

Technology and Public Participation in Environmental Decisions

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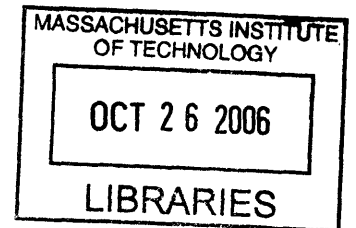
Basilina Wang Yao
B.A. History (1999)
Columbia University

M.B.A. (2006)
Harvard University

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ROTCH

Signature of Author: Basilia Wang Yao
Department of Urban Studies and Planning
August 9, 2006

Certified by: Herman A. Karl
Herman A. Karl
Visiting Lecturer
Co-Director, MIT-USGS Science Impact Collaborative
Thesis Supervisor

Accepted by: Langley Keyes
Langley Keyes
Ford Professor of City and Regional Planning
Chairman, M.C.P. Committee

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Basilia Wang Yao

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ABSTRACT

Since 1970, the National Environmental Policy Act (NEPA) has served as the main instrument for analyzing the environmental impacts of federal agency decisions and providing the public with opportunities to participate in the decision making process. For over 35 years, NEPA has defined the process by which agencies assess environmental impacts and disclose those assessments to the public. During this period however, NEPA has come under increasing scrutiny due to the considerable conflict surrounding environmental policies, eroding credibility of science-based policy information, and lack of meaningful public participation opportunities in practice. Experience has shown that collaborative decision making reduces conflict among participants, increases the credibility of science-based information underlying environmental decisions and improves the overall legitimacy of the participation process.

The federal government has embraced web-based technology as a means of improving upon the traditional NEPA public participation process. Electronic participation has generated considerable interest among policymakers and scholars due to its potential to facilitate more efficient and more deliberative interaction between citizens and government. This paper analyzes a pilot program by the Bureau of Land Management to integrate electronic participation into its decision making process. I evaluate four cases involved in the *ePlanning* pilot to understand the extent to which recent electronic participation efforts build upon established best practices in traditional, or offline participation. While there are some encouraging signs, most cases indicate that technology is applied mostly as a means of digitizing existing steps in the decision making process, rather than as a tool for enhancing the communicative and deliberative aspects of participation. The democratic potential of web-based technology lies not in the automation of existing practice, but in the support of established best practices.

Thesis Advisor: Herman A. Karl

Title: Visiting Lecturer

Co-Director, MIT-USGS Science Impact Collaborative

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Chapter I: Public Participation under the National Environmental Policy Act

Since 1970, the National Environmental Policy Act (NEPA) has served as the main instrument for analyzing the environmental impacts of federal agency decisions and providing the public with opportunities to participate in the decision making process. NEPA set a national policy to establish and maintain conditions under which man and nature can exist in “productive harmony”¹. The Act also directs federal agencies to take into account the potential environmental impacts of proposed actions before making decisions that may significantly affect the quality of the environment. For over 35 years, NEPA has defined the process by which agencies assess environmental impacts and disclose those assessments to the public.

National Environmental Policy Act

In 1969, Congress passed the National Environmental Policy Act (NEPA), establishing guidelines for federal agencies to integrate environmental concerns into their planning and decision making processes. Prior to NEPA, federal agencies could develop public works such as highways and dams or grant permits and licenses to use public lands without a specific requirement to consider environmental impacts. NEPA, a comprehensive procedural law, established the duty of all agencies to consider environmental issues in their planning and decision making process. NEPA can be described in terms of two main features: a set of action-forcing provisions to ensure that

¹ U.S. Congress, *National Environmental Policy Act of 1969*.

environmental goals are met, and a mechanism for integrating public participation in environmental decisions.

The strongest action-forcing provision, and the section of NEPA that has drawn the most attention, is Section 102(2)(C), which requires all agencies to prepare a “detailed statement” on “the environmental impact of the proposed action”². It also requires that copies of the Environmental Impact Statement (EIS) be made available to the general public. Under the public review requirements of NEPA, agencies must circulate an EIS in draft form to the public for review and comment, respond to comments, revise the draft and distribute a Final EIS. The process provides the public with opportunity to scrutinize the analysis of environmental impacts and provide comment before a final decision is reached. It also substantially increases the amount of information an agency is required to consider and disseminate before arriving at a decision³. The passage of NEPA established the responsibility of agencies to support their decisions with adequate evidence and rationale, and respond to the interested public’s arguments⁴.

Environmental Impact Statement

NEPA requires agencies to complete environmental assessments on all projects “significantly affecting the quality of the human environment”⁵. Certain agency administrative actions are excluded from the environmental assessment requirement. These actions, called categorical exclusions, are automatically excluded from the NEPA

² U.S. Congress, *National Environmental Policy Act of 1969*. Section 102(2)(c).

³ Leonard Ortolano. *Environmental Planning and Decision Making*. (New York: John Wiley & Sons, 1984).

⁴ Thomas C. Beierle, “Discussing the Rules: Electronic Rulemaking and Democratic Deliberation”. (Washington, D.C.: Resources for the Future, Discussion Paper 03-22, April 2003).

⁵ National Environmental Policy Act, 1969. Section 102(2)(c).

requirement because they are not considered to have significant environmental impacts. Most decisions involving land use and on-the-ground resources require environmental analysis⁶. Two different levels of environmental analysis may be undertaken, and these are distinguished by their relative comprehensiveness and requirements for public review and comment⁷. The analysis process begins with an environmental assessment (EA), which involves analysis of a proposed project and its alternatives, to determine the likely environmental impacts of a proposed action. Based on the conclusions of the EA, agency officials either file a Finding of No Significant Impact (FONSI) and issue a decision, or conclude that significant impacts will result from the proposed action and therefore require an EIS. An EIS expands the scope and depth of an EA, and provides additional opportunity for the public to provide input into agency decisions.

The EIS process begins with the publication of a Notice of Intent (NOI) to prepare an EIS in the *Federal Register*. This notice states the need for action and provides preliminary information on the scope, alternatives, types of environmental impacts to be analyzed, and other related issues⁸. The NOI also provides information about dates and locations of public meetings. Public participation in the EIS process begins with the scoping stage, when the issues to be addressed in the EIS are outlined. During this stage, agencies hold public meetings and receive oral and written comments on the nature and scope of impacts to be studied, including the types of alternatives that should be analyzed.

⁶ Julia M. Wondolleck, *Public Lands Conflict and Resolution: Managing National Forest Disputes*. (New York: Plenum Press, 1988).

⁷ Ibid.

⁸ U.S. Department of Energy. "DOE, NEPA and You: A Guide to Public Participation", U.S. Department of Energy website http://www.eh.doe.gov/nepa/tools/guidance/participation_brochure.pdf, accessed July 2006.

Agencies are required to consider scoping comments in the preparation of the Draft EIS. A Draft EIS analyzes and compares the potential environmental impacts of the various alternatives, one of which is always a “no action” alternative. The EIS also discusses ways to avoid or reduce adverse impacts. Agencies can identify a preferred alternative if it is known at the time. Once the Draft EIS is completed, agencies must publish a Notice of Availability in the *Federal Register* and make the document available for public comment. During the public comment period, usually between 45 and 60 days, the public can submit oral or written comments on the Draft EIS. Agencies then publish a Final EIS, in which they respond to public comment, and then issue a Record of Decision.

Public participation under NEPA

NEPA established opportunities for the public to participate at various stages of the decision making process. During the scoping stage, the public can participate in identifying the range of important issues related to a proposed action. Snell and Cowell describe the key rationale for scoping as balancing environmental precaution with decision making efficiency⁹. Environmental assessment can be seen as fostering precaution by providing a mechanism for anticipating the environmental risks of a project and considering steps to avoid or mitigate those risks. Scoping also contributes to decision making efficiency by narrowing the range of issues for further investigation.

NEPA provides additional opportunities for the public to propose alternatives and comment on the agency’s preliminary analysis at the Draft EIS stage. Citizens are

⁹ Tim Snell and Richard Cowell. “Scoping in environmental impact assessment: Balancing precaution and efficiency?” *Environmental Impact Assessment Review* 26, 2006. pp. 259-376.

recognized as a valuable source of information that can improve the substantive quality of decisions. In addition to this utilitarian value, public participation reflects the democratic principle that citizens have a right to participate in the decisions that affect their lives.

While the process is seemingly straightforward, there is substantial variation in how agencies involve the public in the environmental impact assessment process. Wondolleck observes that “the responsible agency official has considerable discretion in how and when various publics are involved in the EA process.”¹⁰ NEPA establishes a baseline process for public notification and specific checkpoints for public participation. In practice, agencies use wide range of approaches to participation to comply with NEPA.

The most common mechanism for public involvement is a public hearing¹¹. These are typically characterized by formal presentations on the proposed project, followed by statements by members of the public. Presentations are generally formal and interaction among participants is limited. Agencies typically also distribute written materials, including newsletters and public displays. Under a traditional public involvement approach, agencies receive comments through public hearings, meetings with interested groups or through mail, fax or email. This form of presenting information *to* the public and receiving information *from* the public constitutes a *one-way* form of communication.

¹⁰ Wondolleck, 1988. p. 61.

¹¹ Ortolano, 1984.

NEPA established the mandate for providing opportunity for public comment, but it is argued that the impact assessment process began with little consideration for public participation beyond routine information gathering¹². The assessment itself was to be conducted by experts due to the science-intensive and interdisciplinary nature of environmental issues. Experts have the advanced education and training needed to analyze scientific information, and therefore should be well-equipped to develop sound judgment about potential impacts¹³.

This rationale has met increasing challenge since the passage of NEPA. Jasanoff describes the important role of prediction in any assessment of potential impacts, an activity that requires policy makers to determine or judge likely outcomes.¹⁴ Because evaluation of potential risk involves discretionary judgment and is at least temporarily shielded from scientific disproof, it is the most controversial component of regulatory science. Powell argues that the lack of data and the inadequacies of scientific tools to address science-based regulatory questions forces decision makers to confront considerable uncertainty.¹⁵ One of the principal tasks of an agency in preparing an EIS is forecasting the environmental impacts of alternative actions. NEPA specifically calls for an interdisciplinary approach to planning and decision making.

[agencies shall] utilize a systematic, interdisciplinary approach
which will insure the integrated use of the natural and social

¹² Frederick A. Rossini and Alan L. Porter. "Public Participation and Professionalism in Impact Assessment", in *Citizen Participation in Science Policy*, ed. James Petersen (Amherst: The University of Massachusetts Press, 1984). pp. 62-74.

¹³ Ortolano, 1984.

¹⁴ Sheila Jasanoff. *The Fifth Branch: Science Advisers as Policymakers* (Cambridge, MA: Harvard University Press, 1990).

¹⁵ Mark R. Powell, *Science at EPA: Information in the Regulatory Process*, (Washington, D.C.: Resources for the Future, 1999)

sciences and the environmental design arts in planning and in decision making which may have an impact on man's environment¹⁶.

Because of the range of disciplines involved in environmental policy and planning, there is no one way to approach environmental forecasting and evaluation. The methods and biases of each contributing discipline shape the overall outcome of environmental efforts¹⁷. The process of environmental impact assessment is best described as an "evolving art and science"¹⁸.

Without an objective standard for evaluating potential impacts, the EIS process has been the subject of considerable controversy. Susskind et al. explain that the conventional approach can often lead to "overuse of complicated data in an attempt to justify a certain position"¹⁹. The inability of science to provide definitive answers undermines efforts to allocate greater authority to scientists alone. Increased public scrutiny of scientific research also does not naturally lead to increased consensus about the likely outcomes, appropriate level of risk or best available technology; all of which require non-objective judgments. Policy makers can use rigorous science to support decisions, but those decisions fundamentally involve non-scientific considerations.

¹⁶ NEPA Section 102(2)(a).

¹⁷ Ortolano, 1984.

¹⁸ Paul A. Erickson. *A Practical Guide to Environmental Impact Assessment*. (San Diego: Academic Press, 1994). p. 3.

¹⁹ Lawrence E. Susskind, Ravi K. Jain and Andrew O. Martyniuk. *Better Environmental Policy Studies: How to Design and Conduct More Effective Analysis*. (Washington, D.C.: Island Press, 2001).

Effectiveness of NEPA has become challenged

While NEPA has improved regulatory transparency and provided greater opportunity for public input, many have criticized the effectiveness of the NEPA process to produce policy with a high degree of public satisfaction. The considerable conflict surrounding environmental policies raises questions about the effectiveness of NEPA and its implementation. In 1997, the Council on Environmental Quality (CEQ) published a report entitled, "The National Environmental Policy Act: A Study of its Effectiveness After Twenty-five Years"²⁰. The report examined NEPA's effectiveness and the prospects for improving the environmental analysis and documentation process. The study found a general public perception that federal agencies today are more accountable for their actions than before the Act. It concluded that the success of a NEPA process depends heavily on the extent to which an agency has systematically reached out to stakeholders who will be most affected by a proposal, gathered information and ideas, and responded to the input by modifying or adding alternatives. According to the study's findings, "this desired level of public involvement is not always achieved"²¹. The study also found that citizens reported feeling frustrated that they are often treated as adversaries rather than welcome participants in the NEPA process. Stakeholders complained that agencies make decisions before hearing from the public.

²⁰ Council on Environmental Quality. *The National Environmental Policy Act: A Study of its Effectiveness after Twenty-five Years* <http://ceq.eh.doe.gov/nepa/nepa25fn.pdf>. Accessed June 2006.

²¹ Ibid. pp.9.

The US Institute for Environmental Conflict Resolution identified additional problems within federal agencies' implementation processes²². The study found that agencies overemphasize NEPA documentation and litigation protection, but rarely use the NEPA process as a tool to support strategic planning and decision making. Instead, they tend toward narrow, procedural interpretations of the Congressional mandate for public involvement. Agency representatives also expressed their frustration with the traditional method of public involvement under NEPA. Many complained that public participation often occurs too late in the EIS process and tends to emphasize short-term impacts rather than long-term goals²³.

One of the main problems with NEPA is that it often leads to litigation, which ultimately takes the decision-making authority out of the hands of all involved parties. The time, cost and impasse resulting from frequent litigation is a major source of concern for the government. The following table describes the number of NEPA cases filed in each year between 2001 and 2004, and the number of injunctions granted.

Table 1: NEPA Litigation 2001-2004

Year	Number of NEPA Cases Filed	Number of Injunctions granted
2004	150	11
2003	130	6
2002	150	27
2001	137	6

Source: Compiled from Council on Environmental Quality, NEPA Litigation Surveys 2001 – 2004

²² U.S. Institute for Environmental Conflict Resolution. *Report and Recommendations on A NEPA Pilot Projects Initiative* <http://ecr.gov/pdf/USIECR%20Report%20to%20Senators%208-30-01.pdf>, accessed June 2006.

²³ Council on Environmental Quality. *Modernizing NEPA Implementation*, <http://ceq.eh.doe.gov/ntf/report/totaldoc.html#6.4>, accessed June 2006.

Despite the relatively small proportion of injunctions granted, the threat of litigation has a considerable impact on how agencies move through the NEPA process. In response to EIS litigation, agencies have become more rigid in their implementation of a NEPA process that has failed to generate stable decisions. Many increasingly seek to produce “litigation-proof” documents²⁴. Not only is this goal infeasible in the long term, but it also tends to discourage innovative processes involving collaboration or larger scale analysis. A report by the joint Task Force on Improving the National Environmental Policy Act and Task Force on Updating the National Environmental Policy Act found that agencies are “becoming more cautious – but not necessarily more deliberative – in issuing NEPA documents”, resulting in a “ripple effect of lost economic opportunities”²⁵.

Conclusion

NEPA established a broad legal and procedural mandate for agencies to consider and disclose environmental impacts. However, while many agencies created public involvement mechanisms, the effectiveness of those mechanisms continues to be challenged. Public participation has not led to decisions or processes that are desired by the public. The following chapter describes the challenges of trying to involve the public in an effective NEPA process and describes the prospect of using web-based technology as a means of improving upon existing practice.

²⁴ US Institute for Environmental Conflict Resolution, 2001. pp. 19.

²⁵ U.S. Congress, House of Representatives, Task Force on Improving the National Environmental Policy Act and Task Force on Updating the National Environmental Policy Act. *Initial Findings and Draft Recommendations*, 109th Congress, December 21, 2005. p. 11-12.

Chapter 2: Barriers to Public Participation

Although the mandate for public participation has been established through legislation, there is a wide range of views on what constitutes a “successful” participatory process. Chess and Purcell categorize the literature on participation success into two categories: (1) those that evaluate the success of the participatory *process*; and (2) those that evaluate the success of the *outcome* of the process²⁶. For those that evaluate processes, the means, rather than the ends, of achieving participation define success. Such research evaluates goals such as fairness, information exchange, inclusiveness and procedures. Outcome-based research measures indicators ranging from stakeholders’ influence on decisions and their satisfaction to the stability of final decisions or ability to achieve consensus. The definition of success is complicated and may be context-dependent, as the goals of a participatory process vary by situation and stakeholder. A federal agency may seek to achieve broader support and reduced conflict around a decision. Others may aspire to include underrepresented groups in the decision making process.

The challenges of implementing public participation throughout the NEPA process are well established in the literature. The key issues are described below.

Representativeness

While NEPA established mechanisms for public participation, in practice the public may not be adequately represented. Eccleston finds that members of the public who attend

²⁶ Caron Chess and Kristen Purcell. “Public Participation and the Environment: Do We Know What Works?” *Environmental Science and Technology* 33 (1999). pp.2685-2692.

public meetings tend to be more educated and technically sophisticated than the general public and usually have a vested interest in the outcome²⁷. In fact, the environmental movement as a whole has been characterized as a “postmaterialist” value system, or one that is associated with more affluent communities that do not need to be concerned with their basic economic, or material, needs²⁸. The overrepresentation of white, middle-class, and highly educated citizens raises important concerns about environmental justice. Fisher argues that the insights of ordinary citizens, or “local knowledge”, are essential to a comprehensive understanding of environmental problems and that participation processes that does not include these insights are incomplete²⁹. The question of how to define a “stakeholder” continues to challenge policy makers. In the literature, the definition of a stakeholder is influenced by factors such as the issues, the methods used to evaluate whose views need to be solicited, and the skill with which stakeholders articulate their interests³⁰.

Timing of involvement

While NEPA requires federal agencies to provide notice of opportunities to participate in scoping an EIS, in practice the public is often not involved until the end of a project planning cycle³¹. Participants are not usually involved in the critical stages of planning,

²⁷ Charles Eccleston, *Environmental Impact Statements: A Comprehensive Guide to Project and Strategic Planning*. (New York: John Wiley & Sons, Inc. 2000).

²⁸ Frank Fischer, *Citizens, Experts and the Environment: The Politics of Local Knowledge*. (Durham, N.C.: Duke University Press, 2000). pp. 117.

²⁹ Ibid.

³⁰ Terry F Yosie and Timothy D. Herbst, “Using Stakeholder Processes in Environmental Decisionmaking: An Evaluation of Lessons Learned, Key Issues and Future Challenges”. Prepared by Ruder Finn on behalf of the American Industrial Health Council. Washington, DC. 1998.

³¹ Meinhard Doelle and A. John Sinclair, “Time for a new approach to public participation in EA: Promoting cooperation and consensus for sustainability”. *Environmental Impact Assessment Review* 26. (2006). pp. 185-205.

design and assessment along with project proponents and agency decision makers. Doelle and Sinclair find that this lack of meaningfully timed involvement discourages participation and actually encourages conflict, blaming “a lack of recognition of the need for early and ongoing participation and a lack of openness to rethink a project at the time the public is engaged”³². As a result, participation is often treated by agencies as a compliance measure, rather than a means of integrating public concerns into the planning and design phase of a project.

Poor public understanding of issues

The content of an EIS contains significant scientific, technical and legal information that can be difficult for the average citizen to understand. Gallagher and Patrick-Riley explain that EIS’ and federal land management plans are written for people with 3 to 6 years of college education, far beyond the reading ability of the average American³³. Sullivan et al found a correlation between citizens’ tested reading ability and their ability to understand an EIS, but found that citizens overall lack the ability to develop even an adequate understanding of an EIS’ contents³⁴. The difficulty of the public to understand the content of NEPA documents, combined with the problem of inadequate representation throughout the process, gives an advantage to special interest groups and industry, who have the resources to participate more effectively.

³² Ibid. p. 189.

³³ Thomas J. Gallagher and Kent Patrick-Riley, “The readability of federal land management plans”. *Environmental Management*. 13:1 (1989) pp. 85-90.

³⁴ William C. Sullivan, Frances E. Kuo and Mona Prabhu. “Assessing the Impact of Environmental Impact Statements on Citizens”. *Environmental Impact Assessment Review*. 16 (1996) pp 171-182.

Interaction among stakeholders

Although agencies have accepted and articulated the need for an inclusive, two-way and continuous approach, the reality of day to day practice falls short of these goals³⁵. Charnley and Engelbert criticize the public participation process, arguing that it increases rather than decreases conflict between agencies and the public and creates disproportionate influence for public interest groups³⁶. In contrast, stakeholder interaction provides the benefits of “improved understanding of other stakeholders’ viewpoints and interests, greater access to information, and the building of working relationships and trust (that sometimes continue on past a particular set of deliberations)”³⁷.

Challenges to scientific credibility

Since the 1960s, public trust in experts and in the objectivity of science has been notably eroded³⁸. Jasanoff explains that there are limitations to objectivity of “factual” knowledge, and that experts rarely agree among themselves³⁹. Susskind and Dunlap highlight the substantial components of an EIS that involve nonobjective judgments, including approaches to coping with uncertainty, approaches to public participation, selection of professional team members and the structure of forecasting⁴⁰. Science is thus not value free; the outcome of an environmental impact analysis is highly sensitive to assumptions

³⁵ Amanda Graham, “A Social Communication Perspective Toward Public Participation: The Case of the Cispus Adaptive Management Area”, In *Communication and Public Participation in Environmental Decision Making* eds. Stephen P. Depoe et al. (Albany: State University of New York Press, 2004). pp. 35-58.

³⁶ Susan Charnley and Bruce Engelbert. “Evaluating public participation in environmental decision making: EPA’s superfund community involvement program”. *Journal of Environmental Management* 77, (2005). pp. 165-182.

³⁷ Yosie and Herbst, 1998. pp. 38.

³⁸ Joe Weston. “EIA in a Risk Society”. *Journal of Environmental Planning and Management* 47: 2 (March 2004). pp. 313-325.

³⁹ Jasanoff, *The Fifth Branch*, 1990

⁴⁰ Lawrence E. Susskind and Louise A. Dunlap, “The Importance of Nonobjective Judgments in Environmental Impact Assessments.” *Environmental Impact Assessment Review* 2: 4 (1981) pp. 335-366.

based on judgments, rather than facts. Further, in policy disputes involving the use of science, the merits of scientific evidence are frequently challenged by scientific experts. Susskind and Ozawa find that disagreement among scientists generally arises at two key points in a policy debate: scientists may disagree on the significance or implications of available evidence; or they may disagree on the scientific evidence itself⁴¹. In the absence of expert consensus, contending interests frequently manipulate scientific research and scientific advice to provide a rationale for the decision they seek.⁴² This phenomenon has come to be known as “adversarial science”, as conflicts about facts are difficult to distinguish from those about values⁴³.

Inadequate inclusion of public values, attitudes and opinions

In addition to scientific knowledge, public values and cultural perspectives shape the understanding of environmental impacts. Inglehart shows that public attitudes and opinions about environmental issues are shaped by subjective cultural factors⁴⁴. Social and cultural perspectives also play an important role in shaping how different stakeholders perceive environmental problems, their root causes, and potential solutions⁴⁵. The literature on risk perception also shows the gap between public and expert

⁴¹ Connie P. Ozawa and Lawrence Susskind, “Mediating Science-Intensive Policy Disputes”, Journal of Policy Analysis and Management 5: 1 (1985).

⁴² Ibid.

⁴³ For a discussion on adversarial science, see Clinton J. Andrews, “Humble Analysis: the Practice of Joint Fact Finding”. (Praeger Publishers, Westport 2002).

⁴⁴ Ronald Inglehart, “Public Support for Environmental Protection: Objective Problems and Subjective Values in 43 Societies”. *Political Science and Politics* 28: 1 (1995), pp. 57-72.

⁴⁵ Smith, M Estelie. “Chaos, Consensus and Common Sense”. *The Ecologist* 25: 2/3 (March/April, May/June 1995).

perceptions of risk⁴⁶. Cash et al highlight the prevalence of different norms and expectations in different communities “regarding such crucial concepts as what constitutes reliable evidence, convincing argument, procedural fairness, and appropriate characterization of uncertainty”⁴⁷. Differences in norms and judgments point out the difficulty of effective communication across the scientific community, policy makers and the public.

Transparency in decision making

A vast literature has developed around various techniques to add up or weigh public opinion in the evaluation of alternatives. Some of the better known methods include “weighted matrices”, “expert” weighting and multicriteria analysis⁴⁸. The methods have become more elaborate, but critics argue that at their core, each of the techniques is based upon some form of subjective evaluation⁴⁹. How to weigh various factors depends upon a subjective judgment about what the important criteria are and a normative judgment about what the goals of a decision making process should be. The most commonly applied techniques rarely integrate public input into subjective judgments. Traditional public participation techniques tend to “inform and educate” or “invite feedback” without

⁴⁶ For a broader discussion of public perceptions of risk, see Sheldon Krimsky and Dominic Golding, eds. *Social Theories of Risk*. Westport, Conn.: Praeger, 1992. or Ulrich Beck. *Risk Society: Towards a New Modernity* (Thousand Oaks, CA: Sage 1992).

⁴⁷ David W. Cash, William Clark, Frank Alcock, Nancy M. Dickson, Noelle Eckley, David H. Guston, Jill Jager and Ronald B Mitchell, “Knowledge systems for Sustainable Development”, Proceedings of the National Academy of Science 100 no. 14. Worcester, MA: 2003, p. 1.

⁴⁸ For a discussion on weighted matrices, see Glasson et al. *Introduction to environmental impact assessment*, 2nd ed. London: UCL Press, 1999. For a discussion on expert weighting see Jain et al, 2002. For multicriteria analysis see Dom, A. “*Environmental impact assessment of road and rail infrastructure*.” In Petts J, ed. *Handbook of environmental impact assessment*, vol. 2. Oxford: Blackwell, 1999. pp. 331-50.

⁴⁹ Bruce, Christopher. “Can contingent valuation resolve the “adding-up problem” in environmental impact assessment?” *Environmental Impact Assessment Review* 26 (2006) pp. 570-585.

any guarantee of meaningful citizen input into final decisions⁵⁰. Ultimately, the decision making authority has considerable discretion on the extent to which public comments are factored into decisions⁵¹.

Technology as an improvement to public participation process

The federal government has embraced technology as a means of improving upon the traditional NEPA public participation process. First and foremost, web-based technology is lauded for its impact on *efficiency*; technology can simplify access to government resources and reduce the costs associated with obtaining and providing access. The Paper Work Reduction Act of 1995 promotes the use of information technology to “improve the productivity, efficiency and effectiveness of Federal programs”⁵². In 1998, Congress enacted the Government Paperwork Elimination Act, which requires federal agencies to provide the public, when practicable, with the option of “electronic submission, maintenance, or disclosure of information as a substitute for paper” by October 2003⁵³.

The Bush Administration has established e-government as one of the five cornerstones of the President’s Management Agenda to improve the management and performance of the federal government. “Effective implementation of E-Government is important in making Government more responsive and cost-effective”⁵⁴. The stated goal of the President’s E-Government strategy is to “eliminate redundant systems and significantly improve the

⁵⁰ Steven E. Daniels and Gregg B. Walker, *Working through environmental conflict—the collaborative learning approach*. (Westport, CT: Praeger, 2001).

⁵¹ Ibid.

⁵² U.S. Congress, *Paperwork Reduction Act of 1995*, 3504(h)(5).

⁵³ U.S. Congress *Government Paperwork Elimination Act*, Section 3504(a)(1)(B)(vi)

⁵⁴ *Presidential Memo: The Importance of E-Government*. <http://www.whitehouse.gov/OMB/egov/g-2-memo.html>, accessed July 2006.

government's quality of customer service for citizens and businesses"⁵⁵. Congress has also supported these efforts by passing the 2002 E-Government Act, which includes among its goals "to promote use of the Internet and other information technologies to provide increased opportunities for citizen participation in Government."⁵⁶ In January 2003, the Administration launched a government-wide portal, Regulations.gov, to help citizens locate and submit electronic comments on any proposed regulation by any agency. The administration estimated that creating a centralized electronic docket management system would save \$94 million over three years "by eliminating duplicate systems and annual maintenance fees"⁵⁷.

Scholars and policymakers are also beginning to embrace technology as a means of responding to the problems associated with public participation. Certainly technology alone cannot eliminate barriers to effective participation, but technological applications can be applied to address several of the well-known problems.

Public education and access

Technology can be a powerful tool for improving public education and access to information. The internet broadens the scope of information available and allows the public to access information at their convenience. Agencies can provide scientific studies, data and other supporting information about proposed actions on the web. Although that information is already available to the public, interested individuals normally have to go

⁵⁵ *E-Gov Background*. <http://www.whitehouse.gov/OMB/egov/g-1-background.html>, accessed July 2006.

⁵⁶ U.S. Congress, *E-Government Act of 2002*, P.L. No. 107-347.

⁵⁷ *Report to Chairman and Ranking Minority Member, Committee on Homeland Security and Governmental Affairs, U.S. Senate*, "Electronic Rulemaking: Progress Made in Developing Centralized E-Rulemaking System" (Washington, D.C., U.S. Government Accountability Office, September 2005).

to an agency's headquarters and examine paper files in order to actually get access⁵⁸. The GAO recommends providing supporting materials "such as economic analyses and the comments of others" online, in order to "facilitate receipt of informed public comments."⁵⁹ The internet not only broadens the potential base of public participants, but also offers the potential for more educated participation.

Minnesota E-Democracy is a citizen-based organization whose mission is "expanded participation and stronger democracies and communities through the power of information and communication technologies and strategies"⁶⁰. Its purpose is chiefly educational, based on the assumption that a better-informed citizenry is likely to be a more active one⁶¹. The organization sponsors online forums on local issues, candidate debates and election information. Its local issues forums are "citizen-driven" online town hall meetings, designed to encourage greater participation in local decision making and provide a forum for decision makers to receive immediate feedback from community members⁶². Minnesota E-Democracy also sponsors election year online partnerships to promote access to election information on interactive dialogue⁶³.

⁵⁸ *Letter to House Committee on Government Reform and Senate Committee on Government Affairs, "Federal Rulemaking: Agencies' Use of Information Technology to Facilitate Public Participation"*, (Washington, D.C.: U.S. General Accounting Office, June 30, 2000) p. 17.

⁵⁹ *Ibid.* p. 17.

⁶⁰ www.e-democracy.org, accessed July 2006.

⁶¹ Lawrence Susskind and Liora Zion. "Can America's Democracy be Improved?" Draft Working Paper of the Consensus Building Institute and the MIT-Harvard Public Disputes Program. Cambridge, MA: Consensus Building Institute, August 2002.

⁶² Local E-Democracy National Project, "Local Issues Forum Guidebook". March 15, 2005.

<http://www.e-democracy.org/uk/guide.pdf>, accessed June 2006.

⁶³ Susskind and Zion, 2002.

An additional benefit of online education forums is their ability to reach audiences beyond the boundaries of a public comment period. As early as 1993, the National Performance Review recommended that agencies “[u]se information technology and other techniques to increase opportunities for early, frequent, and interactive public participation during the rulemaking process.⁶⁴” The internet makes it possible for citizens to access information at their convenience.

Interaction among stakeholders

Under the current system, agencies determine which comments to publish and which ones merit response. The current process gives members of the public limited opportunity to hear from and engage one another directly. Agencies can improve the availability of information by putting comments online for public perusal. Noveck argues that through the internet, the public can better understand the decision making process, the spectrum of public opinion on an issue, who the active participants are and where they stand, and which experts have contributed information. “By having a sense of the community of practice, the screen can strengthen engagement, encourage continuing education, and promote... ongoing involvement in the work of the agency over time.⁶⁵” Interactive processes enable participants to engage one another directly, improving not only public understanding, but also the transparency of the process overall. The Department of

⁶⁴ Albert Gore, “From Red Tape to Results: Creating a Government That Works Better and Costs Less”, Report of the National Performance Review, September 7, 1993.

⁶⁵ Beth S. Noveck, “The Future of Citizen Participation in the Electronic State”, presented at the 9th International Working Conference on the Language-Action Perspective on Communication Modeling, Rutgers University, May 29, 2004.

Transportation (DOT) has an extensive docket management system that enables individuals to view and comment upon comments submitted by others⁶⁶.

Increased stakeholder interaction and transparency can also provide a means for the public to ensure that the most salient issues are addressed. Chat rooms and facilitated dialogues provide an opportunity for decision makers and the public to directly engage one another in a managed discussion. Online dialogues require interaction among stakeholders, rather than between participants and the sponsoring agency. In an online dialogue, stakeholders submit and read alternate views and respond directly to one another. The civil society group Information Renaissance has facilitated online dialogues on behalf of several federal agencies and found improved understanding, socialization of individuals in a cooperative process, and greater individual, rather than interest group, participation.⁶⁷

An online experiment by the EPA found that online dialogues created a dynamic discussion among participants and a level of interactivity normally found only in small-group processes⁶⁸. In 2001, the EPA convened nearly 1,200 people for a two-week discussion of public participation at the Agency. Individuals read and posted messages at their convenience during the comment periods. The dialogues took the form of messages posted to a website and “threaded”, or linked together, into ongoing conversations among

⁶⁶ U.S. GAO, June 30, 2000. p.8.

⁶⁷ Robert D. Carlitz and Rosemary W. Gunn, “Online Rulemaking: A Step Toward E-Governance”. Information Renaissance. Washington, D.C.: June 12, 2002. www.info-ren.org, accessed July 2006.

⁶⁸ For a discussion of the EPA’s online dialogues, see Thomas C. Beierle, “Democracy On-Line: An Evaluation of the National Dialogue on Public Involvement in EPA Decisions”. (Washington, D.C.: Resources for the Future, January 2002).

participants. Participants also reported a high degree of learning about one another's position and overall satisfaction with the process. The study highlighted the ongoing problem of representation online, since most participants were already familiar with public participation processes. Overall, the process generated a high degree of interactive deliberation and high quality of communication as participants responded to each other, debated issues and answered questions.

Inclusion of public values, attitudes and opinions

Online dialogues can be applied to any number of topics, including debates over technical information or discussions about opinions and values. Discussions of values are particularly important for highly controversial issues. The US Department of Agriculture (USDA) conducted an experiment with electronic rulemaking to establish standards for marketing organically produced food in December 1997. In order to develop the standards, the USDA needed to base its analysis on scientific data about a broad range of issues such as how various chemicals interact with materials used in organic farming systems. Due to the cultural significance of food and nutrition, the dialogue emphasized the inclusion of the perspectives of diverse consumers and farmers.

After publishing the proposed rule and regulatory impact statement online, the USDA received over 275,000 comments, an unprecedented volume in agency history⁶⁹. The USDA posted all comments, including electronic, letter, fax and transcripts of public hearings, on its website for public view. As a result of the substantial public comments

⁶⁹ Shulman, Stuart. "Citizen Agenda-Setting, Digital Government, and the National Organic Program". Presented at the American Political Science Association, Washington, D.C., August 31-September 3, 2000.

received, the USDA revised the rule, removing the controversial provisions concerning biotechnology, irradiation and antibiotics, and the use of municipal biosolids in the organic production process. The revised proposal was republished for comment in March 2000. After the release of the revised rule, the New York Times, which had in 1997 criticized the original proposal as having “troubling signs” of industry pressure, praised the USDA’s “new sensitivity to a sector of the farming world that has suffered from official neglect⁷⁰.” The National Organic Program was awarded the Government Technology Leadership Award in 1998 for innovative use of the internet and has been recognized for its success in improving the credibility of the decision making process⁷¹.

Transparency in decision making

The storage capabilities of the web enable agencies to offer greater transparency by providing a continuous electronic record of the decision making process. This would allow the public to track the origin of a decision, how it evolved, and how long the process took. Increased transparency can also enable better understanding of the process and rationale behind agency decisions. Through the web, citizens can see the range of public comments, read the substance of those comments, and how track how agencies responded to and integrated public input. This ability can provide greater transparency in shaping the policy agenda. Johnson writes “since the Internet should enable a wider cross-section of society to participate meaningfully in agency's decisionmaking process, it should become harder for individual interest groups to control agencies and to force

⁷⁰ New York Times (Editorial), “Reading the Organic Rules”, December 16, 1997 and “New Rules on Organic Food”, March 9, 2000. In Shulman, 2000.

⁷¹ Shulman and Schlosberg, 2002.

them to abandon their agendas”⁷². He argues that broader stakeholder input should make agencies less susceptible to agenda-capture by special interests.

Beginning in 1998, the non-profit organization AmericaSpeaks, conducted a 21st Century Town MeetingTM, a technology-enabled public engagement process, on the future of the Social Security system⁷³. As part of the Americans Discuss Social Security project, a non-partisan effort funded by The Pew Charitable Trusts, the Town Meeting involved 50,000 citizens across all 50 states through its face-to-face town meetings, teleconferences and online dialogue⁷⁴. President Bill Clinton and 120 members of Congress took part in the town meetings or teleconferences. Public deliberation was a key component of the project. Through the project’s on- and offline meetings, AmericaSpeaks distributed public education materials, legislative updates, facilitated discussions and debates, and asked participants to work collaboratively to choose possible solutions. In most of these forums, laptop computers were provided so that participants could record the outcome of their deliberations and wireless electronic keypads were available to provide instantaneous voting results. The 21st Century Town Meeting has been described by the Deliberative Democracy Consortium as one of the “most promising methods for deliberative public participation in agency decisions”⁷⁵.

⁷² Johnson, Stephen M. “The Internet Changes Everything: Revolutionizing Public Participation and Access to Government Information through the Internet”, *Administrative Law Review* 50. 1998. <http://www.law.mercer.edu/elaw/inter2.htm#first>, accessed June 2006.

⁷³ www.americaspeaks.org, accessed July 2006.

⁷⁴ Information on the Town Meeting was obtained from “Americans Discuss Social Security: Report to Congress”. http://www.americaspeaks.org/resources/library/as/project_files/adss/adss_final_report.pdf, accessed July 2006.

⁷⁵ Deliberative Democracy Consortium Discussion Paper, “The Deliberative Agency: Opportunities to Deepen Public Participation” (Washington, D.C.: Deliberative Democracy Consortium, March 2004).

Weaknesses of technology-based participation

A discussion of the democratic potential of the internet would be incomplete without mention of the digital divide. Virtually all those who write about digital democracy express concerns about the impact of electronic government on the digital divide⁷⁶. The well-established problems of representativeness in the participation process may actually be exacerbated online. Further digitization of government may have the consequence of marginalizing the participation of groups that are underrepresented on the internet, such as minorities, elderly or the poor. Easier access to government information may simplify public participation for communities that are already engaged with political processes, but it does address the broader issue of technological access and literacy. Nor does electronic government guarantee increased responsiveness of government officials. Susskind and Zion warn that while technology can improve the dissemination of information and provide new opportunities for interaction with policy-makers, “teledemocracy does not necessarily require decision-makers to be more responsive to citizen concerns.”⁷⁷

Problems associated with the timing of public involvement are also beyond the scope of technological applications. Technology can greatly expand the amount of information available, but it cannot force decision makers to become more flexible in opening important decisions to public input. The NEPA process establishes requirements for

⁷⁶ See for example, Jane E. Fountain. *Building the Virtual State: Information Technology and Institutional Change*, Washington D.C.: Brookings Institution Press, 2001.

⁷⁷ Susskind and Zion, 2002.

public notice and public comment, but agencies can easily meet the standard for compliance without meaningful deliberation with the public.

Challenges to scientific credibility are also very difficult to overcome in a low-trust environment where public understanding of scientific issues is generally low. Technology can improve opportunities to educate the public about science-based issues, but the tradition of environmental conflict shows that greater access to information does not alone improve the credibility of scientific analysis.

Summary

The communicative powers of the internet can be used to improve upon many of the well-known flaws of the offline participation process. The extent to which technology actually improves public participation will depend upon how it is applied throughout the decision making process. In Chapter 5, I develop an evaluation framework based on the barriers described earlier to analyze whether and how a recent experiment by the Bureau of Land Management utilized technology to respond to participation challenges. The framework includes an evaluation of how technology was implemented to improve upon public education, stakeholder interaction, inclusion of public values and transparency in decision making. The issues of representation, timing of public involvement and scientific credibility are not included as evaluation criteria because solutions to these challenges are beyond the scope of technology-based applications.

The democratic potential of the internet lies not in simply automating existing applications, but rather integrating the best uses of technology into the structure and organization of a truly participatory process⁷⁸. In the following chapter, I describe consensus-based approaches to public participation that improve upon the traditional model and address the weakness of a technology-based approach.

⁷⁸ National Research Council, "Making IT Better: Expanding Information Technology Research to Meet Society's Needs", (Washington, D.C.: The National Academies, 2000). pp. 146.

Chapter 3: Best Practices in Public Participation

In response to the well-documented problems associated with the traditional participation model, federal agencies have begun to embrace alternative approaches to involving the public in environmental decisions. The Department of the Interior's "4C's" initiative – "consultation, communication, and cooperation, all in the service of conservation" – provides a vision for building partnerships with stakeholders to address land management issues⁷⁹. More recently, the Office of Management and Budget directed agencies to "increase the effective use of environmental conflict resolution and build institutional capacity for collaborative problem solving"⁸⁰. These initiatives reflect government efforts to ground decision making in credible science while recognizing that technical factors are only one of many important considerations in making wise public policy choices⁸¹. Scholars further argue that collaboration provides an effective mechanism for decision making in science policy by focusing on the most salient problems and building support for decisions, thus avoiding the problem of dueling experts. "Collaboration can lead to better decisions that are more likely to be implemented and, at the same time, better prepare agencies and communities for future challenges"⁸².

The process of collaboration as a mode of organizing introduces legitimacy to the decision making agency by enhancing the responsiveness and adaptability of the organization. As a tactical measure, collaboration can be an effective hedge against

⁷⁹ U.S. Department of the Interior. "Strategic Human Capital Management Plan, FY 2003-2007". Available at http://www.doi.gov/pfm/human_cap_plan/pdf, accessed June 2006.

⁸⁰ Office of Management and Budget, "Memorandum on Environmental Conflict Resolution", November 2005. <http://www.whitehouse.gov/ceq/joint-statement.html>, accessed June 2006.

⁸¹ Julia M. Wondolleck, and Steven L. Yaffee, *Making Collaboration Work: Lessons from Innovation in Natural Resource Management* (Washington, D.C.: Island Press, 2000)

⁸² *Ibid.*, 23

litigation risk, which only further undermines the authority of the lead agency. Advocates of collaborative processes argue that by including multiple perspectives into debates and generating greater awareness of the uncertainties in science policy questions, the likelihood for conflict is reduced.⁸³ The act of exploring many possible options in a systematic way helps diverse factions develop a shared understanding of the underlying assumptions, methods for analysis and scope of scientific uncertainty.⁸⁴ Rather than become further polarized in entrenched positions, participants in a collaborative process must invest their time and resources. Parties thus have an incentive to sustain the decision in which they themselves have participated, rather than to return to conflict.

Consensus-based approaches are particularly relevant to environmental disputes because they build understanding by fostering exchange of information between scientific agencies and the public and providing a mechanism for resolving uncertainty⁸⁵. The obfuscation of opinions, facts and values contributes to an escalation of conflict in a policy environment where decisions are urgent and the public has a well-established right and ability to participate. Negotiated rulemaking and joint fact-finding are two types of consensus-based processes that have been developed to improve upon traditional participation practice and applied to environmental decisions. These processes overcome the participation barriers that are beyond the scope of technological applications. Both

⁸³ Sylvio Funtowicz, Juan Martinez-Alier, Giuseppe Munda and Jerry Ravetz, "Multicriteria-based environmental policy", in *Implementing Sustainable Development: Integrated Assessment and Participatory Decision Making Processes*, ed. Hussein Abaza and Andrea Baranzini (Cheltenham, UK: United Nations Environment Programme, 2002)

⁸⁴ Clinton J. Andrews, *Humble Analysis: the Practice of Joint Fact Finding*. (Westport: Praeger Publishers, 2002).

⁸⁵ Julia M. Wondolleck and Steven L. Yaffee, *Making Collaboration Work: Lessons from Innovation in Natural Resource Management* (Washington D.C.: Island Press, 2000)

require early and ongoing participation of stakeholders, wide representation and participation in the development and evaluation of alternatives.

Negotiated Rulemaking

Negotiated rulemaking is based on the principle that agencies can create better regulations by working in collaboration with those stakeholders affected by the rule⁸⁶. As a consensus-based process, negotiated rulemaking requires that all parties involved agree upfront that they will try to reach an agreement that all members can live with. The process of negotiated rulemaking is subject to the guidelines of the Federal Advisory Committee Act (FACA) and other legal requirements. Once the negotiating committee has reached agreement in accordance with the requirements of the lead agency, the draft regulation then moves through the standard review, notices and comment procedure.

Negotiated rulemaking improves upon the common process for citizen and government collaboration in an agency's decisions, under which stakeholders can provide comment in response to Federal Register notices. Through firsthand negotiation, stakeholders can participate directly in meaningfully influencing agency decisions. The process generally begins with the lead agency convening a committee that is specifically assembled to represent the interests of those parties that would be substantially affected by a rule. The goal of the committee would be to meet with the agency to develop a consensus-based agreement on a proposed rule. The end product of the negotiation is a written proposed

⁸⁶ Consensus Building Institute and Environmental Mediation Services, "Conflict Assessment: The Prospects for Building Consensus on the Fire Island National Seashore's Vehicle Use Regulations". (Cambridge, MA: Consensus Building Institute, January 2000).

rule, not a final rule, which all participants agree to support. It should be emphasized that regulatory negotiation is not a replacement but a supplement to the standard federal rulemaking process. In no way does the federal agency cede its authority to the negotiating committee. The agency makes a commitment to propose the rule, and support it through the conventional rulemaking process.

Negotiated rulemaking offers greater self-determination, greater creativity and the possibility of improved relationships among stakeholders. Participants are able to remain agents in the decision making process, as a resolution is reached only if the parties involved voluntarily agree to an outcome that they themselves have created⁸⁷. In a traditional adversarial process, parties relinquish this active role to the courts, accepting the risk of an uncertain outcome. Further, in a traditional adversarial process, the range of possible outcomes that can be determined by a permitting agency or by a judge or jury is limited. Under negotiated rulemaking, parties are not constrained by pre-defined options. The negotiating committee can develop whatever options are satisfactory to the group within the mandates of the law and agency guidelines. As participants in the negotiation, stakeholders can directly represent their own interests and deliberate with other stakeholders about acceptable and unacceptable options.

One of the often-cited values of negotiated rulemaking is its ability to improve relationships. It offers an opportunity for proactive engagement with the variety of citizen, government, non-governmental and private sector stakeholders concerned. Negotiated

⁸⁷ Senger, Jeffrey M. *Federal Dispute Resolution: Using ADR with the United States Government*, (San Francisco: Jossey Bass, 2004).

rulemaking offers additional benefit to government agencies. By producing rules that are well informed by multiple interests and supported by enough stakeholder representatives, the process tends to produce more technically accurate agreements that reduce the risk of rulemaking litigation⁸⁸. As a broader goal, the negotiated rulemaking takes the public interest into account by including the public in the decision making process.

The process has been used successfully by federal agencies to resolve public disputes. The National Park Service (NPS) has adopted a negotiated rulemaking approach to resolving contentious conflicts related to off-road driving in Fire Island National Seashore and off-road vehicle use in Cape Cod National Seashore. In Cape Cod, the NPS convened a twenty-three member advisory committee reached consensus on a proposed rule revising off-road vehicle regulations in six days of negotiation over a period of four months⁸⁹. Both negotiations have resulted in solid rules that are supported by all involved parties. Golden Gate National Recreation Area and Cape Hatteras National Seashore are also presently engaged in negotiated rulemaking processes.

Joint Fact Finding

Joint fact finding is another consensus-based process that improves upon the NEPA requirement for consideration of best available scientific data. In a joint fact finding process, stakeholders collectively define the questions to be asked and methods of analysis, define the process for gathering information and select appropriate experts. This collaboration helps avoid the dilemma of adversarial science that has plagued

⁸⁸ U.S. Department of Labor, Office of the Solicitor, *Negotiated Rulemaking Handbook*. (Washington, DC: US. Department of Labor, 1992).

⁸⁹ Consensus Building Institute, 2000.

environmental disputes. In defining the issues of concern, stakeholders are able to ensure that their interests are addressed in the knowledge production process. Joint fact finding ensures that the information gathered is salient to the concerns of all stakeholders, particularly decision makers, and that information is communicated to all stakeholders.

Three critical components distinguish joint fact finding from other types of collaborative processes. The first is the presence of a professional neutral to manage the process and ensure that the interests of all parties are met. The neutral's role is effective for moving people beyond their parochial concerns and initial positions. Retaining facilitators considered neutral and non-partisan is critical to maintaining the integrity of the process. The second distinguishing feature of joint fact finding is participation and selection of representation for all interested parties. Under joint fact finding, all who wish to participate are included. Finally, under joint fact finding the group produces a written agreement which must be signed by all parties. Representatives then take the written agreement back to their constituencies for review. While these components may not render joint fact-finding appropriate for all environmental impact assessments, several key features of the process respond directly to the weaknesses in the traditional NEPA participation process. Collaborative scoping and collaborative analysis and evaluation are particular features of joint fact-finding that improve upon the traditional process.

Collaborative Scoping

The scoping process of an environmental impact assessment ensures that the potentially significant risks are investigated. In practice the scoping process has been criticized for

its failure to provide opportunities for meaningful public involvement. Jain et al find that scoping is conducted in ways which meet the needs of the project, rather than the environment or the public⁹⁰.

In scoping a joint fact finding process, parties generate the science-based questions to be answered and methods for dealing with conflicting interpretations of facts. In defining the methods of analysis, the collaborative group jointly translates the initial set of possible questions into clearly defined researchable questions. Through a joint fact finding process, scientists, decision makers and disputing parties are able to directly confront the value-based components of scientific analysis which lie at the root of science-based disputes⁹¹. Through this process, stakeholders are forced to make their interests and concerns explicit and commit to working productively with uncertainty, rather than use uncertainty as a delay tactic.

Collaborative analysis and evaluation

Joint fact-finding requires that stakeholders collaboratively define the methods of analysis. In doing so, the group translates the initial set of possible questions into clearly defined researchable questions. Parties must agree upon the methods of information gathering and identify the limitations of each method. The stakeholders in a joint fact finding process must reach agreement on the methods of analyzing and interpreting data given the existing uncertainties. Testing analytical assumptions is central to this interactive process of knowledge synthesis. The act of exploring many possible options in

⁹⁰ Ravi K. Jain, L.V. Urban, Gary Stacey and Harold E. Balbach, *Environmental Assessment, 2nd Edition*. (McGraw-Hill, New York. 2002).

⁹¹ Susskind and Ozawa. 1985.

a systematic way helps opposing parties develop a shared synthesis of scientific knowledge⁹². By engaging in the evaluation of problems and options, parties to a dispute will develop an understanding of the tradeoffs involved in each.

Summary

Collaboration is built upon the recognition that federal agencies are agents of broader stakeholder communities and that a variety of perspectives are needed in democratic decision making. Consensus-based processes improve upon the credibility, salience and legitimacy of traditional participation models by more effectively framing the scope of an issue, including the public in the generation and evaluation of technical information, and providing opportunities for stakeholders to participate in the decisions for which they will be affected. As described by Cash et al, credibility involves the scientific adequacy of the technical evidence and arguments; salience deals with the relevance of the assessments to the needs of the decision makers; and legitimacy reflects the perception that the information has been respectful of the stakeholders' divergent values and beliefs, unbiased in its conduct and fair in its treatment of opposing views and interests⁹³.

The goals described by Cash et al. provide a useful framework for grouping the problems associated with the traditional EIS process because they offer an integrated assessment of both the "process" and the "outcome". The credibility of information is weakened by the lack of public knowledge of the relevant issues, the lack of scientific or "expert" credibility and the subjective approaches to evaluating preferences. Similarly, the poor

⁹² Clinton Andrews, *Humble Analysis: The Practice of Joint Fact Finding*. (Westport, MA: Praeger Publishers, 2002)

⁹³ Cash et al., 2003

inclusion of public values and lack of interaction among stakeholders damages the salience of the EIS process. The legitimacy of the process is challenged by the lack of transparency, failure to provide early and ongoing public involvement and escalating costs.

The following chapter describes the experience of four planning teams with ePlanning, a pilot project sponsored by the BLM to provide information and participation opportunities online. The cases provide insight into how technological innovations are being used to improve upon the NEPA process.

Chapter 4: Case Studies

Background on ePlanning

E-Gov for Planning and NEPA, or “ePlanning,” is a pilot enterprise solution developed by the Bureau of Land Management (BLM) that focuses on the web-based delivery of planning information. ePlanning creates tools and technology to enable BLM planning teams to create and publish to the Web all of the documents and maps associated with a land use plan. ePlanning was designed to build upon the features of earlier online participation experiments by providing proposed plans, supporting documents, and interactive features. Planning teams can now provide information “consisting of fully integrated text with intelligent and interactive maps and map layers”⁹⁴. Using ePlanning, BLM and public participants can access web-based documents to read land use plans, submit comments, and view maps related to those plans.

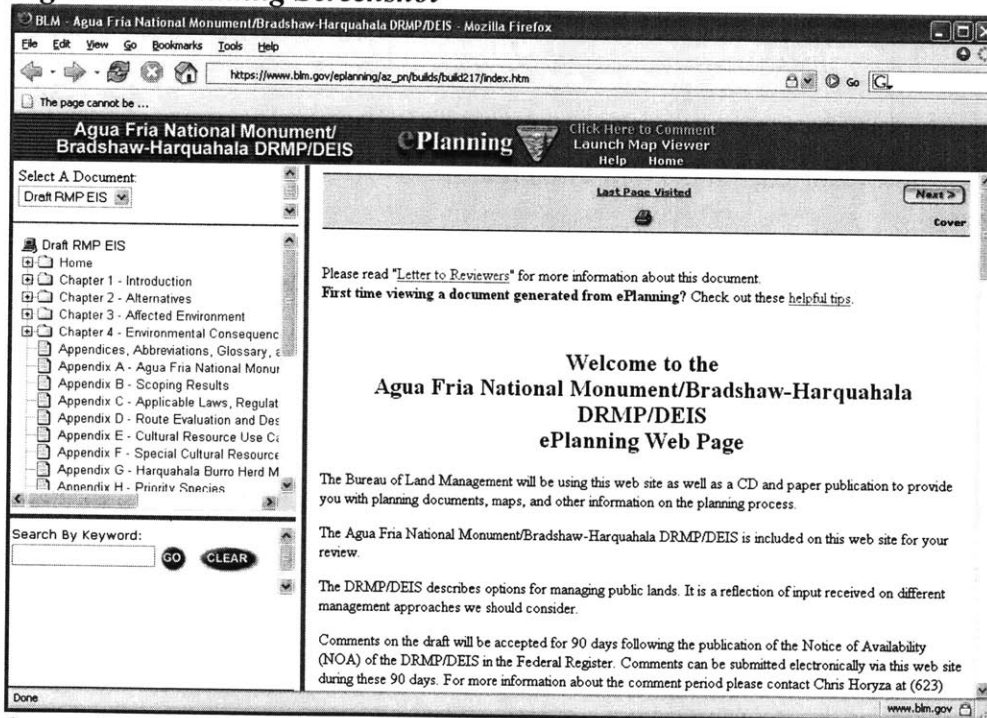
The site features interactive documents that link specific sections of text to specific features on maps. Users can click on maps to view differences among proposed alternatives or point out the exact geographic location related to their own comment. ePlanning enables the public to submit on-line comments on planning documents, directly from the relevant section of the planning document. Currently, most agencies post draft rules in their entirety. In ePlanning, users can select a portion of text in a planning document or online map and tie their comment to the particular text. This feature can be particularly helpful to decision makers in determining which portions of a rule are generating the most controversy. For users, ePlanning claims that “It has never

⁹⁴ Bureau of Land Management, Land Use Planning Tools website.
http://www.blm.gov/planning/tools_egov.html, accessed May 2006.

been easier to pinpoint the statements in the land use planning document that you want to respond to and point out the exact geographic locations to communicate your recommendation or preference to land use planners”⁹⁵.

ePlanning aims to establish a new mechanism for land use planning that leverages information technology “to create more efficient business practices and encourage an open and collaborative process”⁹⁶. The site also supports planners in managing and tracking comments received. By actively maintaining and updating the site, the BLM can provide a history of the draft plans and process.

Figure 1: ePlanning Screenshot



Source: Bureau of Land Management, ePlanning website. www.blm.gov/eplanning

⁹⁵ Bureau of Land Management, ePlanning website. <http://www.blm.gov/eplanning/>, accessed June 2006.

⁹⁶ BLM, Land Use Planning – Tools website.

Methodology

I chose to focus on the ePlanning project after interviewing resource managers from the Department of the Interior, dispute resolution practitioners, and federal government information technology experts. These professionals identified ePlanning as an example of a current, cutting-edge example of web-based communication and participation within the guidelines of the National Environmental Policy Act (NEPA). ePlanning accompanies the traditional land use planning process and aims to broaden and simplify public participation⁹⁷. As a pilot program, the ePlanning project provides a basis for comparing the range of management approaches to integrating technology into the participation process.

The cases in this chapter describe the experience four of the five ePlanning pilot projects. The fifth project, a management plan for the Sonoran Desert National Monument and resource management plan revision for the Phoenix South area, was omitted since the Draft EIS has not yet been released and the plan is in too early a stage of development for comprehensive analysis. Of the remaining four cases, three have released the Final EIS and the fourth has completed the Draft EIS and public comment period. Three represent controversial land use planning decisions managed by the BLM, and the fourth a forest management plan under the jurisdiction of the Forest Service.

As pilot cases in ePlanning, the four cases I analyze do not represent a random sample of land use planning decisions, but rather those that were deemed by ePlanning project managers to generate substantial public interest and match the project's roll out schedule. Data on the cases are derived from the Draft Environmental Impact Statements, Final

⁹⁷ Bureau of Land Management, ePlanning website.

Environmental Impact Statements (where applicable), supporting studies, articles and public comments. Information on the management of public outreach, comment analysis and comparisons with offline practices was gathered during 30-60 minute telephone interviews with BLM and Forest Service officials. At least two members of each planning team were interviewed, including the overall project managers, for each case to ensure representation of perspectives across functional levels. In addition, interviews were conducted with managers in headquarters offices for the BLM, Forest Service, and the ePlanning project. The interviews followed a structured format (see list of questions in Appendix 1), with opportunities for interviewees to provide commentary on the issues that most occupied their attention.

The cases differ in their level of controversy and the extent of public engagement. They also vary significantly in the extent to which the technological capabilities of ePlanning were employed. For each case, I describe the outreach process, method of adding up and analyzing public comments, role of sciences, role of public values and the team's experience with the pilot ePlanning platform.

Forest Service Land Management Plan: Angeles, Cleveland, Los Padres and San Bernardino National Forests

Background

In 1999, the Forest Service published a large scale assessment of current conditions and ecological trends within the four southern California National Forests: the Angeles, Cleveland, Los Padres and San Bernardino National Forests. The assessment area covered 6.1 million acres of mountains and foothills along southern California, of which 56 percent are National Forest System lands⁹⁸. The mountains form a prominent landscape feature that separates coastal basins from the San Joaquin Valley and the Mojave and Colorado deserts. Over 18 million people lived in the coastal basin bordering the assessment area at the time of the study. The assessment found “dramatic changes” in the mountain and foothill ecosystem of the region⁹⁹. As compared to historic conditions, the area had a greater susceptibility to fires and greater presence of invasive nonnative species causing a decline in habitat capability for many native plants and animals. An increased network of dams and diversions had altered the aquatic systems. There was also a concentration of threatened and endangered species in particular habitats, as biological diversity is not evenly distributed across the assessment area. A population boom along with rapid urbanization within and surrounding the assessment area continues to place substantial pressure on the forests.

⁹⁸ John R. Stephenson and Gena M. Calcarone, “Southern California mountains and foothills assessment: habitat and species conservation issues. General Technical Report GTR-PSW-175”. (Albany, CA: Pacific Southwest Research Station, United States Forest Service, 1999).

⁹⁹ Ibid. p. 3.

The 1982 Planning Regulation establishes the basis for revision of land management plans: "A forest plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the plan have changed significantly or when changes in Resource Policy Act policies, goals or objectives would have a significant effect on forest level programs."¹⁰⁰ The Land and Resource Management Plans (Forest Plans) for the four National Forests had been in effect since the mid-1980s.

In response, the Forest Service formed an interdisciplinary planning team in November 2000 to begin work on the revision of the forest plan for four National Forests of southern California. The team included resource specialists for each of the four National Forests and the Pacific Southwest Resource Station, which represents the regional research branch of the Forest Service.

Outreach Process

The formal public participation process began in September 24, 2001, with the publication of a Notice of Intent (NOI) in the *Federal Register* to prepare the EIS. To encourage participation throughout the planning process, the Forest Service held five rounds of public meetings and open houses throughout various locations across southern California. The public meetings and comment period were publicized through flyers and news releases in local and regional newspapers, radio and television stations. The main themes of the meetings were:

¹⁰⁰ Code of Federal Regulations (CFR) at 36 CFR 219.10(g)

- January through March 2001: Prior to the development of the proposed action, the public was asked to develop a list of values and visions for the national forests.
- March through May 2001: The Forest Service presented the preliminary significant issues and background data.
- October through December 2001: During the formal 90 day comment period following the publication of the NOT, people were asked for comments on the proposed action.
- February through March 2003: The FS presented the preliminary range of alternatives being considered.
- May through August 2004: The FS presented the alternatives and described the organization of the environmental documents, including the forest plans to facilitate more effective public comment during the official 90-day public comment period.

The planning team also sent periodic newsletters to those who had expressed an interest and provided copies on its website. After a review of the comments received during public meetings, the planning team identified five categories of public concern: public values and uses; ecosystem elements and function; commodity values and uses; urban development and forest habitat linkages; and special area designations.

During the draft plan review phase beginning spring 2004, the Forest Service hosted twenty-nine open houses in communities within and surrounding the national forests, which drew an attendance of 1,511 persons¹⁰¹. The open houses provided information on the documents and provided training on how to use ePlanning to submit comments or view maps. During the public comment period, the Forest Service received 4,356 responses, of which 3,100 were original responses. Included among the responses was a petition with 1,685 signatures and 1,256 form letters, defined as “five or more letters of

¹⁰¹ United States Department of Agriculture, Forest Service. *Final Environmental Impact Statement, Volume 1. Land Management Plans: Angeles National Forest, Cleveland National Forest, Los Padres National Forest, San Bernadino National Forest*. Forest Service, Pacific Southwest Region, September 2005. <http://www.fs.fed.us/r5/scfpr/>, p. 25. Accessed July 2006.

identical text submitted by different people”¹⁰². In total the responses represent 10,927 individual comments, which were each coded and attributed to a public concern.

The planning team’s process was characteristic of a traditional NEPA process. Opportunities were provided for participation in scoping and commenting on alternatives, but these followed traditional one-way forms of communication. The first public meeting provided opportunity for the public to submit input about the important issues associated with forest management, including information about values and priorities. These inputs were then assessed and presented back to the public in a subsequent meeting, where the public was informed about the results of their input. In interviews with the project manager and deputy manager, both characterized the public outreach process as being typical of planning efforts before ePlanning. The team did not solicit stakeholder input in any way different from normal efforts, and both managers felt that the level of public participation was typical.

Method of Analyzing Public Comment

The planning team retained the services of a government contractor, American Consultants LC, to analyze the comments received from the public. As a first step, the team entered the names and addresses of submitters who included one or more original topic-specific comments in their submission into a database, and assigned a unique number linking those comments to submissions and submitters. Each letter was read by an analyst who identified and categorized comments by topic (a “comment” is an

¹⁰² Ibid. p. 621.

individual quote from the letter). All comments were then entered verbatim into a database, coded by topic, sorted by topic, and then reviewed by the consultants who summarized comments that presented similar arguments or positions. The contractor's role was to "organize the public comment, to set up a tracking system for individual quotes, topic quotes within each letter, and then organize those into categories and write summary statements of the comments"¹⁰³. These statements of similar positions were grouped as "public concerns". The Forest Service planning team responded to the summary statements and addressed public concerns in the Forest Services' response section¹⁰⁴.

Comments and concerns were classified as either "in scope", related to the direct, indirect or cumulative impacts considered in the EIS actions, alternatives and mitigation measures, or "out of scope"¹⁰⁵. Comments determined to be in scope were further classified as either "substantive" or "nonsubstantive". "Based on the Council on Environmental Quality's regulations, a substantive comment is one that:

- Questions, with a reasonable basis, the accuracy of information as presented;
- Questions, with a reasonable basis, the adequacy of information as presented;
- Presents reasonable alternatives not considered in the DEIS that meet the purpose and need of the proposed action; and
- Points out errors in fact, policy, or presentation"¹⁰⁶.

Nonsubstantive comments include those that state a pro or con position or otherwise express an unsupported preference. The Forest Service is required to respond only to substantive comments or the concerns identified from them. The Forest Service's content

¹⁰³Tom White, Deputy Assistant Project Manager, (U.S. Department of Agriculture, Forest Service).

Telephone interview by author, July 10, 2006.

¹⁰⁴ Ibid.

¹⁰⁵ *Final EIS*, p. 620.

¹⁰⁶ Ibid. p. 620.

analysis process “is intended to facilitate good decision making by helping the planning team clarify, revise, or incorporate technical information to prepare the final environmental impact statement (FEIS) and forest plan revisions”¹⁰⁷. The process used for sorting and analyzing public comments was the same as prior efforts. ePlanning was used in this case as a tool for simplifying and improving the management of the process, not to support an alternative approach.

Role of science

Published scientific assessments and expert knowledge provided the basis for “existing data and knowledge” of potential impacts¹⁰⁸. Scientists and researchers contributed to the planning process by helping to:

- Gather, synthesize, and validate information;
- Identify and quantify risk without recommending what level of risk is appropriate; and
- Assure the quality of information by following scientific protocols, including peer review¹⁰⁹.

Public participation in the development of alternatives was similar to a traditional process. Through public meetings, newsletters, ePlanning and one-on-one meetings, where requested, members of the public could submit comments on scoping and alternatives. The scientific information was evaluated by technical experts and planning staff, and the results were communicated to the public. ePlanning added an additional channel for

¹⁰⁷ Ibid. p.603.

¹⁰⁸ Ibid. p. 15.

¹⁰⁹ Ibid. p. 16.

communication, but was not used to enhance collaboration in the development or evaluation of alternatives.

Public Values

During public scoping meetings, Forest Service staff expressly solicited input on values related to forest planning. Values-based comments gathered during scoping were grouped into the category of nonsubstantive comments.

Included in the assessment was a “Civil Rights Impact Analysis” which found no negative civil rights impacts to the public but recommended that the forests “consider nontraditional people and their cultural use of forests land, providing any pertinent information regarding access to land, programs and activities in bilingual format”. Project Manager Ron Pugh noted the importance of recognizing the diversity of southern California, but did not see technology as a particularly useful platform for engaging the public’s values. “We have 30 different languages in southern California, there are people that have a value for going to the woods that’s very different for us... ePlanning won’t solve that.”

Experience with ePlanning

The planning team had two major goals in using ePlanning: 1) to improve the efficiency of managing internal communication; and 2) to improve content analysis of public

comments¹¹⁰. Due to a series of “glitches” and “computer problems” in using the ePlanning tool, the content analysis team used ePlanning primarily as a platform for organizing internal information such as draft versions of documents, but relied upon its traditional method of content analysis¹¹¹. The team relied upon the contractor to conduct the content analysis, and used ePlanning to share the information with the public. “We used ePlanning to provide the *results* of public comments for content analysis... We took the product of content analysis and copied it into ePlanning”¹¹².

As one of the earliest planning efforts to experiment with ePlanning, the Southern California Forest Land Management Plan used an earlier version of the ePlanning technical product. According to the BLM ePlanning project manager, the technical capabilities have “expanded tremendously”¹¹³. The Forest Service used ePlanning to provide documents to the public, but did not find many of the interactive functions to be ready for public launch. As far as the effectiveness of ePlanning, the Project Manager remarked, “We were told it would work better than it did. I don’t think it was developed to the point that we expected¹¹⁴.” The mapping function was therefore not available online and only very limited comments were received through ePlanning.

¹¹⁰ Ron Pugh, Project Manager, (U.S. Department of Agriculture, Forest Service). Telephone interview by author, July 10, 2006.

¹¹¹ Ibid.

¹¹² Interview with Tom White. July 10, 2006.

¹¹³ Mary Beth Stolz, Project Manager (U.S. Department of the Interior, Bureau of Land Management). Telephone interview by author, June 23, 2006.

¹¹⁴ Interview with Ron Pugh.

Where the tool did prove helpful was in organizing internal information and communication across a large team. Both the project manager and deputy manager felt that had the technical issues been resolved, ePlanning would have great potential to improve the time and cost of the planning process, particularly with respect to internal efficiency. As the team consisted of staff from several national forests working from remote locations, ePlanning simplified the management of internal drafts and helped the team come to decisions more quickly.

As a public interface, ePlanning aided the team in building its external planning website, but was not used as a major platform for communicating with the public. While the functions were hindered by technical issues, the lack of training also played a role in the poor public turnout. “People didn’t know how to use it”¹¹⁵.

The management described the process of analyzing and responding to public comment as typical of other planning efforts. The project manager acknowledged that the team has a long way to go in integrating ePlanning into its outreach and public education process. He described the technological flaws with the pilot version as part of the reason the team did not pursue greater public engagement with ePlanning. “The product we used was not what we needed”¹¹⁶.

¹¹⁵ Ibid.

¹¹⁶ Interview with Ron Pugh, July 10, 2006.

Northwest National Petroleum Reserve-Alaska

Background

The Northwest National Petroleum Reserve-Alaska (Northwest NPR-A) Integrated Activity Plan describes the future multiple use plans for the management of 8.8 million acres of the NPR-A. The plan makes all BLM-administered lands within the Northwest NPR-A available for oil and gas leasing, with leasing in the 1.6 million acres near Wainwright deferred for 10 years. The Reserve was established in 1923 by President Warren G. Harding as a Naval Petroleum Reserve to supply oil for the Navy. In 1976 Congress transferred management of the Reserve to the Department of the Interior and renamed the area the National Petroleum Reserve-Alaska¹¹⁷. In 1980 Congress authorized leasing and development in the NPR-A. The Reserve is recognized for its abundant wildlife values, including large populations of geese, caribou, wolves, grizzly bears, and protected species such as the spectacled and Stellar's eiders and yellow-billed loons.

The Draft EIS analyzed a "No Action Alternative" under which no additional oil and gas leasing would be permitted, and four additional alternatives for making part or all of the Northwest NPR-A planning area available. Each alternative considered a different approach and proposed a different percentage of BLM-administered lands to be available for oil and gas leasing. The Final EIS included the BLM's recommended alternative,

¹¹⁷ U.S. Department of the Interior, Bureau of Land Management. *Northwest National Petroleum Reserve-Alaska Planning Area, Final Integrated Activity Plan/Environmental Impact Statement*, December 2003. <http://www.blm.gov/ak/npra.html>, accessed July 2006.

making all BLM-administered lands available, with the exception of specific deferral areas. The Record of Decision was released in January 2004.

On February 16, 2004, EarthJustice, on behalf of seven non-profit organizations filed suit against the BLM in a federal district court in Alaska challenging its oil and gas plan for the Reserve and seeking to stop the BLM's first lease sale, planned for June 2, 2004. The plaintiffs included the Northern Alaska Environmental Center, National Audubon Society, The Wilderness Society, Natural Resources Defense Council, Sierra Club, Alaska Wilderness League and Center for Biological Diversity. The plaintiffs argued that the BLM violated NEPA by approving leasing over a vast area without site-specific analysis and without considering the cumulative impacts of oil development¹¹⁸. The broad scope of the EIS was appropriate for a programmatic planning-level decision, but inappropriate as the basis for granting leasing rights without an analysis of site-specific impacts.

The plaintiffs also complained that the alternatives studied represented an all-or-nothing decision. Alternative A would make 100 percent of the planning area available for oil and gas leasing. Alternative B would make 96 percent of the planning area available, with the exception of a Kasegaluk Lagoon special area. Alternative C would make 47 percent of the area available, including less than 2 percent of the high potential oil areas. The fourth alternative was the NEPA-required no-action alternative. Audubon Alaska's executive director stated: "By choosing to consider only extreme alternatives – either lease

¹¹⁸ Ibid.

everything or lease almost nothing – BLM forced Audubon to go to court to seek a balanced approach.¹¹⁹”

On January 10, 2005, the Federal District Court for Alaska dismissed the lawsuit, finding in favor of BLM on all issues.

Outreach Process

Formal scoping began on November 15, 2001, with the publication of a Notice of Intent, which also included a call for nominations from the oil industry for lands within the planning area to be considered for leasing. Between December 2001 and January 2002, the planning team held eight public scoping meetings throughout Alaska in which they received over 150 oral and written comments. The Draft EIS was released on January 17, 2003, and the BLM held nine public meetings, where over 150 members of the public made statements. Approximately 97,000 individual comments were received during the comment period. Roughly 87,000 comments arrived via email and 8,000 comments arrived via facsimile¹²⁰. Comments were also submitted through the ePlanning website. Many of the comments received were form letters, and were grouped together and responded to as a general comment.

¹¹⁹ Audubon Society, Alaska State Office Press Release, February 17, 2004.
<http://www.audubon.org/chapter/ak/ak/m3item5.html>, accessed July 2006.

¹²⁰ U.S. Department of the Interior, Bureau of Land Management. *Northwest National Petroleum Reserve-Alaska Integrated Activity Plan/Environmental Impact Statement, Record of Decision*, (Washington, D.C: Bureau of Land Management, January 2004), p. 30.

Method of Analyzing Public Comment

Comment letters were entered into a database and randomly assigned tracking numbers¹²¹. For identical or nearly identical form letters, an individual tracking numbers was assigned to only one representative letter. Letters and hearing transcripts were reviewed by a team of BLM and MMS specialists and comments requiring specific responses were identified. “A comment received a specific response if it 1) is substantive and related to inadequacies or inaccuracies in the analysis or methodologies used; and/or 2) identifies new impacts or recommends reasonable new alternatives or mitigation measures; and/or 3) involves substantive disagreements on interpretation of significance”¹²².

The EIS explicitly states that comments on positions are not analyzed by the planning team:

Opinions regarding oil and gas leasing in the National Petroleum Reserve-Alaska—whether for, against, or ambivalent—are considered by BLM management and decisionmakers in preparing the Record of Decision. Opinions are not analyzed in the IAP/EIS because they don't generate changes in the technical content. They are forwarded for management consideration and are part of the permanent record for this planning process¹²³.

Role of Science

In 2002, President Bush’s National Energy Policy Development Group, headed by Vice President Dick Cheney, recommended that the President direct the Secretary of the Interior to “consider additional environmentally responsible oil and gas development,

¹²¹ Final IAP/EIS, Section VII (a).

¹²² Bureau of Land Management, *National Environmental Policy Act Handbook*, 1988. www.blm.gov/planning/policy_nepa.html p. 55-56. Accessed June 2006.

¹²³ Final IAP/EIS, Section VII (c) p. 2.

based on sound science and the best available technology, through further lease sales in the National Petroleum Reserve – Alaska”¹²⁴. Critics in the environmental protection community questioned the objectivity of the process and in 2003 the Audubon Society Alaska State Office completed its own 18-month study of animal and commercial resources in the western Arctic, including the Reserve. Based on “the best available science”¹²⁵, Audubon identified key biological areas in need of special protection while providing for additional oil and gas activity in the Reserve. The report was followed by specific recommendations framed as a “Wildlife Habitat Alternative”, under which approximately 65 percent of the area identified by BLM as having high oil and gas potential would be available for leasing, and areas with threatened species provided with special protection¹²⁶. The Final EIS includes a response to the Audubon’s study, but the alternative was not included as one of the BLM-analyzed alternatives in the Final EIS.

Public Values

Values and opinion-based comments were considered nonsubstantive, and therefore did not require specific response from the planning team. One of the managers acknowledged the requirement of taking values and opinions into account, but added that they were not particularly helpful in the decision making process: “they’re certainly valuable and we

¹²⁴ National Energy Policy Development Group, “National Energy Policy”, May 2001.

<http://www.whitehouse.gov/energy/>, p. 7. Accessed July 2006.

¹²⁵ Audubon Society, Alaska State Office Press Release, “Audubon Seeks a Balanced Approach to Federal Oil and Gas Leasing in the National Petroleum Reserve-Alaska” February 17, 2004.

<http://www.audubon.org/chapter/ak/ak/m3item5.html>, accessed July 2006.

¹²⁶ EarthJustice, “Plaintiffs’ Motion for Preliminary Injunction and Memorandum of Points and Authorities in Support Thereof”, February 2004.

http://www.earthjustice.org/our_work/cases/2004/western_arctic_oil_gas_drilling_nw_reserve.html, accessed July 2006.

have to look at them, but what's more valuable is someone proposing some option or something we hadn't considered".

Implementation of ePlanning

The BLM Alaska Office became involved in the ePlanning pilot at the behest of its Washington D.C. headquarters¹²⁷. The technical features of the project were impacted by a major lawsuit filed against the Department of the Interior¹²⁸. "Our ability to be able to absorb and take comments in electronically - other than email, [for example] somebody making changes to maps, and coming up with new alternatives based upon the technology – hasn't really come to fruition based on this lawsuit"¹²⁹. The field manager described frustration among the planning team, particularly those developing GIS applications, due to the constrained technical capabilities caused by the lawsuit.

The team noted the impact of technical applications like ePlanning on public comments. "Technology doesn't change the nature but it does change the volume [of public comment]. We get a lot more comments in the multiple hundreds of thousands, where we used to get people sending in written comments or [attending] public meetings... We may get hundreds of thousands of comments that say 'I don't like what you're doing', but

¹²⁷ Bob Schneider, Alaska Field Manager (U.S. Department of the Interior, Bureau of Land Management). Telephone interview by author, July 10, 2006.

¹²⁸ As a result of the Cobell v. Norton lawsuit, agencies within the Department of the Interior had their information technology systems temporarily disconnected from the internet, interrupting access to most agency websites, email and web-supported projects included ePlanning. For more information on the case, see the Department of Justice website at: <http://www.usdoj.gov/civil/cases/cobell/index.htm>

¹²⁹ Interview with Bob Schneider, July 10, 2006.

that doesn't provide any site-specific information or rationale that would lead us to consider something different¹³⁰.”

¹³⁰ *Ibid.*

Revisions to Grazing Regulations for Public Lands

Background

The BLM began revision of public lands grazing regulations in the rural west in 2003. The regulations cover the more than 160 million acres of public lands in the western United States that are deemed to be suitable for livestock grazing. The BLM grants grazing permits or leases to individual citizens or business entities, which authorizes a permittee or lessee to graze livestock on one or more grazing administrative units called allotments¹³¹. The generally range in size from 1,000 or fewer acres to over a million acres. The regulations that govern public land grazing include the Taylor Grazing Act of 1934, the Federal Land Policy and Management Act of 1976, and the Public Rangelands Improvement Act of 1978. The last major change to these regulations occurred in 1995. The BLM-proposed revisions leave intact many of the revisions from 1995 but make three main categories of changes.

The first aims to “improve working relationships with grazing permittees and lessees”¹³² by developing a consistent approach in analyzing and documenting the effects of proposed changes in grazing, requiring a phase-in of changes in grazing use of more than 10 percent over a five-year period, allow for joint ownership of range improvement titles, and require BLM to cooperate with grazing boards in reviewing management plans on

¹³¹ U.S. Department of the Interior, Bureau of Land Management, *Proposed Revisions to Grazing Regulations for the Public Lands, Final Environmental Impact Statement*. October 2004. p. 10. www.blm.com/grazing. Accessed July 2006.

¹³² Final EIS.

public lands. The second category aims to “protect the health of rangelands”¹³³ by giving the BLM greater authority over reviewing and issuing permits, requiring standards assessments and monitoring of resource conditions and increasing the timeframe during which the BLM can propose actions to meet those standards. The third and final category of proposed changes aims to “increase administrative efficiency and effectiveness”¹³⁴ through a variety of changes to compliance measures, permitting procedures and decision rights related to nonrenewable grazing permits.

A notable change within the efficiency measures is the modification of the definition of the “interested public” to “ensure that only those individuals and organizations that actually participate in the process are maintained on the list of interested publics. The regulations with respect to the interested public are also revised to improve efficiency in the BLM’s management of public lands grazing by reducing the occasions on which the Bureau is required to involve the interested public”. Many stakeholders who opposed the proposed rule stated felt it would give ranchers preferential treatment at the expense of natural resources and restoring degraded resources. Others feared it would weaken the conservation and restoration of public lands, limit public participation and fail to identify good and bad grazing practices.

Public Outreach

Upon beginning the scoping process in March 2003, the BLM held a series of four public scoping meetings in Albuquerque, Reno, Billings, and Washington, D.C. Approximately

¹³³ Ibid.

¹³⁴ Ibid.

335 people attended the public meetings and more than 8,300 comments were received during the scoping period, most of which the BLM characterized as form letters¹³⁵. The BLM reported receiving only “35 letters containing substantive comments” from special interest organizations and state and Federal agencies¹³⁶. The Draft EIS was developed in December 2004, and a series of six public meetings were held in Salt Lake City, Phoenix, Boise, Billings, Cheyenne and Washington, D.C. The proposed rule and Draft EIS was available on the ePlanning website, through which the public could submit comments. Approximately 18,000 comment letters or emails were received during the comment period¹³⁷.

Managers explained that they used ePlanning primarily as a tool for public comment analysis and response and thus did not undertake outreach or educational activities outside of a traditional EIS process.

Method of Analyzing Public Comment

Oral and written comments were coded, reviewed and evaluated by the BLM. Summary comments were developed for those with similar substantive concerns. All comments were entered into a common database. The comments were categorized into five topics: 1) definition changes; 2) changes in the regulations to clarify present requirements and to allow better rangeland management and permit administration; 3) amendments related to

¹³⁵ Ibid. Chapter 1, p. 23.

¹³⁶ Ibid. Ch. 1, p. 23.

¹³⁷ Ibid. Ch. 1, p. 25.

changes in permitted use; 4) new provisions to the regulations; and 5) general comments not addressed in the proposed rulemaking.

Management found that the technology made it easier to collate comments, as compared to earlier days in the BLM's history where the coding was done by hand. The project manager described the process of analyzing public comments in the pre-internet era. "We had a whole office involved in sorting and coding and literally cut the comments and sorted [them]. Now companies contract to do the comment analysis because its so labor intensive and we don't have the people"¹³⁸. The team used ePlanning to make this process simpler while also keeping it in-house. The project manager wanted to avoid using a third-party contract because she feared it would create a layer of distance between the decision makers and public and restrict organizational learning. "What [the contractors] learn isn't being learned by the agency...it has to be a part of the agency's culture, knowledge base in order for the public input to be effective."¹³⁹

The managers described the process of soliciting and responding to public comments as being very similar to other efforts. Unlike other efforts, however, the team made comment letters available to the public. "It made it possible for the public to look at all of the letters from other people. People would then refer to each other letters. It would spur more comments on those topics. It became more interactive". As a result of this experience, the project manager suggested that chat rooms or other types of internet-facilitated interactions could be integrated into future versions of ePlanning.

¹³⁸ Ibid.

¹³⁹ Molly Brady, Project Manager (U.S. Department of the Interior, Bureau of Land Management). Telephone interview by author, July 12, 2006.

Role of Science

On July 21, 2005, the Western Watersheds Project (WWP), a western regional conservation group based in Hailey, Idaho, filed a lawsuit in federal District Court seeking to block implementation of the proposed grazing regulations. The lawsuit charges that the BLM violated NEPA by misrepresenting the scope of the proposed changes, failing to sufficiently disclose the impacts, and “suppress[ing] the views of its own and other agency scientists, who warned that the changes will cause long-term harm to the environment while impairing BLM’s grazing management effectiveness”¹⁴⁰. Specifically, the plaintiff argued that the draft EIS substantially altered the findings of BLM scientists, which were described in the agency’s internal Administrative Review Copy, which was not published. The WWP claimed that the BLM “ordered a hasty rewrite to eliminate any suggestion that the regulations would have significant effects.”¹⁴¹

Molly Brady, the project manager for the EIS, described the lawsuit as a mischaracterization of the agency’s actions. “It was an internal draft for everyone in the BLM to review. We have an internal review process where everyone can comment before we put it out to the public. The particular version we put out had a lot of flawed analysis. But we thought we’d get good comments from our internal people. Someone sent it out to

¹⁴⁰ Western Watersheds Project, “Opening Brief in Support of Motion for Injunctive Relief, submitted to United States District Court for the District of Idaho. Civ. No. 05-297-E-BLW”. July 26, 2005. <http://www.westernwatersheds.org/legal/legal.html>, accessed July 2006.

¹⁴¹ Ibid.

everyone in the environmental community. That precipitated the lawsuit and people said we were suppressing information”¹⁴².

Public values

Management recognized the importance of values and opinions, but did not make changes to the public outreach and consultation process to expand such input. Managers expressed frustration about the growing volume of nonsubstantive comments online, but did not see ePlanning in its current form as a solution to the issue. Brady also explained that values play an important role in shaping the analysis of alternatives within the agency. “Inside any agency, especially BLM and the Forest Service, you have the same spectrum of interests as the public, the same bias of interests, the employees reflect pretty well the American public. There’s a broad array of interests and biases. When you’re doing an analysis, you’ve got to be really careful about getting away from those biases”¹⁴³.

Implementation of ePlanning

The planning team used ePlanning to streamline the development of planning documents and manage public comments¹⁴⁴. There was initial difficulty in using ePlanning to sort and code public comments, mostly due to the public’s lack of familiarity with the ePlanning functions. Many commenters used the “highlight and comment” function, but provided comments that were not related to the highlighted text. This posed difficulty for

¹⁴² Interview with Molly Brady, July 12, 2006.

¹⁴³ Ibid.

¹⁴⁴ Ibid.

the team, but after a “massive effort”, they were able to develop a framework for analyzing and responding¹⁴⁵

The tool was helpful in increasing the efficiency of the team’s internal communication, since team members were spread across the country. Using ePlanning, they were able to jointly develop documents and provide internal comments on drafts remotely.

While internal efficiency was improved, the management expressed skepticism about ePlanning’s impact on the project’s overall efficiency. As the volume of comments grew significantly, the quality did not. “You get a lot more junk, a lot more non-content. Just people ranting and raving¹⁴⁶”. Another manager commented that “[ePlanning] has greatly expanded the ability of the public to provide comment and instantaneously comment. It’s created this sort of thorn which is the spamming of comments... We’re looking for pertinent and relevant comments and not a poll, so to speak, of public opinion driven by special interest groups. That may work with Congress but when you’re in the Executive branch, we need real information, not your feelings. One comment repeated 25,000 times is still like one comment that a lot of people endorse. As far as substance its still one comment”¹⁴⁷.

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

¹⁴⁷ Kenneth Visser, Rangeland Management Specialist (U.S. Department of the Interior, Bureau of Land Management). Telephone interview by author, July 11, 2006.

Agua Fria/Bradshaw-Harquahala Resource Management Plan

Background

The Agua Fria National Monument Resource Management Plan (RMP) and the Bradshaw-Harquahala RMP are currently being finalized through a joint EIS. The planning area covered by the two RMP's is rich in resources and historic value. The lands are home to a diverse animal population included endangered and special-status species, such as the bald eagle and Sonoran desert tortoise. Thousands of visitors visit the mountains, canyons and desert vistas of the area each year, and thousands of local residents rely upon these lands for their livelihood through mining, grazing, and tourism. The Agua Fria National Monument is also a part of the BLM's National Landscape Conservation System, which is comprised of designated areas that preserve natural landscapes for public use and enjoyment.

The planning area is currently managed under three different land use plans developed in 1983, 1988 and 1993. The three plans, Lower Gila North Management Framework Plan, the Phoenix RMP and EIS, and the Kingman Resource Area RMP and Final EIS, cover not only the planning area of the Agua Fria/Bradshaw-Harquahala Draft EIS, but also a much larger section of western and southwest Arizona¹⁴⁸. On January 11, 2000, President Bill Clinton established Agua Fria as a National Monument. The signing of the Proclamation 7263 represented "new or revised policy and changes in circumstances

¹⁴⁸ U.S. Department of the Interior, Bureau of Land Management, *Agua Fria National Monument and Bradshaw-Harquahala Draft Resource Management Plan and Environmental Impact Statement*, January 6, 2006. http://www.blm.gov/az/LUP/aguafria/afria_plan.htm, accessed July 2006.

affecting the entire plan or major portions of the plan"¹⁴⁹, which requires the development of plans for managing the monument. In addition, an internal BLM study in 2000 determined that the previous plans did not adequately account for the changing conditions land use patterns in the area.

Public Outreach

The formal scoping process began with the publication of a Notice of Intent in the *Federal Register* on November 15, 2002. During the scoping period, the BLM held a series of 10 community workshops to engage in discussion about the scoping and development of alternative ways to manage the lands. Over 560 people attended the meetings and over 3000 total individual comments were received¹⁵⁰. Factsheets, planning area maps and informative brochures were distributed at the meetings and comments were tape recorded and transcribed.

The BLM hired a contractor, James Kent Associates (JKA), to facilitate a collaborative planning process. The goal of the collaborative approach was to build community relationships in an "informal community stewardship process" before beginning the formal process. JKA staff visited residents and community groups in Wickenburg, Yarnell, Buckeye, Tonopah, Castle Hot Springs, New River, Black Canyon City, Cordes Junction, Mayer, Dewey, Humboldt, and Prescott Valley and met with environmental and recreation groups in Phoenix, Flagstaff and Prescott. The team also developed Human

¹⁴⁹ 43 Code of Federal Regulations [CFR] 1610.5-6

¹⁵⁰ Bureau of Land Management, Phoenix Field Office, "Arizona Planning Bulletin: Agua Fria National Monument & Bradshaw-Harquahala Resource Management Plans", February 2003, vol. 2. http://www.blm.gov/az/LUP/aguafria/docs/plan_bulletin_2.pdf, accessed July 2006.

Resource Units, to provide a working map of the social and cultural communities within the planning area. JKA describes the process as one of creating a “human geographic map” that enables agencies to “interact with the local issues and ideas about public land management, the informal networks and gathering places that make up the local communication system, and the current social and economic conditions in the area”¹⁵¹. Management stressed the importance of a pro-active approach toward public engagement, particularly in recognition of the flaws of the traditional approach.

Following the formal scoping process, the planning team held Alternatives Development Workshops, to provide opportunities for citizens “1) to discuss their visions for BLM lands that consider and incorporate social, economic, and natural resource issues; 2) to orient participants to the data collected by the specialists so far; and 3) to begin exploring alternative ways to manage BLM lands and resources”¹⁵².

Analysis of Public Comment

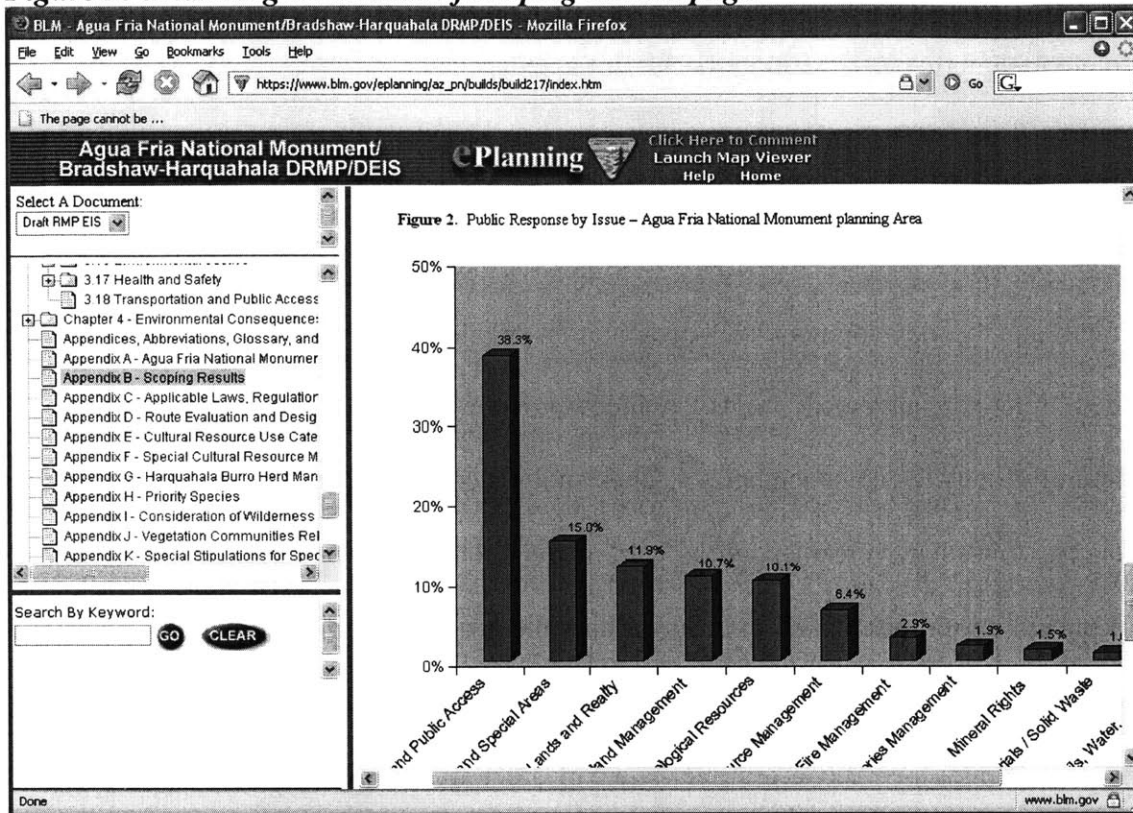
All comments received were grouped into one of 12 major issue categories. The comments were further divided into sub-issues within each category, and entered into a database. The planning team separated substantive from nonsubstantive comments. Using ePlanning, the planning team was able to provide the summary analysis of public

¹⁵¹ James Kent Associates website, www.naturalborders.com, accessed July 2006.

¹⁵² BLM, Phoenix Field Office, 2003. p. 1.

comments online through graphs and charts. The figure below shows a screenshot of the ePlanning site from the “Scoping Results” section.

Figure 2: ePlanning screenshot of Scoping Results page



Users can click on the Table of Contents on the left hand side of the screen to access the charts and view the distribution of public responses by issue. The data enable any user to easily view the number of comments by issue and sub-issue for both the Agua Fria and Bradshaw-Harquahala planning areas. The information can be used to evaluate the levels of support among those participating in the public comment process. For example, under the issue of “Grazing”, a total of 90 comments were received, 35 for the sub-group “Continue leases for grazing”, 28 for “Limit grazing”, and 27 for “Evaluate grazing impacts”.

The project manager emphasized that while ePlanning aided in organizing and presenting information to the public, the understanding of the public's goals and preferences came from directly engaging communities. ePlanning, and technology in general, are a tool to facilitate the public participation process, not a replacement.

Role of Science

To facilitate the development and presentation of alternatives, the planning area was divided into "management units" which provide a "geographic orientation and community focus for management"¹⁵³. These units were developed alongside the Human Resource Units that were mapped as part of the collaborative planning process. These units played an important role in ensuring that the analysis of impacts was conducted at an appropriate scale for individuals and informal groups. Data collection centered around "resource, community and economic data" in order to successfully resolve issues and analyze "social, economic and environmental impacts"¹⁵⁴. The planning team's Preparation Plan described the inevitably incomplete nature of any scientific assessment as one of the reasons cited for pursuing a collaborative engagement process.¹⁵⁵ The Alternatives Development Workshops conducted prior to the release of the Draft EIS provided training and presentation on scientific data collected to date, in order to build public capacity to respond to the scientific and technical information.

¹⁵³ Final EIS, Chapter 2.1.

¹⁵⁴ Bureau of Land Management Phoenix District Office, "Preparation Plan: Bradshaw Foothills Agua Fria National Monument", June 11, 2001. Available at <http://www.blm.gov/az/lup/aguafria/docs/bradshaw-agua-fria-prep-plan-final-doc.pdf>, accessed July 2006.

¹⁵⁵ Ibid. p. 23.

Public Values

The project manager described the goal of the public participation process as building “a far more intensive informal relationship with the public”, characterized by “spending a lot more time talking to people in informal settings than we traditionally do”¹⁵⁶. The contractor was selected for their particular expertise in understanding community values. Management felt that this knowledge of public values was essential to the success of any planning process.

We started with communities, entered the community as an outsider, and begin to look at it in terms of their development patterns. What are their informal networks? Who is involved with various things in town? Where is the power behind the power? A lot of communities function in the real world as small players. People behind the scenes have more influence than may be apparent on the surface. We did community mapping, network mapping, talked to people in bars, laundromats to find out what their relationship with the public lands are. A critical question to ask is – who else should I talk to about that? You start hearing the same names over and over again. Those people become important components of what that network is. We used a process of finding the people, their connections, the networks that really have an affinity for the public lands, and worked informally with those citizens on an intensive basis. We found out a heck of a lot that we didn’t ever hear at public meetings¹⁵⁷.

JKA refers to this method as “The Discovery Process”TM, which aims to enter the routine of a community in order to “see the world as residents do”¹⁵⁸. In consultation with the BLM and its contractor, several communities prepared community vision statements,

¹⁵⁶ Chris Horyza, Project Manager (U.S. Department of the Interior, Bureau of Land Management). Telephone interview by author, July 15, 2006.

¹⁵⁷ Ibid.

¹⁵⁸ James Kent Associates, “A Social-Economic Community Assessment Related to Bureau of Land Management Activities in the Phoenix Field Office: Supporting Documentation for an Environmental Impact Statement for Resource Management Plans (RMP) for the Agua Fria National Monument and the Bradshaw Foothills-Harquahala Mountains”.

http://www.blm.gov/az/lup/aguafria/resource_assess/soc_ec-assess.pdf, accessed July 2006.

which articulate their priorities and overall vision for the area covered by the EIS. Stakeholders representing diverse interests in the Town of Wickenburg formed the Wickenburg Outdoor Recreation Committee and developed a Vision Statement for the lands surrounding their community¹⁵⁹. The Committee also developed a land management plan for recreational areas in Wickenburg which was adopted in large part in the final resource management plan¹⁶⁰.

Implementation of ePlanning

The planning team found that ePlanning helped most in managing documents more efficiently and making portions of documents reusable. The management found the actual technical features to be crude compared with their expectations, but attributed the poor performance to the pilot nature of the project. While the planning team did not achieve many overall efficiency gains, the management remained highly optimistic about the potential for future versions of ePlanning to improve internal processes. With improved technical functionality, ePlanning can also help build a more informed and effective role for the public. ePlanning provided an additional platform for the agency to engage the public. The planning team held eight “Getting Acquainted with the Plan” workshops in various communities to demonstrate how to navigate the system¹⁶¹. The instructional workshops provided training on how to navigate the ePlanning site and explain the different components of the electronic document and maps.

¹⁵⁹ A copy of the Wickenburg Outdoor Recreation Committee’s Community Vision Statement is included in Chapter 1.4 of the Final EIS.

¹⁶⁰ Interview with Chris Horyza, July 15, 2006.

¹⁶¹ Bureau of Land Management Phoenix District Office, “Arizona Planning Bulletin: Agua Fria National Monument & Bradshaw-Harquahala Resource Management Plans”, December 2005, vol. 1. http://www.blm.gov/az/lup/aguafria/docs/plan_bulletin_3.pdf, accessed July 2006.

Management described the role of technology in public participation as purely a function of management's philosophy. "The agency's role is not defined by a technical application but by management's philosophy. Technology isn't going to change that. The philosophy can define the parameters and functioning of technology"¹⁶².

¹⁶² Ibid.

Chapter 5: Evaluation

To assess the degree to which recent approaches to public participation address the weaknesses of the traditional EIS process, I derived a checklist based upon the barriers described in Chapter 2, the best practices from consensus-based processes and the goals of e-government. Specifically, the checklist includes an evaluation of whether the cases improved public education, inclusion of public values, stakeholder interaction and transparency, each of which are well-known barriers to effective participation that can be improved upon using technology. The cases are also evaluated based on whether they include collaborative scoping, a best practice feature of joint fact finding that can be applied to any planning process. The final criterion is efficiency, the key goal of e-government. Each case is evaluated based on whether it *improves upon traditional practice* for each criterion on the checklist. Thus a checkmark indicates that the process improved public education, for example, as compared to a traditional EIS process. An X-mark does not indicate that public education was not part of the process, but rather that the case did not improve upon the baseline of traditional practice.

Evaluation Criteria

- *Public education*: Did the process increase public understanding? Did planning teams provide additional information or training through ePlanning?
- *Inclusion of public values*: Did decision makers seek information about public values? Were values meaningfully included in decisions?
- *Collaborative scoping*: Was the public involved in early and participatory scoping?
- *Stakeholder interaction*: Did the process facilitate greater interaction among stakeholders?
- *Transparency*: Did the process improve the transparency of decisions?
- *Efficiency*: Did the process reduce time or costs?

Public Education

<i>National Forests</i>	x
<i>Northwest Petroleum Reserve - Alaska</i>	x
<i>Public Lands Grazing Regulations</i>	x
<i>Agua Fria/Bradshaw-Harquahala</i>	✓

A well-informed public is a necessary condition of a functioning environmental policy system. Each of the four teams used ePlanning to provide planning documents online and enable better search. Each of the teams also reported some technical difficulties with the GIS mapping function, and only the Agua Fria team was able to provide navigable maps, albeit with limited function. The NPR-Alaska and Forest Service teams provided a general summary of comments and select responses online, consistent with their traditional practice. Neither team undertook additional outreach or provided information beyond what would be presented in other cases. The Public Lands Grazing team also followed its usual public outreach process, but through ePlanning posted all public comments received, enabling anyone to view what had already been submitted. Overall, the three cases did not have an impact on increasing public education.

The Agua Fria team provided the results of its community “discovery process” online through ePlanning, in addition to summary data on public comments. Their Alternatives Development Workshops also improved upon the traditional process by providing information on ongoing scientific data collection and training to enable community members to evaluate the information. By dividing the planning area into Human Resource Units, the team was able to conduct analyses at a scale appropriate for local communities. These features improved the capacity of the public to have greater input and understand the relevance of scientific information.

Managers from each of the four teams recognized the value ePlanning could have on educating and informing the public on issues related to proposed plans, but all found the actual technical capabilities of the pilot version to be below their expectations. Nevertheless, all were optimistic about the public education potential of ePlanning.

Inclusion of public values

<i>National Forests</i>	x
<i>Northwest Petroleum Reserve - Alaska</i>	x
<i>Public Lands Grazing Regulations</i>	x
<i>Agua Fria/Bradshaw-Harquahala</i>	✓

Across the four cases, the algorithms for sorting and grouping comments were highly similar. Teams internally identified the major topics of concern to the public, and then grouped public comments into those categories. All teams described their process of separating substantive from nonsubstantive comments. The treatment of “nonsubstantive”, or values- and position-based comments varied across the four teams.

Generally, teams did not have an established internal process for responding to values or position-based comments. All tracked the number of comments received but relied upon management discretion to determine the extent to which those comments would be responded to or incorporated into decisions. Of the three teams who hired contractors to manage the public involvement process, only one assigned the contractor with a specific role in soliciting information about community values. The Agua Fria team hired James Kent Associates because of its experience with conducting culture-based public stewardship processes. In contrast, the role of the contractor in the Southern California

National Forests case was to organize and summarize public comments received. The planning team reviewed all comments and responded to the summary statements, but had less engagement with the public. One manager expressed concerns about the trend of relying upon contractors to handle public involvement. “I think there are too many variations on how people have used contractors. Some say ‘you go do it, here’s the job, go do it’. It’s a disaster because the contractor isn’t interacting with the staff or the public... The agency has to know it, own it, and communicate it with the public. It has to be a part of the agency’s culture, knowledge base in order for the public input to be effective”¹⁶³. The presence of an intermediary between decision makers and the public can reduce understanding of public values if agencies do not maintain active involvement.

The Agua Fria case is the only one that improved upon traditional practice for including public values and perspectives in the planning process. The team’s project manager noted that while technology in general, and ePlanning in particular, can help agencies better manage public comment, it cannot replace direct engagement with the public. “You hear a lot more if you sit down and talk to people than on comments that are written. That helps to define or clarify a lot of those comments that we got. ePlanning isn’t going to help with that”¹⁶⁴. Technology can assist with the discovery of public values, but it must be viewed as a supplement, and not a replacement, to best offline practices.

¹⁶³ Interview with Molly Brady, July 12, 2006.

¹⁶⁴ Interview with Chris Horyza, July 15, 2006.

Collaborative scoping

<i>National Forests</i>	x
<i>Northwest Petroleum Reserve - Alaska</i>	x
<i>Public Lands Grazing Regulations</i>	x
<i>Agua Fria/Bradshaw-Harquahala</i>	✓

In a collaborative scoping process, stakeholders define the significant issues and generate the questions to be answered. The deficiencies in the traditional scoping model are well known: even the most sophisticated techniques cannot predict the environmental consequences of a project and the assessment process itself involves subjective judgments about risk, values and boundaries¹⁶⁵. Collaborative scoping is a participatory process which includes a broader range of inputs and judgments.

As the experience of two of the ePlanning cases show, the scope of an EIS can be the basis for litigation. Both the Alaska National Petroleum Reserve and the Public Lands Grazing EIS' resulted in NEPA litigation. The plaintiffs in the Alaska case sued on the grounds that the EIS violated NEPA by failing to conduct site-specific analysis and consider the cumulative impacts of oil development. They argued that the scope of the EIS was too broad to serve as a basis for granting leasing rights. The plaintiffs in the Public Lands case also claimed that the EIS violated NEPA by misrepresenting the scope of proposed changes and failing to sufficiently disclose impacts. In both cases, the scoping process involved traditional forms of participation. The lawsuits highlight the important role of scoping in establishing the legitimacy of a participation process.

¹⁶⁵ Snell and Cowell, 2006.

Scoping in the southern California National Forests EIS also followed a traditional one-way approach. The team provided opportunity for the public to submit comments on scoping and then informed the public at a later stage of the results. Public comments were summarized and assessed by the team internally.

In contrast, the Agua Fria team conducted its community “discovery process” in conjunction with its traditional process of holding public meetings and distributing written material. In dividing the planning area into Human Resource Units, the team sought to identify social and cultural communities within which collaborative planning could occur. The community vision statements that resulted from this process included not only values, but also statements of priority issues and specific proposals. For example, the Castle Hot Spring Community Vision Statement states: “We need to seriously consider a recreational-user fee, earmarked for the local community, imposed on non-residents to help fund the substantially increasing costs associated with recreational uses.”¹⁶⁶ The Vision Statements and all results of the scoping process are provided on the project’s ePlanning site.

Only the Agua Fria team can be described as engaging the public in a collaborative scoping effort. Managers from each of the other three cases acknowledged the need to involve the public earlier and in more meaningful ways. Nevertheless, the teams followed traditional one-way scoping processes.

¹⁶⁶ Bureau of Land Management, Agua Fria/Bradshaw Harquahala Draft RMP and EIS. Chapter 1.4.3.2

Stakeholder interaction

<i>National Forests</i>	x
<i>Northwest Petroleum Reserve - Alaska</i>	x
<i>Public Lands Grazing Regulations</i>	✓
<i>Agua Fria/Bradshaw-Harquahala</i>	✓

Unlike traditional one-way commenting procedures, interactive participation enables individuals to see themselves as part of an engaged community¹⁶⁷. Greater interaction among stakeholders can promote deliberation and transformation of preferences, rather than simplify “one stop” commenting¹⁶⁸.

The experiences of the National Forests and Alaska teams showed no increase in stakeholder interaction online or offline. Both teams complained of technological problems in their implementation of ePlanning and used the program mostly to provide basic planning documents online. The public Lands Grazing team posted on its website all of the comments received. As a result, users began to refer to one another’s comments in their own statements. This introduced some difficulty for the team in tracking and organizing comments, but gave the public better information on the positions of others and increase online interactivity. The project manager found the cross-referencing helpful in terms of enabling users to learn from one another’s comments¹⁶⁹.

The Agua Fria EIS process increased interaction among participants offline, through its informal outreach and training programs. The team used ePlanning to communicate the findings from community-level engagement to all participants.

¹⁶⁷ Noveck, 2004.

¹⁶⁸ Noveck, 2004. p. 4.

¹⁶⁹ Interview with Molly Brady, July 12, 2006.

Transparency

<i>National Forests</i>	x
<i>Northwest Petroleum Reserve - Alaska</i>	x
<i>Public Lands Grazing Regulations</i>	x
<i>Agua Fria/Bradshaw-Harquahala</i>	✓

Web-based technology has significant potential to improve the sharing of information used to support decisions. Through their websites, agencies can make the scientific studies, data and other supporting information much more accessible to the public.

All managers described using ePlanning to provide basic documents online and enable better search through the planning documents. All teams also reported some technical difficulties with the GIS mapping function, and only the Agua Fria team was able to provide navigable maps, albeit with limited function, online. The Agua Fria team provided summary data on community visions and public comments through ePlanning, but relied mostly on its informal community engagement process to increase awareness of the project and decision making process. ePlanning was used as a supplement to its planning process. Again, only the Agua Fria case improved the transparency of the overall process through its extensive outreach to communities. Other teams used technology to improve access to information, but did not expand the scope of available information nor provide guidance on how public input would be factored into decisions. More data does not by itself help stakeholders understand how it is used to support decisions.

Efficiency

<i>National Forests</i>	X
<i>Northwest Petroleum Reserve - Alaska</i>	X
<i>Public Lands Grazing Regulations</i>	X
<i>Agua Fria/Bradshaw-Harquahala</i>	X

Public participation processes are frequently criticized by both participants and government as costly, time consuming and generally inefficient¹⁷⁰. Evaluations of participation processes show that agency managers will support public participation programs if they can be demonstrated to be worth the commitment of resources¹⁷¹. Much of the government support of electronic participation stems from its potential to reduce the cost of meeting regulatory requirements for public comment. The President's Management Agenda stresses the importance of e-government in creating more cost-effective and efficient ways to engage citizens¹⁷².

In three of the four cases, managers said that the process took either more time or more cost than usual, and all attributed this additional time to the pilot nature of the product. Only the managers of the Alaska National Petroleum Reserve observed no change in the time and cost associated with using ePlanning. One of the managers of the Southern California National Forest team found however that the improved internal communication enabled the team to quickly identify the comments that required response.

Technological malfunctions and staff training were the most common reasons for additional time or cost. The process of managing two versions of documents, electronic

¹⁷⁰ Doelle and Sinclair, 2006.

¹⁷¹ Charnley and Engelbert, 2005.

¹⁷² <http://www.whitehouse.gov/omb/egov/g-2-memo.html>, accessed July 2006.

and paper, also contributed to the complexity. One of the managers remarked that while the process took more time, they did not incur greater cost. Instead, the quality of the project was compromised. “We did everything very quickly under ePlanning, [but] we probably didn’t do the quality because of the tech problems.¹⁷³”

Despite the challenges with the initial version of ePlanning, each of the managers described substantial potential for the application to improve efficiency. The area most cited for efficiency gains was internal communication, particularly for those planning efforts that spanned several cities and time zones. Several noted the potential of the comment analysis function, which consumes a significant portion of the planning staff’s time and budget. Since contracting for comment analysis has become common practice within agencies, ePlanning can either replace contractors or simplify the process of managing contractors.

Summary

Overall, only the Agua Fria case integrated technology into a collaborative process that improved upon traditional practice. In the other three cases, ePlanning was not applied in a way that significantly improved upon traditional approaches to public participation. Rather, the focus was on improving internal communication and automating, rather than enhancing the analysis of public comment. In the following chapter, I discuss the policy implications of the initial experience with ePlanning and provide recommendations for improving subsequent versions.

¹⁷³ Interview with Molly Brady, July 12, 2006.

Chapter 6: Discussion and Policy Implications

The experience of the four planning teams studied shows a range of managerial approaches to integrating technology in the participation process. Most teams focused on leveraging technology to facilitate internal communication, store and manage public input and achieve cost efficiencies. While most managers recognized the collaborative potential of technology, only the Agua Fria team used ePlanning as a supplement to a collaborative process. The experience of the other three teams suggests that technology may actually have the reverse effect of making the relationship between the agency and the public less collaborative. Planning teams rely heavily on automated public comment analysis functions, whether in-house or through a contractor. Automated comment analysis can significantly reduce the agency's burden of responding to a growing volume of public comments, but may also impose greater distance between decision makers and stakeholders. Although all managers acknowledged their duty to consider all comments received, there is reason for skepticism as field managers are under increased pressure to reduce costs. Without a parallel process of community engagement, the method of grouping and sorting public comments is fundamentally one of preference aggregation. This shifts the center of management attention from active participation toward passive information gathering¹⁷⁴. Electronic participation has the potential to introduce greater two-way communication between agencies and the public. However the experience of ePlanning shows that this potential is not currently being realized. One-way communication indicates an aggregative mode of democracy, in which experts in agencies aggregate the preferences of the public and determine the extent to which those

¹⁷⁴ Noveck, 2003.

preferences are included in a final decision¹⁷⁵. Neither citizens nor decision makers are required to directly engage with the position of others, nor are they induced to reflect upon their own position. In contrast, deliberation involves discussion, reasoning, and engagement across lines of difference.

One-way communication

The comment analysis process across the four teams was similar, generally beginning with teams internally grouping public comments into categories. As more of these comments are moving online, there may be less direct interaction between stakeholders and decision makers. Scoping in the ePlanning cases mostly followed a traditional one-way flow of input, under which agencies received public comments and decided internally which issues were relevant and how they should be framed. The lawsuits in the Public Lands Grazing and Northwest National Petroleum Reserve - Alaska EIS clearly demonstrate the importance of a collaborative scoping process. Stakeholders must be involved not only in identifying the range of potential issues but also in narrowing the list down to a set of clearly defined research questions to be addressed in the Draft EIS. A scoping process that does not directly engage and respond to the concerns of all stakeholders early on will leave all subsequent stages vulnerable to litigation. Technology can facilitate easier dissemination and receipt of information, but this does not generate deliberation. The current version of ePlanning does not leverage the interactive potential of web-based communication.

¹⁷⁵ Schlosberg, Shulman and Zavestoski, 2003. p. 217.

A more comprehensive design of ePlanning should build upon the successes of earlier experiments. The 21st Century Town Meeting offers a model of how technology-enabled public participation can be integrated into the NEPA process. In the Americans Discuss Social Security project described earlier, decision makers and members of the public participated in face-to-face town meetings, teleconferences and online dialogues. Public deliberation was a key component of the project's online and offline meetings. Federal agencies can apply this model in scoping a project and developing alternatives. Agencies can distribute educational materials, newsletters and other information through ePlanning, and use the site to facilitate interactive discussions and debates. Public meetings should also expand upon the traditional model. The Town Meeting model requires deliberation among stakeholders. After presenting information on a project, planning teams can facilitate group discussion and ask participants to collaboratively develop possible solutions. The technological changes needed to support such an upgrade are minimal. The greater challenge lies in re-orienting the planning process around public deliberation rather than one way communication. ePlanning can provide an online platform for sharing information and hosting discussions, but it must be viewed as the technological component of a broader effort to achieve collaborative decision making.

Science and values

All managers emphasized the importance of informed, substantive comments. The Alaska case illustrates how stakeholders' perception of substantive input can differ from the agency's perception. The Audubon Society of Alaska commissioned its own 18-month study of resources in the western Arctic using the "best available science". Not

surprisingly, the Audubon's best available science differed from that of the BLM, and led to substantially different conclusions about areas appropriate for leasing. The BLM did not include the Audubon's study as one of the alternatives in the Draft EIS. Rather than jointly developing a study, the two parties independently conducted research, proposed recommendations, and challenged the legitimacy of the other party's work. The non-expert public was left to interpret conflicting data on baseline resources. Clearly science alone does not produce consensus and expertise does not go unchallenged. If the process of generating research questions, testing assumptions, selecting methods of analysis, and developing recommendations is not viewed as legitimate, the results of scientific analysis will have little credibility and will continue to be politicized. Technology can greatly increase the availability of information used to support a decision, but this neither improves upon public education nor reduces conflict.

Under the current approach, agencies group information on values or positions into the category of nonsubstantive comments. The rationale behind the current approach is problematic. This method of grouping creates a false dichotomy between science and values. It is well established in the literature that science and values cannot be neatly separated and that scientific analysis is shaped by subjective judgments. Further, management's preference for substantive comments has important implications for policy. In the absence of additional efforts to improve public education, the public's understanding of the substantive issues will remain low. The subset of the public that can provide the type of substantive comments that agencies seek is a small, unrepresentative group. The type of input that the majority of the public is able to provide is generally

considered by decision makers to be less useful. This creates a lose-lose situation for all parties. The public does not have the capacity to provide the type of input that agencies seek. Agencies must consider all public comments, but the majority of comments received are not useful.

Joint fact finding overcomes the problems of education and representation by engaging diverse stakeholders in a collaborative process. The process requires that all stakeholders who believe they will be affected by, or should have a say in, a decision be allowed to participate and be represented. It also improves the legitimacy and credibility of science, as stakeholders are directly involved in generating information and recommendations. As such, joint fact finding is an effective model for public participation under NEPA. The Consensus Building Institute has developed a six-step process for joint fact finding¹⁷⁶:

- 1) Prepare for joint fact finding
- 2) Scope the joint fact finding process
- 3) Define the most appropriate methods of analysis
- 4) Conduct the study
- 5) Evaluate the results of joint fact finding
- 6) Communicate the result of joint fact finding process

In preparing for joint fact finding, the convener, or lead agency, initiates the process and works with stakeholders to identify all relevant parties to be involved. A critical component of this step is selecting a professional neutral to guide the process. Scoping requires parties to frame the overall mission of the effort and agree upon roles and responsibilities. Stakeholders define ground rules, select appropriate experts and generate possible questions to be answered. In defining the methods of analysis, the group jointly translates the initial set of possible questions into clearly defined researchable questions.

¹⁷⁶ www.cbuilding.org, accessed June 2006.

Parties must agree upon the methods of information gathering and identify the limitations of each method. The study itself may be primarily conducted by the chosen experts, but stakeholders play a key role in providing input and collectively reviewing the draft report. The evaluation of results includes using sensitivity analyses to examine significance of assumptions and developing draft conclusions. The end product of a joint fact finding process is a recommendation translating the research findings into possible management or policy responses that meet the interests of all parties. The final step in a joint fact finding process involves translating science into key messages and findings for broader constituencies. Stakeholders play a critical role in communicating the results to the greater public.

ePlanning can be an effective tool for sharing information and providing an ongoing record of discussions throughout the joint fact finding process. Teams can present draft reports and results of various sensitivity analyses online as they are developed. Agencies are often reluctant to provide draft reports for fear of being held to initial findings. The Public Lands lawsuit illustrates this challenge. Joint fact finding has the advantage of being a stakeholder-driven process. A critical component of the process is communication with the wider stakeholder community. Participants can present findings and participate in online discussions through ePlanning.

Role of management

The Agua Fria case met several of the checklist criteria because it followed a fundamentally different approach to public involvement. The team began engaging

communities prior to the formal scoping period to identify relevant issues and understand the values and perspectives of stakeholders. Their active presence in communities enabled the team to engage stakeholders who may not be familiar or comfortable with the formal participation process. In doing so, the team was able to improve the education, interactivity and transparency of the process, in addition to ensuring that public values were integral to the process.

The decision to pursue a comprehensive community-based approach to planning was driven entirely by management. The project manager believed strongly in the importance of a collaborative approach. The team had successfully applied similar participatory approaches in the past, and felt confident that collaboration leads to widely supported decisions. Managers were highly critical of the traditional public involvement approach, saying that it has intensified conflict between the agency and the public. They also described the importance of participation after a decision is reached since land management plans require the cooperation of citizens in order to maintain the integrity of the lands. An intensive community engagement process requires upfront investment in building relationships. The payoff comes in the form of more stable decisions, improved understanding and trust, and increased compliance.

As the cases demonstrate, a variety of approaches can comply with the NEPA requirement for public involvement. Managers have considerable discretion in determining the extent of public outreach and engagement throughout the process. Experience shows however that token participation efforts do not result in stable

decisions. In a policy environment characterized by adversarial relationships, participation processes that are not perceived as legitimate can and frequently do result in litigation. The lessons from collaborative approaches show that meaningful participation of stakeholders increases the legitimacy, salience and credibility of decisions.

Conclusion

The BLM has recognized the potential of technology to improve the public participation process, but emphasis is placed mostly on improving efficiency. The automation of existing activities can increase the efficiency and scalability of parts of the participation process, but it cannot address the barriers to effective participation. Efforts aimed at improving efficiency do not address the fundamental challenges of participation. They also may not actually improve efficiency due to the variety of opportunities for delay and litigation. Improving the public participation processes requires a comprehensive approach to overcoming its well known challenges. Technology can be an integral part of this approach, but it is fundamentally a tool to achieve broader objectives, not an end in and of itself.

The pilot ePlanning project has not applied technology in a manner that fully builds upon the lessons of best practice in participation. The revised version of ePlanning should emphasize the communicative processes of participation, in addition to improving efficiency and information management. The technological capabilities of ePlanning can be a powerful supplement to a participatory decision making process. Agencies should

recognize and support the use of collaborative approaches such as joint fact finding to improve the overall process of participation.

The credibility of information and the legitimacy of a decision making process are established through early and ongoing participation in the framing and evaluation of alternatives. Relationships and trust are built over time, project-by-project, under the guidance of managers who emphasize collaboration in their day-to-day operations. These goals require leadership throughout agencies, and can be supported by the powers of technology. The democratic potential of technology lies not in simply digitizing the traditional approach to public participation, but rather integrating the best uses of technology into the structure and organization of a collaborative process.

Appendix 1: Interview Questionnaire

1. What prompted your office to undertake ePlanning? What was your goal?

Comments/Quotes:	
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2. What were the advantages/disadvantages of using ePlanning?

Comments/Quotes:	
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3. Has the general NEPA public involvement process used by your offices changed in the last few years? What were the drivers of those changes, if any?

Comments/Quotes:	
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4) Did ePlanning take more or less time from the beginning to the final rule?

Comments/Quotes:	
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5) Did the process demand more staff time and analysis?

Comments/Quotes:	
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6) How did your office respond to public input? Was this any different from traditional EIS processes?

Comments/Quotes:	
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7) Does ePlanning change how the agency interacts with the public?

Comments/Quotes:	
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8) Did ePlanning make it easier or more difficult for officials or staff to deliberate among themselves? To engage the public?

Comments/Quotes:	
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9) How did you incorporate responses from the public into project plans and decisions?
Did ePlanning change the way your office incorporated public input into decisions?

Comments/Quotes:	
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10) Were public comments analyzed differently under ePlanning?

Comments/Quotes:	
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11) Did ePlanning change the way you solicited stakeholder input? (e.g. additional outreach, earlier participation, etc)

Comments/Quotes:	
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12) Were more stakeholders involved?

Comments/Quotes:	
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13) Did you provide any additional information through ePlanning? (*maps, draft versions of decisions, information related to preliminary alternatives*)

Comments/Quotes:	
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14) How would you measure the success of your experience with ePlanning?

Comments/Quotes:	
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15) Based upon your experience, what should be improved about ePlanning before wider adoption throughout BLM?

Comments/Quotes:	
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16) Additional comments:

Comments/Quotes:	
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