et al., 2011).

Like other public land management agencies, the NPS has formally allowed for public input into management decisions since the Administrative Procedure Act (APA, 1946). With the advent of the National Environmental Policy Act (NEPA, 1970), public involvement became a standard part of significant or controversial natural resource management plans. The Director's Order on Civic Engagement and Public Involvement (DO-75A, National Park Service, 2007) provides a mechanism through which NPS can engage in on-going dialogue with the public outside of formal NEPA plans and institutionalizes civic engagement as a way of doing good business. Civic engagement is seen as a commitment to building and sustaining relationships with stakeholders, to reinforce the Service's and the public's commitment to the preservation and stewardship of park resources. DO-75A also implies that civic engagement prior to a NEPA plan can support NPS goals of reduced planning timeframes, better community relations and other ways of “connecting people to parks.” According to DO-75A, civic engagement includes, but is not limited to, public involvement activities.

Public involvement in a NEPA process can help ensure that the NPS considers all relevant issues, and therefore is in a position to prevail if those decisions are challenged in court. However, the types of public involvement associated with many NEPA processes are not always well-suited to resolve controversies that led to the need for a plan in the first place. Additionally, natural resource management relies more heavily on biophysical science than do other types of resource management in NPS. Different sources of knowledge about natural resources can be shared and discovered during on-going civic engagement outside of formal NEPA planning. There is a need to analyze and integrate data collected through civic engagement activities so that it can be used in future NEPA

processes if necessary. Several offices recognize that NEPA processes would be strengthened if NPS units had additional guidance and tools for engaging with the public more broadly. With these observations in mind, this project examined the current state of civic engagement for natural resource management in NPS and explored its relationship with NEPA compliance.

Although some civic engagement resources are available, specific guidance and examples for natural resources are lacking. Civic engagement in natural resource issues can be less intuitive than for other types of NPS resources. Stakeholder groups might be less clearly defined than those interested in, for example, management of cultural resources related to a specific cultural group (e.g., African Burial Ground National Monument, Japanese American Confinement Sites). In addition, natural resource issues are often framed as scientific issues in which the space for public discussion might be highly limited. While NPS has developed a number of civic engagement examples for cultural resources or historic sites (see <https://www.nps.gov/civic/>), natural resource issues also justify using targeted civic engagement tools and strategies.

This report starts by reviewing unique challenges related to civic engagement and 21<sup>st</sup> century natural resource issues and then discusses results of interviews with diverse NPS staff who are regularly involved with civic engagement activities. Finally, some suggestions for future steps to build capacity for civic engagement for natural resources are examined. This project recognizes that, while NPS resource management decisions are informed by the best available science, there are other factors that must be considered to make effective and sustainable NPS natural resource management. It is our hope that improving NPS capacity to implement effective civic engagement will lead to more collaborative and less contentious planning processes.

### **A brief history of public involvement and civic engagement**

Often, terms related to communicating with and involving citizens in government activities are used interchangeably. As ideas about the role of the public have evolved, terms have developed very specific meanings that reflect different paradigms of public participation. Public participation is an umbrella term that refers to informing and/or engaging affected stakeholders in governance. Public participation is a foundation of democratic governance theory (National Research Council, 2008). Yet, the term “public participation” encompasses a range of philosophies and approaches to engaging the public in decision-making. The nature of participation in governance in the United States has evolved along with changes in social, cultural and economic conditions. In recent decades, the U.S. government has experienced a strong expansion of expectations for involving the public in agency decision-making. Literature on public participation attributes this expansion to a number of factors. These include loss of trust in government agencies (Ludwig, 2001); legislative and statutory requirements for communicating with the public (Leong, Forester, & Decker, 2009); and changing demographics that have brought more people in contact with the nation’s natural areas and wildlife (Leong, Decker, Lauber, Raik, & Siemer, 2009).

Diverse drivers have yielded different approaches, techniques and typologies of public participation. Arnstein (1969) provided one of the first attempts to organize various approaches to communicating with the public into a coherent framework, which she referred to as the “Ladder of Public

Participation.” Subsequent research has refined this thinking and sought best practices in applying participatory techniques. The National Research Council (2008) describes in detail the history of legislation related to public participation in the United States. Leong, Decker, et al. (2009) analyzed characteristics of these legal changes and identified three distinct paradigms that have been used to describe the relationship between natural resource management agencies and stakeholders. The International Association for Public Participation (IAP2) developed a spectrum of public participation that outlines strategies reflecting this progression, which was modified by the Department of the Interior (DOI, Table 1). Figure 1 illustrates the continuum of public participation strategies and the governance paradigms with which those activities are generally associated.

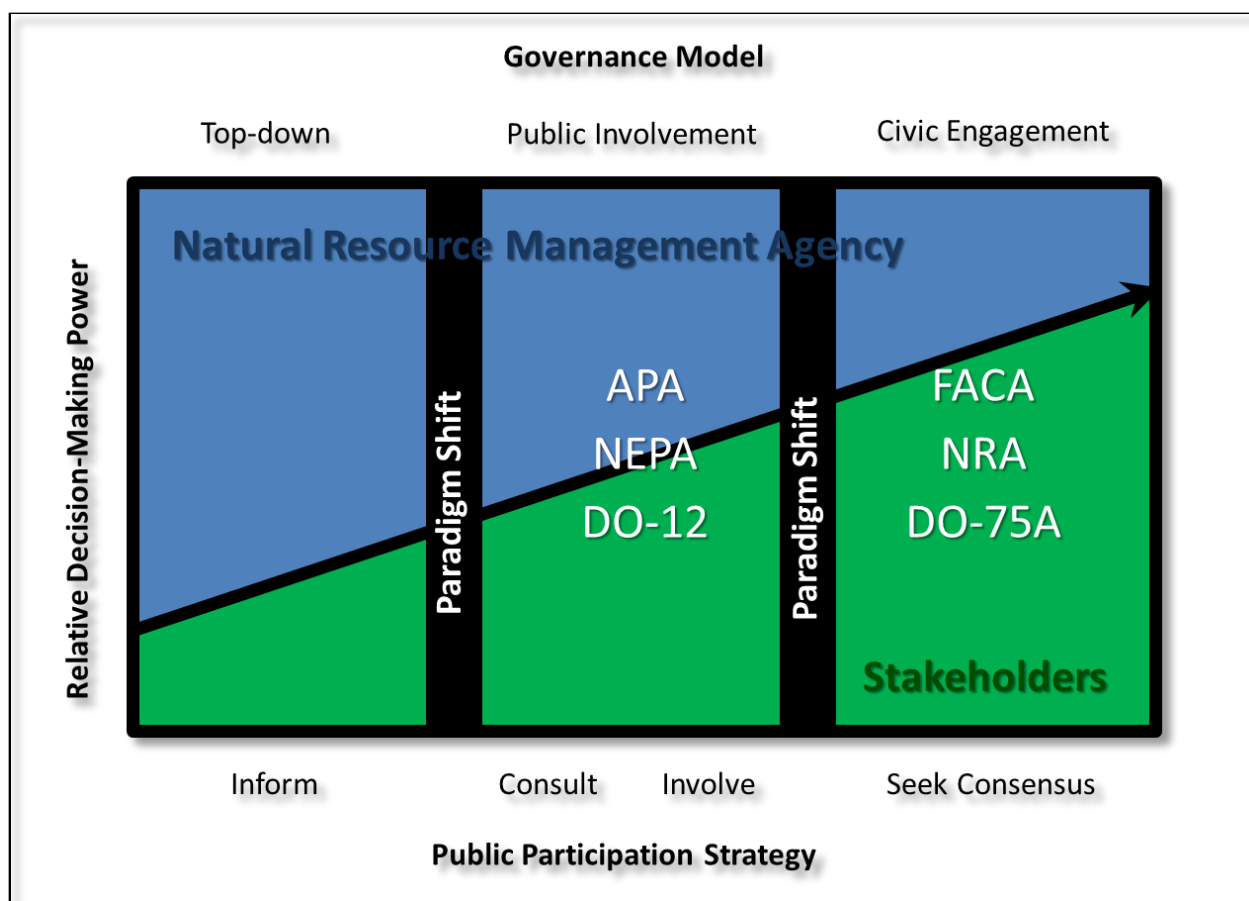


**Figure 1.** Governance models for public participation, relative decision-making power, and public participation strategies. Modified from Leong, Emmerson, and Byron (2011). Green indicates relative decision-making power of stakeholders, blue of the natural resource management agency. Each governance model encompasses multiple approaches to public involvement, described in detail in Leong, Decker, et al. (2009). Shifts between governance models represent different paradigms regarding roles of agencies and stakeholders in public participation. Legal authorities corresponding to various approaches are indicated in white text: APA=Administrative Procedures Act, NEPA=National Environmental Policy Act, DO-12=NPS Director's Order 12: NEPA Handbook, FACA=Federal Advisory Committee Act, NRA=Negotiated Rulemaking Act, DO-75A=NPS Director's Order 75A: Civic Engagement and Public Involvement. Public participation strategies correspond to the categories described in the Spectrum of Participation (Table 1).

**Table 1.** Spectrum of Stakeholder Engagement in Decision-Making. A tool to help agency decision-makers determine the appropriate level of engagement to achieve stated goals in a specific circumstance and then identify process options for achieving that level of engagement. Based on International Association of Public Participation Spectrum and modified by Department of the Interior.

| Parameter                                     | Inform                                                                                                                                                                                    | Consult                                                                                                                                                                                                                               | Involve                                                                                                                                                                                                                | Seek Consensus                                                                                                                                                                                                                                      |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Public Participation Governance Model:</b> | Top-down                                                                                                                                                                                  | Public Involvement                                                                                                                                                                                                                    | Public Involvement                                                                                                                                                                                                     | Civic Engagement                                                                                                                                                                                                                                    |
| <b>Agency Goal:</b>                           | To provide sufficient objective information to assist stakeholders in understanding the issues, the alternatives considered and/or the decision/s.                                        | To obtain feedback on issues, the alternatives considered, analysis, and/or the decisions.                                                                                                                                            | To consistently include stakeholders input throughout the process to ensure that stakeholder concerns are understood and considered before decision/s made.                                                            | To directly engage or partner with stakeholders in all aspects of the decision-making process including the framing of the issues, the development of alternatives, and the identification of the preferred solution.                               |
| <b>Agency Commitment to Stakeholders:</b>     | Agency will provide you with comprehensive, accurate and timely information about our decision-making.                                                                                    | Agency will keep you informed and listen to your concerns and suggestions, and provide feedback on how your input was considered in the decision-making process.                                                                      | Agency will work with you to ensure that your suggestions and concerns are reflected in the alternatives developed during the decision-making process, and provide feedback on how your input influenced the decision. | Agency will partner with you at each stage of the decision-making process, seek your advice on the formulation of the alternatives and solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible. |
| <b>Decision-making:</b>                       | By agency                                                                                                                                                                                 | By agency with opportunity for suggestions or feedback                                                                                                                                                                                | By agency with stakeholder input considered in advance of decision                                                                                                                                                     | Shared decision-making process involving agency and stakeholders                                                                                                                                                                                    |
| <b>Options to Consider:</b>                   | <ul style="list-style-type: none"> <li>• Fact Sheets</li> <li>• Newsletter</li> <li>• Web Site</li> <li>• Open House</li> <li>• Panel Presentations</li> <li>• Public Meetings</li> </ul> | <ul style="list-style-type: none"> <li>• Public Comment</li> <li>• Surveys</li> <li>• Focus Groups</li> <li>• Consultation: Tribal, State</li> <li>• Public Meetings</li> <li>• Advisory committee</li> </ul>                         | <ul style="list-style-type: none"> <li>• Collaboration Clinics</li> <li>• Advisory Committee</li> <li>• Workshops</li> <li>• Joint Fact-Finding</li> <li>• Deliberate Polling</li> <li>• Consultation</li> </ul>       | <ul style="list-style-type: none"> <li>• Consensus-building</li> <li>• Negotiated Rulemaking</li> <li>• Advisory Committee</li> <li>• Mediation</li> <li>• Consultation</li> </ul>                                                                  |
| <b>Possible Issues:</b>                       | <ul style="list-style-type: none"> <li>• Full and timely distribution and access.</li> <li>• Ability to respond to questions.</li> <li>• One-way information stream.</li> </ul>           | <ul style="list-style-type: none"> <li>• Stakeholders don't actually shape decision.</li> <li>• Forums/Processes can be formal/ mechanistic (Federal Register), not conducive for genuine dialogue and public involvement.</li> </ul> | <ul style="list-style-type: none"> <li>• Raised Expectations.</li> <li>• Are all interests involved?</li> </ul>                                                                                                        | <ul style="list-style-type: none"> <li>• Federal Advisory Committee Act concerns.</li> <li>• Are all interests involved?</li> <li>• Is issue ripe/ready for collaboration?</li> <li>• Time constraints.</li> <li>• Resources required.</li> </ul>   |

In the evolution of governance models, the first model to emerge was top-down governance, where the agency is trusted as an expert to make decisions on behalf of the public. Stakeholders may provide input, but this input is not explicitly requested by the agency. Under this governance model, an inform strategy is appropriate, as there is no explicit goal of public participation.

Requirements for formal solicitation of input from the public in the form of the APA and NEPA signaled a change in thinking about the role of stakeholders in governance, and the public input governance paradigm emerged. Under this governance model, agencies actively seek input from stakeholders via consultation or other forms of public involvement. Processes with limited dialogue might be adequate to inform agency planning, since the agency is the sole decision-making body. This is largely the approach that continues to be used by agencies today, and often is appropriate. For NPS, Director's Order 12 and its accompanying handbook (National Park Service, 2011, 2015b) outline public participation procedures that meet minimum legal requirements under a public involvement paradigm.

In the last few decades, agencies and stakeholders have become much more interdependent in achieving natural resource management goals. Many natural resource issues cross jurisdictional boundaries or involve multiple competing perspectives. In these situations, agencies are unlikely to be successful if their management does not consider local sentiments and knowledge or is not coordinated with relevant stakeholders such as adjacent landowners. The public engagement governance paradigm, in which natural resource management agencies act as members of a broader community, evolved to address these types of issues. This engagement paradigm can include collaborative elements in planning processes, and may share some decision-making authority with the public. Many elements of the Federal Advisory Committee Act (FACA, 1972) reflect this paradigm. Civic engagement, as described in Director's Order #75A: Civic Engagement and Public Involvement (DO-75A, National Park Service, 2007), corresponds to the types of ongoing dialogues that are needed in these situations, which may occur outside of a formal plan. The public engagement paradigm also can be used in development of plans where the agency is the sole decision-maker and the agency decision is part of a broader collective goal.

Because each governance model starts with different assumptions about the relationship with the public and the purpose of engagement, the types of participatory processes utilized under each model will be fundamentally different. Leong, Decker, et al. (2009) point out that the historical emergence of the different governance paradigms should not be taken to indicate progression towards an ideal governance model. Instead, each paradigm has provided additional participatory approaches which should be selected among based on specific management context, public participation goals, and target publics. The challenge for the agency then becomes matching the engagement approach to the management issue and context.

For NPS, Director's Order-75A defines civic engagement and public involvement as follows:

*Civic engagement is a continuous, dynamic conversation with the public on many levels that reinforces the commitment of both NPS and the public to the preservation of heritage resources, both cultural and natural, and strengthens public understanding of the full*

*meaning and contemporary relevance of these resources. In this DO, civic engagement encompasses all of the activities that encourage public involvement in and dialogue about the meaning and future of the Nation's heritage resources.*

*Public involvement... is the active involvement of the public in NPS planning and decision-making processes. Public involvement is a process that occurs on a continuum that ranges from providing information and building awareness, to partnering in decision-making. The NPS role is to provide opportunities for the public to be involved in meaningful ways, to listen to their concerns, values, and preferences, and to consider these in shaping our decisions and policies (National Park Service, 2007, p.5-6).*

These definitions distinguish between civic engagement and public involvement based on relationship to the formal planning process rather than philosophical approach. However, the way that civic engagement is described implies alignment with the public engagement governance paradigm. Public involvement, on the other hand, occurs on a continuum that encompasses both public input and public engagement governance models, if they are used in developing a formal plan.

### **Natural resource management in the 21<sup>st</sup> Century**

As indicated by the emergence of the public engagement governance paradigm, conservation issues in the 21<sup>st</sup> century increasingly involve competing ideas about the importance of environmental resources and perceptions of risks and benefits associated with them. Often, additional biophysical science is not sufficient to bring such diverse ideas into alignment. Natural resource managers, typically trained in biophysical sciences, increasingly need to integrate social sciences and the humanities to achieve management goals and address conflict that arises around different values associated with natural resources. In addition, renewed interest in different types of knowledge, such as the movement to incorporate traditional ecological knowledge in management, has highlighted the need to engage with the diverse publics who may have very different ways of relating to natural resources than biologists trained in western science. These observations are reflected in the new NPS Interim Policy for Resource Stewardship for the 21<sup>st</sup> Century, which recognizes the need to include multiple perspectives in preserving ecological, historical, and cultural integrity (National Park Service, 2016). It also directs staff to base NPS resource decisions on best available sound science and scholarship (which includes the social and cultural sciences), accurate fidelity to the law, and long-term public interest (partially understood via meaningful civic engagement).

### ***Beyond complexity***

Complex problems are those that have many interacting components and are not solved by simply addressing component interactions. Many natural resource issues are highly complex, and often more than complex, they are wicked (Allen & Gould, 1989). Rittel and Webber (1973) coined the term “wicked problems” to describe ill-structured, on-going problems that encompass a large degree of uncertainty. Wicked problems resist resolution because they are strongly impacted by social and cultural factors that might not be well-understood, are inherently in conflict, or are constantly changing. Wickedness is always the result of social, epistemological, or cultural differences, but wicked problems can be found in many realms. Understanding what makes many natural resource

issues “wicked problems” and the role that science can (or cannot) play in resolving them will be crucial in determining how to engage the public in their management.

Xiang (2013) describes some broad traits of highly complex and wicked problems. These traits are often found in natural resource issues that become contentious (Balint, 2011). The traits are:

- Problem formulation that is challenging due to a wide variety of social values that change over time. For example, the issue of wildlife in the U.S. has changed over time due to changing values, landscapes and technologies.
- No clear solution to the problem because the nature of the problem changes depending on point of view (see point above). In addition, no definitive solution is possible given interests and values that change over time affecting desirable outcomes and therefore the efficacy of any chosen solution.
- Given that there are no clear problem formulations or solutions, such problems cannot be solved. They may be addressed and managed, but need constant attendance or they will recur.
- The consequences of taking action to manage the problem are irrevocable. Managing the problem changes the social and ecological conditions upon which the original actions are taking. For example, when a management activity creates factions with diverse interests, those relationships change the fundamental problem formulation.

These characteristics make planning and management of wicked problems an on-going challenge. Traditional planning and natural resource frameworks often attempt to “tame” problems by selecting a portion of the problem (normally that which seems most fundamental to the decision-making body) and using linear approaches to “solve” that problem. However, the aspect selected by the decision-makers might not be of greatest interest to stakeholders. The result in these cases is a shift in the factors tied to the original problem formulation and a “mutated wicked problem” (Xiang, 2013, 1).

Instead, scholars propose that the key to managing such problems is in the collective recognition by a diverse body of stakeholders of the characteristics of these problems and the collaborative design of adaptive techniques to manage them and deal with their impacts (Churchman, 1967; Rittel & Webber, 1973). A holistic approach that employs adaptive thinking as collective learning through civic engagement can illuminate different perspectives and change the original problem formulation to one that is mutually understood by the agency and stakeholders. This approach corresponds to the public engagement paradigm and NPS civic engagement directives.

### ***Science in decision-making***

It is essential to emphasize that entering into participatory processes does not diminish the role of science in decision-making. NPS is required by law to make decisions that employ high quality scientific analysis and “best available information” (National Park Service, 2015b). The determination of what and whose science is best given a particular resource management context can be unclear. At times, publics might be satisfied by a public involvement process that simply communicates the science used as a base for expert opinions. Such information provision might help them understand a natural resource issue about which they had not previously formed an opinion.

However, when addressing a wicked problem, or issues where strong opinions have already been formed, simply providing access to biophysical scientific information is unlikely to address the publics' concerns. Conflicting values and interests make wicked problems ill-suited for solution through the types of linear and logical approaches typically employed in biophysical science and engineering. Biophysical scientific studies provide a crucial foundation for discussions held through participatory processes. However, the nature of wicked problems is such that a single technical, biophysical scientific solution might not be feasible. Further, success in addressing the technical aspects of one part of the system can have consequences on other aspects of the system, resulting in greater controversy.

The conflict inherent in using biophysical sciences to solve values-related planning problems continues to challenge natural resource management. As our world becomes more environmentally and socially diverse, we continue to struggle to reconcile the role of biophysical science, with its emphasis on falsifiable hypotheses, with planning, which recognizes the potential for sociopolitical influences that confound causal relationships. On-going civic engagement can be essential in helping managers determine whether their issue can be addressed by improving science communication or if a more in-depth dialogue needs to be built.

Many environmental problems are to some extent wolves in sheep's clothing. They often present themselves as ecological or biological problems that can be addressed through the biophysical sciences. For example, we can identify management techniques that will address impacts of an invasive species on the dynamic equilibrium of an ecosystem. Yet, the related conflict and controversy results from "expressions of diverse and conflicting values and interests" (Norton, 2012): do the ecological effects matter, and why? Are the management techniques acceptable and under what circumstances? These value-based questions are not best addressed from a positivist biophysical scientific perspective. Yet, when issues are framed as biophysical science issues, stakeholders often respond with results from scientific studies that support their values and beliefs, further obscuring the social nature of the conflict.

Value-based questions also illustrate the observation that decision-making is a political and social process (National Research Council, 2008; Jasanoff, 2012). Thus, it is essential that, in addition to employing the foundation of biophysical sciences, decision-making also embrace the social sciences. In managing natural resources, the social and biophysical sciences should work as a unified whole to help managers achieve desired environmental conditions. Social science techniques to identify stakeholders and their values as well as clarify socio-economic context can determine the information needs of stakeholder groups, improving the ability for biophysical science information to be applied effectively (National Research Council, 2008).

Thus, both biophysical and social sciences have an important role in participatory processes, by providing foundational knowledge about the biophysical system and social context that is necessary to make an informed decision. Chilvers (2008) notes that biophysical science should support dialogue-based processes, not drive them. This is especially true for wicked natural resource issues, as biophysical science is not the actual source of controversy.

Public participation that follows the public input governance paradigm, for instance consultation, often emphasizes the biophysical scientific evidence that supports the perspective adopted by the agency for a given issue. Yet, as discussed, natural resource issues might require more discussion over how the problem is defined, or framed, to reach resolution. Again, this indicates a role for a public involvement or civic engagement paradigm approaches to participation, e.g., for civic engagement to help formulate the purpose statement of a future plan. Given the dearth of natural resource examples that explicitly utilize civic engagement in NPS, we conducted research to consolidate some of the lessons learned and identify important next steps.

## Methods

Semi-structured informal interviews were conducted with NPS employees with significant experience implementing civic engagement activities. Initial interviews were conducted with key informants who were champions for civic engagement; instrumental in the development of DO-75A; specialists in planning, NEPA compliance, policy, or social science for natural resources. Snowball sampling (asking key informants to identify additional interviewees) resulted in a total of 13 interviews. Interviews employed an open-ended interview guide (Appendix), and probes and prompts were used to elicit the individual perspective of the interviewee. Interviewees discussed the definition of and experiences with civic engagement; best practices/barriers for civic engagement in general and for natural resource management; the relationship between civic engagement and NEPA input; and available and desired resources.

Interviews were conducted via telephone or over voice over internet protocol (VOIP) during regular business hours in the interviewee's time zone during June and July 2014. Interviews lasted between 1 and 1.5 hours. Detailed notes were also taken during the interviews. Recordings were used only to clarify notes when necessary. Interview analysis used an inductive approach, examining notes for common themes. A literature review was used to develop the theoretical context for data analysis as well as to inform interpretation of the emergent themes from the data.

## Findings

Perspectives were developed through professional experience and related to goals of the interviewees' jobs. Perhaps because of this large range of perspectives, a varied list of benefits and barriers to civic engagement in the National Park Service were identified.

### **Benefits**

Frequently, interviewees provided rather broad and non-specific descriptions of the benefits of civic engagement, which they discussed in terms of opportunities. One interviewee described a situation where civic engagement helped to make discussions more productive and therefore allowed the community to help the park be successful in their planning process. Another stated that the benefits are "endless" in that a strong relationship built through civic engagement builds communication channels that are useful in innumerable future contexts. Collectively, respondents identified trends in NPS that offer great opportunities to expand the use of civic engagement in natural resource management.

### ***Transformative aspects of civic engagement***

All interview respondents mentioned transformation at some scale and expressed a recurrent theme of change. Change and transformation affected NPS approaches to natural resource management, communication with the public and even internal communication. Civic engagement was seen as not only resulting from transformations in how NPS was expected to engage with the public, but also in creating transformations in identifying solutions to controversial issues.

Interviewees acknowledged that changing social and ecological conditions are pushing NPS units to engage in more interactions with the public. They referred to a more educated, active and organized public with strong interests who are willing to engage with NPS over issues about which they feel strongly. One interviewee noted that gone are the days when a winter public meeting drawing a handful of the park's neighbors would suffice to communicate with interested and affected parties. Another interviewee described a recent NPS planning open house where a group of rock climbers staged a sit-in. This action required the park to address this group's needs right away.

Several respondents with many years of NPS experience expressed that the culture within NPS is changing in response to internal and external pressures. They noted that in the past several decades, the demands of government accountability have driven agencies to emphasize transparency in decision-making, and that civic engagement is one way to improve transparency. Interviewees also referred to successful outcomes as a driver of civic engagement transformation in NPS.

Civic engagement of internal publics also has the power to foster profound change. A capacity building program at New Bedford Whaling NHP was described as "transformative." When given practical skills in areas such as stakeholder analysis and provided techniques for handling difficult discussions, the staff was empowered to dig into their issues rather than defer them to avoid controversy.

Moving beyond park boundaries, and going to the people to discuss park issues is one of the techniques that was associated with successful civic engagement. In Great Sand Dunes National

Park, generation of a new General Management Plan (GMP) was stalled over community concerns about wilderness designation. This concern so delayed the planning process that the Department of the Interior (DOI) elected to abandon the process. When a new superintendent took up the issue several years later, a strategic and diverse civic engagement plan led to conversion of some of the harshest foes into vocal backers, allowing the completion of the plan. This example demonstrates not only changing approaches to civic engagement, but shows how civic engagement itself can help transform issues.

### ***Connecting to NEPA***

One of the goals of this project is to examine how civic engagement can support the National Environmental Policy Act (NEPA) compliance process. All interviewees agreed that there is a need, one described it as a “desperate need,” to strengthen civic engagement for natural resource management and better integrate civic engagement with public involvement under NEPA.

To this end, respondents were asked how they view the integration of civic engagement and NEPA. Generally, these two processes were seen as independent with civic engagement dealing with developing relationships in general and NEPA dealing with specific issues. In one interview, the respondent indicated that the dividing line between NEPA and civic engagement is largely determined by the personalities involved and that there exists potential for the two approaches to differ procedurally. He characterized NEPA-related public involvement as “staunch” and civic engagement as “free form” that allows park staff to “shoot from the hip.”

Several respondents characterized NEPA-related public input as being a minimum requirement. Other respondents viewed public involvement within NEPA as adequate if not excessive. Interviewees who saw NEPA requirements as minimal stated that the goal of civic engagement was to build relationships and understanding. These interviewees generally aligned with a civic engagement philosophy of public participation and tended to evaluate public involvement in NEPA as inadequate because it does not reach the goal of developing long-term, on-going relationships with interested publics. For those who held the latter perspective, the measure of success of NEPA-related public involvement is that people feel that they have been heard and do not contest the outcome of the NEPA process on procedural grounds. NEPA public involvement is often described as a “black box” process where “all you have to do is a public hearing and you are covered.” This represents a misunderstanding of the purpose of NEPA public involvement, and indicates a need for education and training of NPS staff.

It was common that respondents viewed NEPA and civic engagement going “hand-in-hand,” but they also recognized that the conceptual link does not easily or clearly transfer to practice. There were no examples of parks collecting data from civic engagement activities that later supported NEPA decision-making, and respondents felt that parks did not see civic engagement as a data generating activity. While there is a general feeling that civic engagement could and should contribute to NEPA processes, it was difficult for interviewees to define the actual or potential form of the relationship between the two. One interviewee suggested that relationships and communication channels built during civic engagement outside of NEPA could translate into better communication and trust in the

NEPA process. This is an important observation related to the ability of civic engagement to address conflict and controversy.

Interviewees indicated that civic engagement might be better suited to resolving conflict and controversy than public involvement. There was suggestion that civic engagement, both in principle and in practice, is given more importance when issues are likely to be controversial. Specialists in the Environmental Quality Division indicated that they primarily deal with “sticky issues,” suggesting that they are engaged during NEPA processes where the action is likely to be precedent-setting or controversial. Several interviewees provided case examples of public involvement, mainly within the NEPA process, where progress was halted by stakeholder resistance, but finally completed after a longer, slower civic engagement approach was carried out.

Several interviewees cautioned against setting expectations about the ability of civic engagement to prevent all controversy around NPS actions, or to solve longstanding resource management issues involving public uses of parks. They indicated that there are issues that touch on deeply-held values that cannot be reconciled. Off-road vehicle (ORV) use was given as an example where factions have impacted planning processes because they do not like the decisions that NPS is making. However, winter use in Yellowstone was also provided as an example where civic engagement helped move the NEPA process to a conclusion that was acceptable to stakeholders. Some interviews suggested that the ideas of civic engagement as an on-going conversation with the public and public involvement as a NEPA-related compliance activity are growing further apart.

While several interviewees concretely stated that they did not see a difference between civic engagement and NEPA-related public involvement, their subsequent statements indicated that the typical NEPA-related public involvement was not sufficient to deal with many natural resource management issues. For example, waiting to involve the public until after a purpose, scope and need statement has been developed is not appropriate for determining whether action is needed at all. However, due to lack of clear guidance about engaging publics, NPS units might start a NEPA process for just that purpose. Sometimes in scoping they realize the issue does not need to be elevated to a plan, but that they still need to engage the public on the topic. Several interviewees suggested that, although DO-75A encourages civic engagement, the broad guidance of the Director’s Order is more difficult to implement than the clear cut steps involved in NEPA. Some felt that NPS units needed to be encouraged to use civic engagement outside of NEPA in order to determine if action should be taken and what the goal of taking that action might be. Civic engagement would help engage internal and external stakeholders in better framing of issues before embarking on a formal NEPA plan.

### ***Civic engagement can result in better decision-making***

Interviews referred to the ability of civic engagement to lead to better decision-making. This was referred to in two contexts. One is that civic engagement develops a broader understanding of stakeholder interests and the values that they hold for park resources. This provides a stronger foundation for decision-making and helps parks understand how their decisions might be perceived. From the other perspective, civic engagement fulfills legal requirements that make decisions more legally defensible on procedural grounds.

While a well-managed civic engagement process is no guarantee of achieving the best possible decision, interviews generally reflected the idea that better decisions were more likely when civic engagement is part of the decision-making process. Interviewees described “better” decision-making as that which minimizes controversy, withstands legal and community challenges and leads to timely management actions. Civic engagement helps understand stakeholder interests and values, and builds trust and communication channels that can be capitalized upon when dealing with specific issues. Sharing diverse perspectives can help frame issues and uncover roots of interests and concerns. Civic engagement as an on-going process can facilitate understanding by giving internal and external publics time to analyze and contemplate issues.

This approach allows NPS to bring issues to people where they are. It also helps staff be better understood and more human to the people who might be opposed to the policies and actions. When issues are brought to the community early, by the time a formal plan is started, there is saturation in the community, they have heard about these issues and it’s part of what they talk about and part of what they understand. As summarized by one interview, “And if we do that well enough and often enough, then we as decision makers ought to have a much better understanding of what they feel about these issues, and where they’re coming from, and what they’d like to see. As opposed to holding it close to the chest, not talking about it enough, and then starting off on a formal process, coming in a little bit cold or at least not as well positioned as you could be.”

One area where interviewees suggested that there might be significant opportunities is improving NPS civic engagement of internal stakeholders (i.e., NPS staff). NPS organizational structure is not always conducive to developing a coherent understanding of complex and cross-cutting issues. Compliance and planning personnel in particular expressed a concern that NEPA is often triggered before an issue has been fully framed and contextualized by interested parties within NPS. Better utilizing civic engagement to engage internal stakeholders can help facilitate information and perspective sharing across NPS unit divisions to frame issues appropriately and consolidate the unit’s perspective on the issue prior to inviting external publics. One interviewee who participated in the development of DO-75A highlighted that there were strong feelings that it was important to include internal publics in recognition of the ability of NPS employees to strengthen NPS platforms.

Internal civic engagement helped Lewis and Clark National Historic Park clarify their problem statement about what their issue was and what they wanted to accomplish. Starting with a vague project proposal, internal civic engagement allowed them to better define the project by asking: what is the current issue?, what would you like to do?, and what are the measures of success and desired outcomes? The process helped them ask hard questions and clarify decisions to be made and who had the authority to make those decisions. Participants were appreciative of having access to people who had experience with a broader range of planning projects and could give them perspective on a different way of doing things. Such internal processes can help avoid confusing external publics by taking time to ensure that NPS policy is reflected in proposals and that NPS staff can provide a consistent message when engaging external publics.

### ***Related to many existing training efforts (although few target natural resources)***

Interviewees were asked to discuss the types of capacities needed for civic engagement and identify resources and opportunities to tap into these capacities or develop them. The list of capacities was fairly consistent across all interviews. Good communication skills, including the ability to both impart information and genuinely hear (and ensure that stakeholder feel heard), are central to civic engagement. Science communication skills are a particular communication skill subset that was seen as particularly relevant to civic engagement around natural resources issues. Tolerance and flexibility were also seen as essential.

As mentioned above, interviewees generally believed there are limited opportunities within NPS training programs to develop these skills. Some interviewees suggested that within NPS, having communication, listening and hearing skills are innate parts of personality that are natural to some people and that those people need to be developed as leaders.

However, collectively interviewees identified a large number of resources available to improve capacity for civic engagement in general. These resources include staff of the Rivers, Trails, and Conservation Assistance Program (RTCA) and Department of the Interior Office of Collaborative Action and Dispute Resolution (CADR), as well as more traditional resources including: trainings in Crucial Conversations and Getting to the Core of Conflict; the NPS Civic Engagement Website (<https://www.nps.gov/civic/>); the RTCA Community Toolbox (<https://www.nps.gov/ncrc/programs/rtca/helpfultools/Toolbox/>); numerous publications from the Stewardship Institute (formerly Conservation Studies Institute, <https://www.nps.gov/csi/>); and the newly developed Collaboration Clinics being offered by the RTCA. Few of these resources, however, are directly targeted at natural resource management. One respondent identified a large number of “pockets” of engagement, and she and several others recognized the need to “dust-off” and “repackage” these resources to make them more available to parks.

Although all interviewees were able to provide a list of civic engagement resources, they also recognized a lack of capacity to connect resources to issues in parks. An interviewee summarized this disconnect saying “You can produce a checklist, but how do you get them to use it correctly?”

### **Challenges**

Despite the interviewees clear support for increasing the role of civic engagement in natural resource management decision-making, they were also very aware of reasons that CE has not been used to its potential. Some challenges were directly expressed while others were inferred from concepts present or absent across interviews.

### ***Terminology is not uniformly understood***

Interviewees provided varying definitions of civic engagement and the activities that fall under that umbrella. These definitions often related to their individual experience with interactions with the public. Some utilized the definitions set forth in DO-75A and discussed two distinct areas of activity with different goals. Staff who generally interact with the public through formal planning or compliance processes tended to have a slightly narrower view of civic engagement, often related more closely to the public involvement definition offered by DO-75A and the public input

governance paradigm. This perspective emphasized communication with the goal of “explaining” NPS actions so that constituents could better understand the reasons behind the actions. The activities associated with compliance were generally described as those that educate, though one respondent noted that “people cannot be educated out of their positions.”

Others view civic engagement and public involvement as part of a single process. They emphasized the on-going nature of communications with stakeholders that are meant to build relationships. This tended to be the perspective offered by people who dealt with the public on a wide variety of issues including cultural and natural resources, of varying controversy from the mundane to the divisive. This process generates a productive dialogue and builds relationships.

These respondents also discussed diverse activities associated with their vision of civic engagement. They rarely listed specific activities. In most cases, they include “everything involved with talking to people and hearing from them.” The activities are on-going in nature and not “myopic,” with the goal of building relationships which are not necessarily focused around a particular issue.

For many respondents, the charge within DO-75A is just a way of doing business. These are primarily respondents who espouse the broadest view of civic engagement, and, to them, it just makes sense to talk to the people who are interested in their parks. However, it is also recognized that the capacity to engage the public on a daily basis is not uniform.

#### ***A range of frustrations and fears are associated with civic engagement***

Interviewees expressed the view that civic engagement and public involvement are essential components of NPS daily work. While there was recognition of some fear associated with interacting with the public (discussed below), there were also comments about frustration when the public does not take advantage of opportunities to get involved in NPS planning. Similarly, interviewees believed that many parks want to listen but NPS doesn’t have capacity to do the things that the people want. This led to frustrating situations where parks listen but are shut down because they can’t respond or there is too much to respond to.

Interviewees referred to various fears related to civic engagement as a challenge. There is fear that inviting the public into NPS management will set expectations that cannot be fulfilled because engaging with the public promises them more influence in decision-making than statute allows. A related fear was concern about overreaching the bounds of NPS authority if managers follow through with those promises, which would also result in NPS abdicating responsibility and losing decision-making power. Respondents recognized that this would violate federal regulations, but believed that NPS staff might not be aware of public participation techniques that preserve NPS decision-making power.

There is also fear of engaging the public in ways that violate other administrative laws, such as FACA, which is not always well understood. Public participation processes that ask stakeholders to come to a group agreement (often discussed as a consensus agreement) on recommendations that guide an agency decision require the establishment of a FACA committee. Processes that ask stakeholders for individual opinions that the agency can consider but fall short of a group

recommendation are not subject to FACA. There is concern that dialogue-based civic engagement processes can appear to be seeking consensus, thus violating FACA.

Interviewees also reported concerns about not only entering into conflict, but generating conflict through civic engagement. One interviewee discussed a fear that a civic engagement process would result in polarized views that would hinder future planning efforts. In such cases, it was seen as better to leave engagement for the public involvement associated with NEPA.

Respondents generally believed that parks were willing to or even excited about engaging the public outside of the NEPA process, but lack skills, capacity, and institutional framework to do so. “What I have heard is that people are open and like the idea of civic engagement outside of the NEPA process, but don’t have the tools...and have not been empowered to do that in the past, so most people are scared to do that because they are worried about engaging the public outside of the legal process.”

***DO-75A tells people TO do civic engagement, but not HOW to do it***

DO-75A outlines NPS goals and authorities for civic engagement and public involvement.

Respondents were asked to describe their familiarity with the DO as well as describe how they have seen the DO invoked by parks. Generally, respondents, even those involved in planning activities, were familiar with the DO, but had not reviewed it in a long time. There were no specific examples of parks drawing on the authorities in DO-75A to conduct civic engagement around natural resource management issues. One interviewee noted that DO-75A is good, but NPS has not generally taken advantage of the opportunities it presents: “It is a lot of aspiration and a lot of opportunity for more follow-through.”

One of the most common impressions of the DO is that it is an underutilized opportunity. Parks are unfamiliar with its content and therefore do not use the guidance or authority that it provides. For others, the DO is just a codification of the way that they conduct business on a daily basis, although these were typically interviewees who were selected because they were known to be early adopters of civic engagement.

Many interviewees also recognized that many NPS employees practice informal civic engagement activities on a daily basis. One referred to Superintendents as “the face of the park.” Others pointed out that the Superintendent’s willingness to engage the public was a key driver of their unit’s approach to communicating with the public. This personality-based phenomenon was viewed as problematic because it fails to provide continuity as Superintendents move from one unit to another.

In sum, respondents familiar with the DO are supportive of the order’s content, but suggest that its utility is limited because of lack of specific structure. One respondent summarized the impact of DO 75A by saying that it, “tells people to do it, but doesn’t tell them how.” Others believed that NPS staff who are not aware of DO-75A might think that the only mechanism NPS has to engage the public is through NEPA, “My impression is that most parks are probably not familiar with that DO and what it potentially offers... and this has led to the knee jerk response which is ‘I need to engage the public therefore I need to start a NEPA process.’”

This observation reveals that currently, public involvement in a NEPA process is the only institutionalized means for engaging the public, yet it is limited to formal decision-making. Interviewees identified the need for a common framework for how to do civic engagement without invoking NEPA, as well as a need for additional guidance.

### ***Lack of investment in capacity-building***

While civic engagement is becoming increasingly recognized as an important way of doing business, NPS does not invest directly in developing capacity. Several interviewees recognized that NPS is building its capacity for civic engagement by hiring people who already possess the required skills, but few could identify programs or trainings that help current staff learn about engaging with the public. While there were many references to opportunities within current trainings for adding modules to assist with civic engagement, few of these had been acted upon.

Lack of capacity was identified as a key challenge to civic engagement. Several interviewees stated that many people that they work with simply do not know how to do civic engagement. Even when there is some exposure to civic engagement techniques, there is often limited ability to exhibit the flexibility needed to address wicked environmental problems. One interviewee stated, “there are good intentions, but there is no capacity to think outside of the box so they will return to their default modes.” Typically, the default modes are the institutionalized public input approach to public involvement, such as meetings and open houses that rely on providing information and receiving input more than engaging in dialogue. This interviewee believed that parks have a limited set of tools to draw from and they often default to the tools with which they are most comfortable. If they do attempt to implement a novel technique for civic engagement, and they do not meet expectations, parks are quick to return to their default mode as well.

Several respondents indicated that part of the challenge of promoting civic engagement around natural resource issues relates to the cross-cutting nature of civic engagement. Several interviewees noted that responsibility for civic engagement does not reside in one place consistently across parks. Because responsibility for civic engagement is not centralized, there is confusion about who is responsible for promoting and championing it, as well as confusion over where to turn for support. It is at the same time everyone and no one’s responsibility. A few interviewees equated the current status of civic engagement to that of safety before NPS began to implement Operational Leadership Training. They stated that safety was always a concern, but there was no “hook” or driver to take steps to institutionalize an approach. This was additionally complicated by the fact that safety is a cross-cutting issue that is not the sole responsibility of any one group, but requires coordinated effort across organizational units.

Respondents also mentioned the need to provide incentives, to measure and reward civic engagement. The current performance and budget systems do not directly address the extent to which parks successfully engage with their publics to understand and tackle natural resource issues. It is generally considered a collateral duty and often falls outside of the performance rating system, particularly for natural resources staff. This results in the time and resources necessary to conduct ongoing and meaningful dialogues not being allocated.

## Discussion

As NPS celebrates 100 years of service to the nation, there is clear recognition that NPS units have become increasingly varied and have entered into “places difficult to imagine 100 years ago – into urban centers, across rural landscapes, deep within oceans, and across night skies.” (National Park Service, 2015a, 5). In addition, as evidenced by A Call to Action, NPS has reaffirmed commitment to connecting people to parks (National Park Service, 2015a, 5). NPS is responding to, and evolving with, changing socio-cultural contexts. As these contexts become increasingly connected and complex, there will be a continued need for capacities and approaches to deal with new types of issues within a framework that addresses humans and their environments as an integrated whole.

Interviews from this project provide ample evidence of how common difficult natural resource management problems have become in NPS. The ubiquity and constancy of change across NPS that interviewees expressed has implications for our approach to natural resource management. Expectations of the American Public, the resource context and values with the parks, the organizational culture of NPS are all sources of change. Societal and institutional changes have the potential to convert a relatively straightforward resource management issue to a complex or wicked one. Challenges exist in recognizing the nature of issues (e.g. simple, complex, or wicked) and sources of uncertainty (e.g. technical or socio-cultural) and selecting the appropriate approach to the specific issue. The interviewees discussed diverse civic engagement methods and concepts that can allow NPS staff to broaden understanding of natural resource issues. Civic engagement processes can also help to build resources and relationships to facilitate the long-term management of natural resource issues that resist resolution.

Many interviews recognized the changing ideas and contexts of NPS natural resource issue and saw need for new capacities to deal with a new generation of problems. This need does not diminish the relevance of proven methods that have been used successfully over the past 100 years. NPS has capacity to deal with many natural resource management issues, however, as diverse socio-cultural values are incorporated into natural resource management, the potential for issues to become driven by value differences rather than lack of information increases. Interviews provide substantial evidence that NPS routinely addresses difficult “wicked” problems, and these problems, specifically, require additional capacities in addition to the extant ones.

Interviews also indicated that well-designed civic engagement has great potential for addressing wicked problems and can provide information that is useful in formal planning processes including NEPA. They provided multiple examples of cases in which civic engagement helped to recognize and manage conflict that had its roots in differences in values. However, they also said that civic engagement could be used more effectively if additional capacities are developed.

Interviewees identified challenges and opportunities which will be difficult to address or take advantage of without building additional capacity for civic engagement and developing a robust and relevant civic engagement framework. The following sections discuss findings in terms of what we learned about the current status and needs of civic engagement. We also discuss findings in terms of

suggestions for building a culture in which civic engagement is an integrated part of NPS functioning.

### **Civic engagement status and needs**

There is a movement within NPS to make better use of civic engagement and collaboration in addressing confounding natural resource management issues. The five-year strategy for Interpretation, Education, and Volunteers incorporates civic engagement in multiple goals (National Park Service, 2014), and one of the pillars of the Urban Agenda is “Nurture a Culture of Collaboration” (National Park Service, 2015c). Interviewees provided information on existing civic engagement resources and had a number of suggestions for improving NPS capacity for civic engagement with a goal of institutionalizing its practice in natural resource management.

First, it is important to recognize that there are different conceptualizations of public participation in NPS. These perspectives arise from individual experiences and fall along the public participation continuum. Existence of different definitions of public participation lead to different assumptions about what techniques are appropriate and necessary. Varying definitions can lead to confusion when discussing appropriate techniques and the skills necessary to implement those approaches. NPS staff may not all approach public participation from the same perspective, thus it is important for members of a planning team to be clear on their desired goals for public participation before deciding how they will engage the public. The Spectrum of Engagement (Table 1) can be used to facilitate this discussion.

Diverse definitions of the range of civic engagement activities also determines the range of techniques that might be deemed appropriate when addressing natural resource management issues. Respondents whose conceptions of civic engagement fall further to the right of the spectrum of participation are able to identify circumstances in which the techniques associated with the levels to the left are appropriate. Respondents whose conceptualizations fall to the left side of the spectrum generally do not talk about techniques associated with higher levels of public impact because their concept of civic engagement does not extend to collaboration and empowerment. Therefore, the broader the concept of civic engagement, the greater the number of techniques available when addressing problems that are complex and beyond.

Several interviews referred directly or indirectly to the frequency with which the information deficit model of scientific knowledge is reflected in NPS activities. This model holds that provision of reliable information from a trusted scientist will address lack of knowledge, such that public opinion about technical topics will shift to align with positions of scientists (Groffman, et al., 2010, Nisbet & Scheufele, 2009). Yet, a large body of research demonstrates that science literacy accounts for only a small portion of factors used by lay publics to form public opinion, with stronger influences stemming from value dispositions such as ideology, partisanship, and religious identity (Nisbet & Scheufele, 2009). Human cognition and values development is much more nuanced and complex than the information deficit model allows, and communication specialists suggest moving towards a public engagement model of communication that reframes issues to be more relevant to lay publics (Groffman, et al., 2010), resulting in “public dialogue that matters” (Nisbet & Scheufele, 2009, 8). Therefore, NPS staff in designing civic engagement around technical issues could benefit from exposure to a broader variety of communication models.

Interviews also revealed that the goals of public participation under DO-75A and DO-12 are becoming more distinct. Under DO-75A, civic engagement is an on-going process unrelated to a specific issue. The goal is to build relationships and communication channels and to foster trust. Increasingly, public involvement under DO-12 is a clearly prescribed process that, while also strengthening the planning process, meets regulatory requirements and makes resulting planning decisions more robust to legal challenge. This distinction weakens the link between civic engagement and NEPA. Early civic engagement could help strengthen the NEPA process if they are conceptualized as related activities (Figure 2). This project suggests that some effort might be needed to realign civic engagement and NEPA.

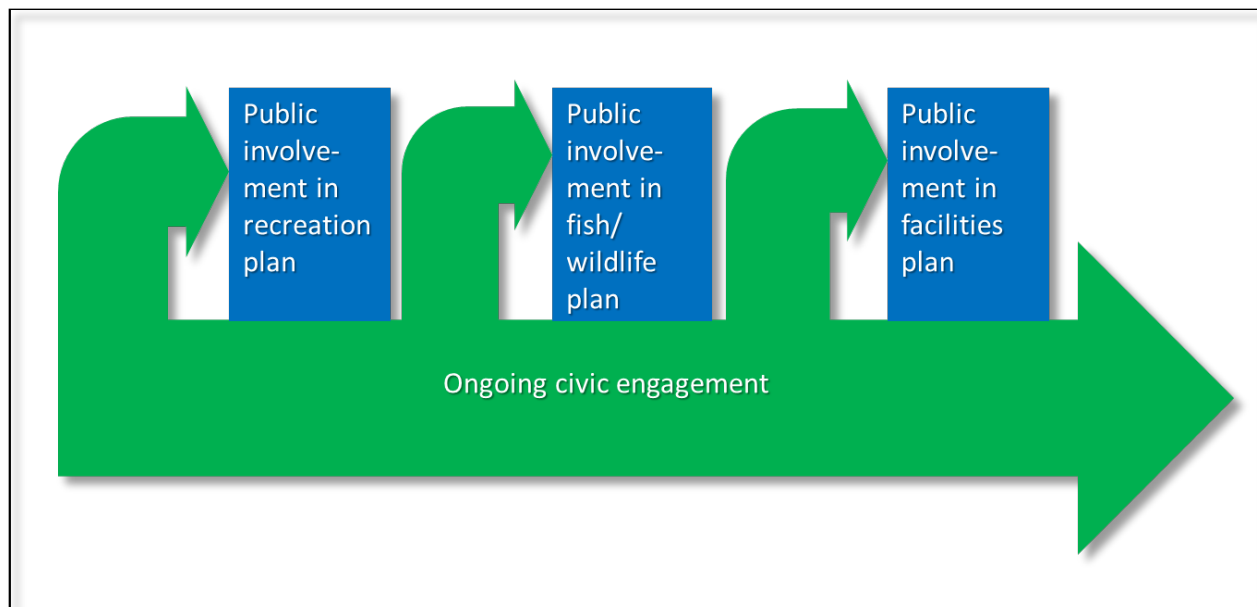


**Figure 2.** Relationship between civic engagement and public involvement. Civic engagement (green) involves ongoing dialogue to build relationships and collaborations and can occur regardless of a formal plan. It can also help determine the need for a plan and inform the goals of a plan. Public involvement (blue) is episodic, occurring during formal planning processes, and is used to inform decisions or plan elements.

There are already a large number of resources, both within the NPS and other federal and non-federal agencies to provide tools and techniques for civic engagement. The NPS civic engagement website and trainings and workshops, such as the Collaboration Clinics offered by the RTCA help NPS staff apply tools in a practical context. Participants are not only given the tools and resources needed to address a particular issue, but they are taught the underlying theory of tool selection so that they are empowered to address future issues. This capacity needs to be associated with employee empowerment (everyone can do this) and it needs to be focused on a particular framework.

## **Institutionalizing civic engagement for natural resource management**

An institutional commitment to adopting a broad definition of civic engagement and providing training and resources consistent with that definition could serve to facilitate more effective use of civic engagement in natural resource management. Although there are numerous resources available, there is currently no guidance to help NPS staff structure an engagement process. Interviewees agree that it would be beneficial to centralize and categorize available resources and ensure that they are presented in terms of natural resource management (as opposed to other realms that require civic engagement such as transportation planning or cultural resources). The unique nature of natural resource issues justifies the effort in tailoring existing civic engagement tools to the specific context.

While NPS does not need to re-invent these tools, it does need to develop internal capacity to select the right tool and implement the right practices. Engaging the public in meaningful discourse around complicated natural resource in a transparent and objective way requires specific skills and appropriate timing, which many biologists/planners/managers learn on the job through trial and error.

A central location for civic engagement resources, such as an NPS subject site, also offers the opportunity to share civic engagement experiences and case studies. As mentioned above, successful civic engagement encourages additional effort in the arena. Civic engagement processes must be site specific, but it would be beneficial for NPS units to have a central location to share successes, seek advice and find resources to address their natural resource issues.

This project demonstrated significant momentum and authorization for use of civic engagement in natural resource management. However, it was also recognized that DO-75A encourages civic engagement, but does not provide guidance on how and when to do it. DO-12, on the other hand, provides clear detail on how to do public participation, but is specifically related to NEPA planning. There is recognition of a need to develop an integrated framework for civic engagement around natural resource management issues. Such a framework would offer guidance/resources that would:

- Provide a unified vision of civic engagement;
- Clarify who is responsible for driving civic engagement;
- Better integrate social and natural sciences in the adaptive management cycle;
- Centralize access to existing tools and techniques for civic engagement, in a natural resources context;
- Develop staff capacity to select and implement the most appropriate public participation tool for their situation;
- Improve training and coaching to assist staff in honing their public participation skills;
- Provide a bridge between on-going civic engagement and NEPA-related public involvement.

NPS Management Policies (2006), DO-75A (National Park Service, 2007), “Revisiting Leopold” (National Park System Advisory Board 2012), Resource Stewardship for the 21<sup>st</sup> Century—Interim Policy (National Park Service, 2016), and other documents encourage expansion of the NPS civic engagement model to approaches that allow a higher level of public participation. Efforts to improve

public participation are hindered by lack of clear responsibility for ensuring that the public is engaged except during NEPA processes. As with the commitment to safety across NPS, commitment to public participation, and civic engagement in particular, will require coordination across programs and units. To date, no cohesive framework exists to support such a change. Development of a comprehensive civic engagement framework would help streamline the capacity-building process by allowing NPS staff to assess their civic engagement needs in a structured, rather than ad hoc manner.

## Conclusion

NPS has created an excellent foundation for civic engagement. There is wide recognition that civic engagement is a necessary part of meeting public trust responsibilities in the 21<sup>st</sup> century. There is an ongoing shift in organizational culture around engaging and collaborating with the public and authorizations have been put in place to allow this.

Within NPS there are a large number of approaches to civic engagement, and each of these approaches makes a contribution when applied in the correct environment. Although DO-75A provides a clear definition of civic engagement to guide NPS units, the operationalization of that definition varies greatly across the agency. As a result, the knowledge and resources drawn on for civic engagement differ from case to case to different effect. Synthesis of knowledge for civic engagement on natural resource management issues is particularly challenging because it requires reconciling social and biophysical sciences. Civic engagement for natural resource management would be strengthened by developing a unified framework that draws on both DO-75A and DO-12, by developing civic engagement materials directly addressing the unique challenges of natural resource management and by centralizing civic engagement tools and guidance.

DO-75A provides a broad framework for use of civic engagement and points toward resources for civic engagement activities. Linking this broad mandate to practical resource management activities and selecting a civic engagement strategy appropriate to the specific resource issue and target audience is a challenge. Future efforts will need to develop techniques that will help managers design effective civic engagement processes, collect useful data, and build partnerships that help managers develop a clear statement of the problem and strengthen natural resource management. It is our hope that good civic engagement will lead to more collaborative and less contentious planning processes.

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# **Appendix: Interview Guide**

## **Civic Engagement and Natural Resource Management**

The NPS Office of Park Planning and Special Studies and Natural Resource Stewardship and Science Directorate have identified a need for resources that help managers incorporate civic engagement best practices into natural resource management. As a first step, we will be conducting interviews with people identified as champions for civic engagement/public involvement and/or with influence in the planning arena across the National Park System. The goal of the interviews is to help us identify, develop and share tools and resources for civic engagement specifically around natural resource issues. The tools will be shared with NPS natural resource managers to help them design and implement (either independently or with the help of contractors) civic engagement processes that minimize natural resource conflict, build community support, situate their natural resource management issue in a larger ecological and social context, and, when appropriate, facilitate development of an effective NEPA planning process. These tools, when developed, will constitute additional resources that help implement the recommendations of DO75A “Civic Engagement and Public Involvement” in natural resources contexts.

The following are questions that will guide the conversation. Depending on the course of the conversation, individual questions may be skipped, reordered or additional questions may be asked to ensure your perspective on natural resource related civic engagement activities is accurately captured. The answers that you give will be kept anonymous. The interviewer will be taking notes, and, with your permission, would like to record the interview as well. Interviews will not be transcribed, but recordings will be kept in order to check the notes that are taken during the interviews. After completing the summary of the interview, you will have the opportunity to review the summary and make additions or clarifications. You are not required to, but it would be very helpful to ensure your perspective is accurately represented.

## **Guiding Questions**

- 1) Please describe your background with respect to civic engagement/public involvement
- 2) What does the term civic engagement/public involvement mean to you?
- 3) What sorts of activities do you consider civic engagement/public involvement?
- 4) What is your impression of how parks use DO 75A on civic engagement for natural resource management?
- 5) Where have you seen NPS make the best use of opportunities for civic engagement/involvement in natural resource management?
- 6) What do you see as some of the barriers to effective civic engagement/public involvement in natural resource management?
- 7) What do you see as the benefits of civic engagement in NPS natural resource management?
  - a) the risks?
  - b) What is your impression of how parks/regions see the risks and benefits of civic engagement in natural resource management?

- 8) Do you feel that civic engagement is related to decision-making in parks? Why or why not?
- 9) Please describe a civic engagement/public involvement process for natural resource management that you think went well
  - a) What makes you feel like that approach went well?
  - b) To what do you attribute the success of that process?
  - c) Was this related to a formal NEPA process?
- 10) Please describe a civic engagement process for natural resource management that you think was less than successful
  - a) Why?
  - b) What could have made it better?
  - c) Was this related to a formal NEPA process?
- 11) How would you describe the relationship between civic engagement/public involvement and NEPA?
  - a) In what ways can civic engagement/public involvement support or hinder NEPA?
- 12) What resources exist to help managers choose among/design different approaches to civic engagement?
- 13) In an ideal world, what resources would be developed to assist managers in applying civic engagement to natural resource management?
- 14) What skills/capacities would you like to see natural resource managers develop in order to successfully participate in the design and implementation of civic engagement/public involvement in natural resources issues?
- 15) What is the best way to disseminate resources and develop skills?
- 16) Is there anything else you'd like to share that we didn't ask about?
- 17) Can you suggest others you think would be important contacts to interview, especially Superintendents or managers on the ground with experience using civic engagement processes outside of formal natural resource decision-making?



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