GUIDANCE ON BEST PRACTICE PRINCIPLES FOR ENVIRONMENTAL ASSESSMENTS

The NAEP Report to the CEQ

NATIONAL ASSOCIATION OF ENVIRONMENTAL PROFESSIONALS

Council on Environmental Quality Pilot Project

Prepared by

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Acronyms and Abbreviations

ANO	Alaska Native Organization
BPPs	Best Practice Principles
CEAM	Cumulative Effects Assessment and Management
CEP	Certified Environmental Professional
CEQ	Council on Environmental Quality
C.F.R.	Code of Federal Regulations
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAQ	Forty Most Asked Questions
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
NAEP	National Association of Environmental Professionals
NEPA	National Environmental Policy Act
NHO	Native Hawaiian Organization
NHPA	Natural Historic Preservation Act

1. INTRODUCTION

BACKGROUND

The Council on Environmental Quality (CEQ) released a solicitation in March 2011 inviting Federal agencies and environmental professionals to nominate pilot projects as best examples focused on more efficient and effective implementation of the National Environmental Policy Act (NEPA), those that would improve the quality and transparency of agency decision making. The National Association of Environmental Professionals (NAEP) responded to the CEQ solicitation with a proposal to develop experience-based Best Practice Principles (BPPs) for preparing effective EAs. The NAEP proposal was one of five (5) Pilot Projects selected by CEQ, *available at* http://www.whitehouse.gov/administration/eop/ceq/Press_Releases/NEPA/October_19_2011.

The first stage of the Pilot Project focused on design of the questionnaire that would be distributed to a wide range of environmental professionals, and the review of the assembled survey responses. The steering committee presented an overview of the Pilot Project to the NAEP membership at the 2013 Conference, focusing on the methodology and results of the survey. The steering committee developed the final Best Practice Principles for Environmental Assessments after feedback from the Conference and CEQ.

In the last phase of the Pilot Project, the NAEP team refined and consolidated the BPPs and conducted quality reviews, including review and input by CEQ. This report focuses on the seven (7) BPPs identified as most important in advancing the effective and efficient development of quality EAs. These Priority One BPPs for EAs are:

- Description of Purpose and Need
- Description of Proposed Action and Range of Alternatives
- Content
- Cumulative Effects Assessment and Management
- Regulatory Consultation and Coordination
- Determination of Environmental Impact Significance
- Extent of Public Involvement

The NAEP presents this Guidance on BPPs for EAs to the CEQ with the recommendation that this report be used as a resource material by the Federal agencies as they prepare EAs. NAEP further recommends that individual agencies consider adding agency-specific BPPs to these BPPs.

PRACTITIONER KNOWLEDGE AND DEVELOPMENT OF BPPS

The Pilot Project hypothesis stated that the assimilation of practitioner knowledge related to effective BPPs for EAs provided the basis for improvements in preparing EAs. A six-person steering committee, led by Dr. Larry Canter and David Keys, CEP, completed the first stage of the pilot project by formulating the survey questions, distributing the survey questions, and finally, compiling the survey questions and recommending BPPs.[1]

The steering committee identified two groups of selected recipients of the survey questionnaire. The first group included the professional membership of NAEP; the second group included agency NEPA liaisons and other NEPA collaborators and compliance professionals compiled by CEQ. The NAEP membership included 811 professionals, and the CEQ group consisted of 250 professionals. Accordingly, the survey questionnaire was sent to 1061 persons on February 28, 2012, and responses were received over a 22-day period ending on March 21, 2012.

Responding to this survey questionnaire was voluntary for persons in both the NAEP and CEQ participant groups. Further, both groups had a participation rate of about 30.0% (the NAEP group – 240 of 811, or 29.6%; and the CEQ group – 76 of 250, or 30.4%). The questionnaire design consisted of 23 questions comprised of a variety of styles and requested inputs. More specifically, groups of questions related to respondent experience in NEPA compliance documentation, current inadequacies and adequacies in EAs, selected topical features for inclusion in EAs, and potential implementation of BPPs for EAs. Respondents made 1689 comments in addition to the standard responses to the topical questions.

This analysis of the survey represented approximately 5000 person-years in experience, established by considering the midpoint between the four experience ranges (1.5, 6.5, 15, and 25 years) of the respondents and multiplying them by the response counts. The steering committee members, representing about 150 person-years in NEPA-related experience, aided in the final findings. Attachment A presents biographies documenting the experience of the preparers involved in the CEQ Pilot Project on BPPs for EAs.

In addition to the questionnaire responses, the steering committee considered law, regulations, and case law in the delineation of inadequacies and adequacies of EAs to establish the initial categories of delineated BPPs. The steering committee also reviewed certain Federal agency guidance, reported in Exhibit G to the final report, and peer-reviewed literature. The steering committee presented their findings in the final report on July 24, 2013, documenting the

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1 Thanks to the significant planning and work completed by Dr. Larry Canter, David Keys, CEP and Paul Looney, CEP.

2 Any views expressed are Ms. Hudson's personal views and not necessarily those of the Department of Defense,

design and development process of the questionnaire, the survey results, the methods and criteria used to develop the BPP topics, and 15 initial Priority One BPPs.

After discussing the final report with CEQ, NAEP organized a second seven-person, experienced team to prepare the guidance for the final BPPs. This team consisted of, in alphabetical order:

- Ron Deverman, Associate Vice-President, HNTB Corporation; Past President, NAEP; 30-year NEPA practitioner, Chicago, IL
- P. E. Hudson, Esq., Counsel and Environmental Law and Planning Training Director, Office of General Counsel, Department of the Navy, Ventura, CA.[2]
- Karen Johnson, CEP-Documentation, 27 years experience, Wylie, TX
- Ronald E. Lamb, CEP, Chair-NAEP NEPA Practice, Washington, DC.[3]
- Professor Daniel R. Mandelker, Stamper Professor of Law, Washington University, St. Louis, MO
- Stephen Pyle, Esq., Project Manager, HDR Environmental, Operations, and Construction, Inc., Spring Branch, TX
- Dr. Robert Senner, Robert Senner Consulting, Seattle, WA

SELECTING THE BPPs

As previously noted, the overarching criterion used to identify the seven Priority One BPPs for EAs presented in this report was to base their selection and development on the knowledge and advice of NEPA practitioners, specifically the 318 NEPA professionals who responded to the electronic survey. In addition, the team applied two specific criteria to identify and prioritize potential BPP topics:

- The level of emphasis and concern which the respondents devoted to a topic, and
- The extent to which a potential BPP topic was already addressed by the CEQ NEPA regulations and informed by state-level guidance, case law, academic research, and other sources.

In the first stage of the Pilot Project, the steering committee applied these two criteria quantitatively through a five-step, systematic, tabulated selection process to produce the first 15

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[3] Any views expressed are Mr. Lamb's personal views and not necessarily those of the Department of Defense, Navy, or Federal Government.

Priority One BPP topics. The final report describes this process in detail (pp. 33-43). The key features were:

Step 1: Develop topical categories from the responses to survey Question 7, which asked NEPA practitioners to identify features typically associated with adequate EAs. The respondents identified 535 positive features which the steering committee collated into 23 distinct topical categories.

Step 2: Compare the 23 topical categories with the CEQ NEPA regulations, case law involving or applicable to EAs, relevant peer-reviewed research articles, and other useful information sources to delineate those topics already receiving high levels of emphasis as opposed to other topics in need of increased attention and guidance. This process yielded 18 potential BPP topics representative of those practice areas not adequately covered by regulatory, case law, or other guidance.

Step 3: Incorporate the results from survey Question 6. This question presented a list of nine inadequacies which have historically been identified in litigation and public comments and in criticisms of specific EAs, and asked the respondents to prioritize them. Each of the prioritized EA inadequacies was matched with one or more of the 18 potential BPP topics derived in Step 2. This provided an initial priority order based on rankings provided by the survey respondents.

Step 4: Factor in the results from survey Questions 8 through 21, which yielded many insightful qualitative responses, based on the respondent's own experience, which the steering committee used to provide a supporting basis for prioritizing the BPPs.

Step 5: Identify Priority One and Priority Two BPP topics based on the preceding steps. The process yielded 15 initial Priority One topics and nine Priority Two topics, from which the 15 originally proposed Priority One BPPs were prepared.

In the second stage of the Pilot Project, the NAEP team closely examined the 15 initial Priority One BPP topics from the first stage of the project and considered them more closely from the context of regulatory language, case law precedent, and review and comment by the CEQ. In addition, the team identified common features or redundancies, which served as criteria to broaden or consolidate the original 15 Priority One topics. This second hard look, following the first systematically applied, step-wise procedure, resulted in the seven Priority One BPPs presented in this report. These Priority One BPPs for EAs are:

- Description of Purpose and Need
- Description of Proposed Action and Range of Alternatives
- Content
- Cumulative Effects Assessment and Management
- Regulatory Consultation and Coordination
- Determination of Environmental Impact Significance

- Extent of Public Involvement

2. SEVEN PRIORITY ONE PROPOSED BEST PRACTICE PRINCIPLES

The seven Priority One BPPs for EAs consist of concisely written, topically focused principles related to how to address necessary topics in NEPA compliant EAs. The BPPs are designed to improve the quality, usefulness, and timeliness of EAs, while reducing the risk of challenge. The proposed BPPs should be applicable across all Federal agencies that prepare EAs.

The BPPs were developed based primarily on the CEQ Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 40 C.F.R. pts. 1500-1508 (2011) [hereinafter CEQ Regulations], *available at* http://ceq.hss.doe.gov/nepa/regs/ceq/toc_ceq.html, questionnaire survey responses, a review of case law, peer-reviewed scholarship, comments by the CEQ, and practitioner experience. Each BPP is written in the style and manner that is particular to the underlying subject matter of the BPP; the BPPs do not follow a strictly standard format.

This report recognizes that a range of EAs exists in practice, on a scale of length or complexity varying from small scale, referred to here as traditional EAs; to EAs with Findings of No Significant Impact (FONSIs) incorporating mitigation measures (mitigated FONSI EAs); to expansive EAs. The latter term as used here covers programmatic or broad EAs, as well as EAs requiring lengthy documentation because, for example, the proposed action is complex, a large number of alternatives is described, many resources or geographic locations could be affected, substantial mitigation is proposed, or controversy or uncertainty associated with impacts on a particular resource requires detailed or extensive discussion. The BPPs acknowledge and address this sliding scale of EA complexity, where relevant and applicable. As a matter of reference, the citations to the sources cited are in full at the first citation, and in shorthand, thereafter.

BPP 1: DESCRIPTION OF PURPOSE AND NEED

Background Information

Responses to Question 6 (inadequacies in EAs) indicate a concern that the statements of purpose and need in EAs are inadequate. Four related comments regarding purpose and need in Question 6 noted that inadequacies included:

- Inadequate explanation of need for the action;
- Unclear delineation of purpose;
- Confusion of the purpose and need with proposed action; and
- Reverse engineering the purpose and need to fit the proposed action.

Conversely, the responses to Question 7 (adequacies in EAs) in the Description of Purpose and Need section included 46 comments on good purpose and need statements within EAs. The comments generally focused on the importance of drafting a clear, concise, well-articulated, and well-defined purpose and need statement.

Other portions of Question 7 that included comments regarding purpose and need were four responses to the Description of Proposed Action and Alternatives (DOPAA) section, and four comments to the Application of Principles of Scientific Writing and Communication section. All comments focused on the need for clear and concise purpose and need statements. Four comments were also noted in the section entitled Inadequacies in EAs, which focused on loosely written and poorly defined purpose and need statements.

Responses to Question 7, involving 269 respondents, indicated strong support for ensuring clear, concise, well-defined purpose and need statements in all levels of EAs.

BPPs for Description of Purpose and Need in an EA

1. Regulations and Guidance involving Description of Purpose and Need

For Environmental Impact Statements (EISs), CEQ Regulations require that "[t]he statement shall briefly specify the underlying purpose and need to which the Agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. §1502.13; *see also* 40 C.F.R. § 1502.1 (expressing a need for good writing in documents, and requiring that "[s]tatements shall be concise, clear, and to the point."). The regulations also require that an EA contain "brief discussions of the need for the proposal." 40 C.F.R. § 1508.9 (2)(b).

The CEQ recognizes the potential value of a collaborative approach, when applicable, in defining purpose and need statements. CEQ, "Collaboration in NEPA - A Handbook for NEPA Practitioners" (October 1, 2007) [hereinafter CEQ Collaboration Handbook], *available at* http://ceq.hss.doe.gov/publications/collaboration_handbook.html. The collaborative approach involves the lead agency working directly with parties, such as agencies with regulatory authority, cooperating agencies and private parties, at one or more stages during the NEPA process, seeking their advice and agreement on the purpose and need statement.

2. Case law and other sources involving Descriptions of Purpose and Need

Many courts will look to the project's purpose and need statement to determine whether an agency should have reasonably considered an alternative; the purpose and need statement guides the range and selection of reasonable alternatives. *See, e.g.*, *Mayo Found. v. Surface Transp. Bd.*, 472 F. 3d 545, 550 (8th Cir. 2006*), City of Alexandria v. Slater*, 198 F.3d 862, 867-69 (D.C. Cir. 1999); *Carmel-by-the-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142 (9th Cir. 1997).

Courts defer to agency statements of purpose and need and uphold them when reasonable. *See, e.g.*, *Citizens for Smart Growth v. v. Secretary of Dept. of Transp.*, 669 F.3d 1203, 1212 (11th Cir. 2012) (*citing Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C.Cir.1991) ("[A]gencies must look hard at the factors relevant to the definition of purpose" and "should take into account the needs and goals of the parties . . . "). On the one hand, an agency may not define the purpose of and need for the action in such unreasonably narrow terms that it prevents consideration of any reasonable alternatives to the proposed project. But then again an agency need not craft a statement so broad that it requires consideration of alternatives that are inconsistent with the overarching purpose of the proposal. The courts apply similar legal reasoning to both EAs and EISs.

The courts emphasize the importance of a carefully developed purpose and need section – the needs should be succinctly stated and the purpose (goals or objectives) should be articulated such that measurable (quantitative or qualitative) criteria could be used in the evaluation of reasonable alternatives. Owen L. Schmidt, *The Statement of Underlying Need Determines the Range of Alternatives in an Environmental Document*, *in* Environmental Analysis — The NEPA Experience, 42-65 (S.G. Hildebrand and J.B. Cannon, eds., 1993); Judith L. Lee, *The Power of Purpose and Need in Quality NEPA Planning: Three Case Studies*, Federal Facilities Envtl. J. Autumn 1997, pp. 72-85.

Finally, an agency should look to its own guidance to determine whether it has reasonably defined the purpose and need.

3. Recommendations for Description of Purpose and Need

CEQ Regulations require that an EIS "briefly specify the underlying purpose and need to which the agency is responding . . ." 40 C.F.R. §1502.13. When it comes to an EA, CEQ Regulations state that a brief discussion of the need for the proposal is needed. 40 C.F.R. §1508.9(2)(b). For an EA, the purpose and need may be drafted as a combined statement. In practice, however, it is common to draft the purpose and need as two distinctly separate statements as is normally done for an EIS. In conceptualizing the purpose and need, the need can be thought of as a description of a situation that exists before an agency takes action. The purpose can be thought of as the position an agency would like to be in after taking action. *See* United States Bureau of Land Management, Planning/NEPA Forum: Purpose and Need, *available at* http://www.ntc.blm.gov/krc/uploads/366/Purp_Need.html) (last visited Feb. 11, 2014.

Purpose

The purpose is a statement of goals and objectives that an agency intends to fulfill by taking action. It is typically based on a problem to be fixed or solved, or a decision that needs to be made. The purpose statement should not be defined too narrowly so as to define the proposed action (i.e., the proposed solution to the problem). Nor should the purpose statement be so broad that it fails to effectively support the development of the range of reasonable alternatives to be analyzed. Finally, the purpose of the proposed action is never to "prepare an EA for a proposed action" or "to comply with NEPA."

Need

The need statement explains why an agency is proposing a particular action at a particular time. The need statement might describe some underlying condition that needs to be corrected, or a requirement that needs to be carried out. A credible, well-substantiated need statement should present evidence of the problem to be addressed. United States Marine Corps, USMC NEPA Manual (September 2011), *available at* http://www.miramar-ems.marines.mil/Portals/60/Docs/MEMS/NEPA/USMC_NEPA_ Manual.pdf. Such evidence can include background information about the conditions that need to be changed or fixed, agency mission responsibilities or requirements, agency policy or guidance, management objectives, or other specific information documenting why action is being proposed. Often, explaining what the agency's overall mission is as an introduction or background to the need statement supports or clarifies why there is a particular need. Without documenting the evidence in the need statement, an agency risks an impression that its proposal for action is arbitrary or not well planned out.

The purpose and need statement for the proposed action guides the alternatives screening and development process in determining the range of reasonable alternatives to be analyzed in the EA, as described further in BPP 2 – Description of Proposed Action and Alternatives. Therefore, the purpose and need statement should not be too narrow, nor too broad. If too narrow, then the purpose and need will likely eliminate reasonable alternatives that should be analyzed in the EA. This could lead to challenges of the EA process itself or give the impression that the "decision has already been made." If too broad, then the purpose and need might not be supportive of constraining the realm of alternatives to those that might reasonably respond to the problem. This could lead to a waste of agency and contractor resources by analyzing alternatives that might not be reasonable or responsive to addressing the underlying need.

Consider a collaborative approach when working with cooperating agencies, agencies with regulatory authority over some aspect of the Proposed Action, or other parties in drafting of the purpose and need statement.

In the case of an EA prepared in response to a private party's application to a Federal agency (i.e., right of way to cross public lands), the lead agency has discretion in adapting the applicant's purpose and need to the agency EA. In these cases, the lead agency should give

consideration to the underlying purpose and need of the applicant, in addition to the purpose and need from the public interest perspective. Individual agency NEPA procedures should be consulted because individual agency treatment of purpose and need in applicant situations may vary.

4. Purpose and Need Example:

Background

A remote Federal facility with a 24 hour per day/7 day per week national defense related mission has traditionally received potable water used for drinking, cooking, restrooms, fire suppression, and other uses through a 4-mile long waterline that starts at a well, and terminates at the Federal facility. The waterline was installed over 50 years ago in an underground right of way that includes two miles of shoulder along paved roadway, and two miles of unpaved dirt access road within a state park. Sections of the waterline within the state park frequently break because the dirt road right of way has experienced severe erosion from off-road vehicle use and natural causes, exposing the waterline in many places. When the waterline breaks, the resulting flooding leads to additional erosion and the Federal facility water supply must be turned off due to loss of pressure and contamination of the water. The facility is located in an arid climate with high fire danger.

Example of an adequate purpose and need statement

"The purpose of the Proposed Action is to ensure a reliable and adequate supply of potable water to the remote installation. The Proposed Action is needed because frequent breaks in the installation's 50-year old water supply line lead to contamination of the potable water supply, in addition to lack of water pressure. Potential water supply contamination threatens the health of installation personnel, who must staff the facility 24 hours per day, 7 days per week according to mission requirements. Lack of water pressure presents a regional fire safety risk since no other water source is currently available to meet fire suppression needs, and the facility has a duty to take action in case of fire emergencies."

Example of an overly broad purpose and need statement

"The purpose of the Proposed Action is to ensure that the installation's water concerns are addressed. The Proposed Action is needed because the current system is not adequate, which is of concern to the installation commander."

Example of an overly narrow purpose and need statement

"The purpose of the Proposed Action is to replace the existing installation waterline with a new one. The Proposed Action is needed because the current waterline experiences frequent breaks and a new one would prevent this from happening."

BPP 2: DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Background Information

Written comments in response to Question 6 (inadequacies in EAs) indicated that inadequacies included poorly-stated description of the proposed action (most frequently a proposed project), inadequate screening and consideration of alternatives to reduce impacts, failure to consider obvious alternatives, reverse engineering the Purpose and Need to fit the Proposed Action, and the absence of a hard look regarding specific types of impacts (including cumulative impacts). Responses to Question 7 identified numerous features associated with adequate EAs. Features pertaining to alternatives can be grouped into 1) a well-defined and detailed project description or Description of Proposed Action and Alternatives (DOPAA); 2) a clear, definitive alternatives analysis, including the "no-action" alternative; 3) discussion of comparative impacts for each alternative; and 4) logical, rational reasons for why an alternative was chosen or dismissed from consideration.

Responses to Question 9 indicated strong support for addressing alternatives in EAs, with 79.5% of 224 respondents supporting fewer (2) alternatives for small-scale EAs (i.e., one action alternative and the required comparison to the no-action alternative baseline). Most respondents agreed that larger EAs (reflecting broader needs to be addressed) are more likely to have more than one reasonable action alternative that should be analyzed. The responses are consistent with CEQ guidance on preparing concise, focused and timely EAs. *See* CEQ, "Emergencies and the National Environmental Policy Act" Attachment 2, (May 12, 2010) (refreshing the previously issued 2005 guidance) [hereinafter 2010 CEQ Focused EA Guidance], *available at* http://ceq.hss.doe.gov/ceq_regulations/Emergencies_and_NEPA_Memorandum_12May2010.pdf. *See* CEQ, "Emergency Actions and NEPA" Attachment 2 (September 8, 2005) [hereinafter the 2005 CEQ Focused EA Guidance], *available at* http://ceq.hss.doe.gov/nepa/regs/Memo_to_NEPA_Contacts_September_8_05.pdf

BPPs for Description of Proposed Action and Alternatives

1. CEQ Regulations and Guidance on Proposed Action and Alternatives

Section 102(2)(E) requires agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." National Environmental Policy Act of 1969, § 102, 42 U.S.C. § 4332 (2012). *Suttenberg* discusses Section 102(2)(E) as a requirement independent of those for EISs listed in Section 102(2)(c)(iii). J. Suttenberg, L. London, and T. Campbell, *Unresolved conflicts: How revisiting NEPA § 102(2)(E) could increase efficiency, simplify government, and save taxpayers money*, 18 N.Y.U. Envtl. L. J. 156 (2010). However, the cases have not given a consistent interpretation to this section. For a more detailed discussion, *see* Daniel R. Mandelker et al., NEPA Law and Litigation § 9:22.

The CEQ Regulations include the requirements of Section 102(2)(E) at 40 C.F.R. §§ 1501.2(c), 1507.2(d) and 1508.9(b), but do not provide implementing guidance. The CEQ's 1981 guidance on the range and application of alternatives addresses EISs but not EAs. CEQ, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" (March 16, 1981) (Questions 1 – 7) [hereinafter CEQ FAQs], *available at* http://ceq.hss.doe.gov/nepa/regs/40/40P1.HTM.

Finally, the CEQ's Collaboration Handbook discusses the value of a collaborative approach to developing alternatives: "there may be a number of ways by which their objectives (purpose and need) can be met. Collaboratively developed alternatives are more likely to withstand external challenges because such an approach enables stakeholders to have a meaningful role in choosing among alternatives…"

2. Case law and other sources involving Proposed Action and Alternatives

Court cases involving EAs state that federal agencies must include all reasonable alternatives setting forth those alternatives that demonstrate a reasoned choice. An agency need not consider an infinite range of alternatives, only reasonable or feasible ones. *See, e.g.*, *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991). For situations in which a large number of similar alternatives exist, it may be appropriate for an agency to consider a representative range of reasonable alternatives rather than an exhaustive list. For example, if the Proposed Action could involve a range of options between X and Y (where X may represent a high or maximum number of houses in a development, the number of wind turbines installed, or a resource take limit, and Y represents a low or minimum number), an agency may evaluate the bounds of the range (X and Y) and possibly a midpoint (1/2 [X+Y]), if appropriate, to represent the minimum, maximum and intermediate bounds of possible impacts.

An agency is not required to consider alternatives that are not significantly different from those considered or that have substantially similar consequences. The courts do not define a "numerical limit" on the number of alternatives that must be considered. What constitutes a reasonable range of alternatives depends on "the nature of the proposal and the facts in each case." Some courts have found the obligation to consider alternatives in an EA to be less than that required for an EIS, and consequently have allowed agencies to study a more limited range of alternatives in their EAs. *See* Mandelker at § 10:28.

In addition, two peer-reviewed articles support the survey findings and were used to support the need for a BPP on alternatives. *Smith* examined decisions from the federal Courts of Appeals on challenges to alternative analyses contained in federal agency NEPA documents for the ten-year period 1996–2005. Michael Smith, *A Review of Recent NEPA Alternatives Analysis Case Law*, 27 Envtl. Impact Assess. Rev. 126 (2007). The most common challenge was that federal agencies had not included a full reasonable range of alternatives, while the second most frequent was that agencies had improperly constructed their Purpose and Need for their projects resulting in an inadequate development of alternatives. The results show, however, that federal agencies were overwhelmingly successful against both challenges — winning 30 of the 37 cases

in that time period. The study's conclusion focuses on practical steps to developing alternatives analyses in a manner that fulfills the requirements of NEPA and CEQ regulations and makes them less vulnerable to an unfavorable court decision if challenged.

Steinemann investigates problems with the development of alternatives, based on a study of environmental impact analysis (EIA) in the US. Ann Steinemann, *Improving Alternatives for Environmental Impact Statements*, 21 Envtl. Impact Assess. Rev. 3 (2001). The article suggests that alternatives often reflect narrow project objectives, agency agendas, and predilection toward a Proposed Action and that impact analysis often occurs too late in agency decision-making to consider a full range of alternatives. The conclusion of the study proposes ways to improve environmental decision-making.

3. Recommendations for the Proposed Action and Alternatives in EAs

The Purpose and Need statement and the description of the Proposed Action should not be "one and the same."

In a May 12, 2003 letter to the Department of Transportation (DOT) the CEQ stated "[c]ourts have cautioned agencies not to put forward a purpose and need statement that is so narrow as to define competing 'reasonable alternatives' out of consideration (and even out of existence)." Letter from James L. Connaughton, Chairman, CEQ, to Norman Mineta, Secretary, DOT, (May12, 2003), *available at* http://www.environment.fhwa.dot.gov/guidebook/Gconnaughton.asp. It is inappropriate to define the Purpose and Need so narrowly that potential alternatives are not reasonable and the outcome of the analysis becomes a predetermined formality (*see also* BPP #2 on the Purpose and Need).

The Proposed Action/Project Description should be complete and clearly stated.

Based on an appropriate Purpose and Need statement, the Proposed Action/project description must be clearly and completely defined. The description of the Proposed Action should answer the questions *who, what, where, when, how,* and *how many*. The description of the Proposed Action should be straightforward and concise, but sufficiently detailed to form the basis for the EA analysis. It is also important that the description of the Proposed Action include all *connected actions* (if the action is dependent on or part of other actions).

EAs addressing broad actions or with unresolved conflicts concerning alternative uses of physical, cultural, or natural resources should evaluate a larger range of action alternatives.

The broader the problem that needs to be solved, the more likely it is that a broad range of alternatives (possibly including alternatives that only partially satisfy the Purpose and Need) may be found to be reasonable and accordingly will need to be analyzed.

The number of alternatives considered in an EA depends on the circumstances. The sliding-scale approach should be applied to the formation of alternatives. The range of alternatives should consider the scope and scale of the need, the complexity of the proposed action, and the potential for significant direct, indirect and cumulative impacts. The sliding-scale

approach implements CEQ's instruction to agencies to conduct "concise reviews and documentation that are proportionate to potential impacts and effectively convey the relevant considerations to the public and decision makers . . . " CEQ, "Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act" (March 6, 2012), [hereinafter CEQ Guidance on Efficient and Timely Environmental Reviews], *available at* http://ceq.hss.doe.gov/current_developments/docs/Improving_NEPA_Efficiencies_06Mar2012.pdf. In crafting the range of reasonable alternatives, practitioners should strive to include alternatives with substantial distinguishing characteristics, in contrast to alternatives that are very similar.

If there might be opposition to the Proposed Action, consider conducting public scoping and involving the public and stakeholders in the development of alternatives. If a stakeholder or other interested party suggests a reasonable alternative, practitioners should evaluate the alternative in detail or provide a well-reasoned explanation for why the alternative is being dismissed.

Use screening criteria to develop a reasonable range of alternatives.

Where many alternatives can meet the Purpose and Need, screening criteria may be helpful in developing the range of reasonable alternatives for analysis. Screening criteria are derived from the Purpose and Need and should reflect the minimum threshold requirements to meet the Purpose and Need. For example, screening criteria may include, but are not limited to, operational needs, safety, environmental impact, time constraints, consistency with enforceable plans, logistics, or geographic considerations.

The method for screening alternatives should be transparent to reviewers and decision makers so that reviewers and the decision-maker can understand agency priorities among the alternatives. The failure to consider alternatives that seem reasonable may affect the credibility of the EA and may lead to delays in the process. Alternatives that were identified by the public during scoping should be considered, or provide a well-reasoned explanation for eliminating the alternative.

BPP 3: CONTENT

Background Information

This BPP is derived from the information from Question 11. Participants were asked if they agreed or disagreed with the premise that different scales of assessments should have different topical outlines: (1) for larger complex (expansive) EAs, the EIS format in 40 C.F.R. § 1502.10 should be used; (2) for EAs supporting mitigated FONSIs, the EIS format in 40 C.F.R. § 1502.10 should be used; however, the topical coverage could be reduced; and (3) for a traditional EA, the topical outline in 40 C.F.R. § 1508.9(b) could be used with slight modification.

A total of 231 respondents provided their reactions to the three premises. There was a general agreement (71.0%) that 40 C.F.R. § 1502.10 could provide an outline for expansive EAs, along with its intended use as an outline for EISs. For focused EAs, 84.8% of the respondents indicated that the brief outline in 40 C.F.R. § 1508.9(b) could be used and modified (expanded) as needed. For mitigated FONSI EAs, the responses were closer in magnitude, with 54.3% agreeing and 45.7% disagreeing.

NEPA requires federal agencies to prepare an EIS prior to taking "major Federal actions significantly affecting the quality of the human environment." Many agency procedures identify certain actions that normally require the preparation of an EIS, and the agency can prepare an EA to determine whether the action will have a significant effect on the environment if it is not in the predetermined category. If the conclusion is reached that there would be no significant impact, which is the case in most EAs, then that finding must be clearly supported in the analysis in the EA and the agency may issue a FONSI. If the EA reveals potential significant impacts, or uncertainties about significant impacts, then an EIS is needed.

BPPs for Content

1. CEQ Regulations and Guidance on Content

CEQ Regulations discuss format and topics for EISs at 40 C.F.R. § 1502.10, and core elements for EAs at 40 C.F.R. § 1508.9(b).

The recommended format for an EIS in the CEQ regulations at 40 C.F.R. § 1502.10 is:

(a) Cover sheet.
(b) Summary.
(c) Table of contents.
(d) Purpose of and need for action.
(e) Alternatives including proposed action (sections 102(2)(C)(iii) and 102(2)(E) of the Act).
(f) Affected environment.
(g) Environmental consequences (especially sections 102(2)(C)(i), (ii), (iv), and (v) of the Act).

(h) List of preparers.
(i) List of Agencies, Organizations, and persons to whom copies of the statement are sent.
(j) Index.
(k) Appendices (if any).

The regulations state that the preceding standard format for EISs should be followed unless the agency determines that there is a compelling reason to do otherwise. If a different format is used, it shall include paragraphs (a), (b), (c), (h), (i), and (j) of this section and shall include the substance of paragraphs (d), (e), (f), (g), and (k) of this section, as further described in Sections 1502.11 through 1502.18, in any appropriate format.

The CEQ FAQs address format issues in a general way at Question 25 and Answer, Appendices; Question 26 and Answer, Index; and Question 27 and Answer, List of Preparers.

The regulations do not have a similar outline for an EA. Instead, the "core elements" for an EA are described in 40 C.F.R. § 1508.9(b):

- The need for the proposal
- Alternatives as required by NEPA Section 102(2)(E)
- The environmental impacts of the proposed action and alternatives
- The agencies and persons consulted

In addition, there are other sources that address EA format or contents. The CEQ FAQs address this matter in Question 36a, by the question "[h]ow long and detailed must an environmental assessment (EA) be?" The CEQ Answer states that EAs are "concise public documents" that "should not contain long descriptions or detailed data which the agency may have gathered" and should be "not more than approximately 10-15 pages."

Recent CEQ Guidance on Efficient and Timely Environmental Reviews references its FAQ 36 answer and states:

> [t]his guidance must be balanced with the requirement to take a hard look at the impacts of the proposed action. As with EISs, an EA's length should vary with the scope and scale of potential environmental problems, rather than just with the scope and scale of the proposed action. The EA should be no more elaborate than necessary to fulfill the functions and goals set out in the CEQ Regulations: (1) briefly provide sufficient evidence and analysis for determining whether to prepare an EIS; (2) aid an agency's compliance with NEPA when no EIS is necessary, i.e., the EA helps to identify and analyze better alternatives and mitigation measures; and (3) facilitate preparation of an EIS when one is necessary.

Another source is a Memorandum from the James L. Connaughton, Chairman, CEQ to the Ann M. Veneman, Secretary of Agriculture and Gale A. Norton, Secretary of the Interior,

Guidance for Environmental Assessments for Forest Health Projects (December 9, 2002), *available at* http://www.fs.fed.us/projects/hfi/2002/dec/guidance-for-environmental-assessments.pdf, describing core elements of the EA process with the content being similar to the topics provided in at 40 CFR § 1508.9(b).

The CEQ NEPA Task Force Report, *Modernizing NEPA Implementation*, (2003*)* provided recommendations for improving EAs, among other NEPA recommendations. *See* CEQ NEPA Task Force Report at 75, *available at* http://ceq.hss.doe.gov/ntf/. This report recommended that CEQ should reiterate the minimum statutory and regulatory requirements for EAs when a short EA is warranted, and recommended CEQ clarify when it is appropriate to use an EA standardized analysis form.

The 2010 CEQ Focused EA Guidance contains guidance during emergencies on preparing focused, concise, and timely EA. It restates the core elements of an EA from 40 C.F.R. § 1508.9(b), but does not change the regulation's guidance.

All of these guidance documents were reviewed in preparing and developing the recommendations for EA content.

3. Recommendations for Content

EAs should be clearly written and organized. The CEQ Guidance on Efficient and Timely Environmental Reviews states that clarity and consistency ensure that the substance of the agency's analysis is understood, avoiding unnecessary confusion or risk of litigation that could result from an ambiguous or opaque analysis. As with EISs, an EA's length should vary with the scope and scale of potential environmental problems as well as the extent to which the determination of no significant impact relies on mitigation, rather than just with the scope and scale of the proposed action. *See* CEQ Guidance on Efficient and Timely Environmental Reviews.

Even though the purpose, depth, and breadth of analysis differ among EAs, depending upon the complexities involved, a common format would be useful. As stated above, the core elements of an EA come from 40 C.F.R. § 1508.9(b); however, the regulations do not provide explicit guidance for the organization and format of an EA. This BPP is intended to provide such guidance. The format in **Table 1** should be followed for an EA, unless the agency determines that there is a compelling reason to do otherwise (similar to the caveat in the regulations for the recommended format for an EIS in 40 C.F.R. § 1502.10).

The recommended format for an EIS at 40 C.F.R. § 1502.10 separates the (f) affected environment and (g) environmental consequences into separate sections; however, there is no recommended format for an EA. When addressing focused EAs, combining all aspects of a resource evaluation (e.g., affected environment and direct, indirect, and cumulative impact analysis for water resources) could tighten the discussion and avoid the need to restate information from the affected environment in the impact analysis.

Table 1. Recommended Content for Environmental Assessments

	Section	Purpose
1	Title Page	Should provide the information needed to prepare a reference citation and, similar to EISs, identify any co-lead or cooperating agencies.
2	Cover Sheet/Abstract	Provides information on the agency preparing the EA and who to contact for additional information. Should be no more than one page.
3	Executive Summary (optional)	Allows an interested party to know what resources were evaluated in detail and any important issues without having to read the entire EA. In smaller, focused EAs, the abstract on the cover sheet could provide an adequate summary.
4	Table of Contents, etc.	Provides a roadmap to the EA.
5	Acronyms and Abbreviations	Supports clarity and usefulness to the public and decision-makers who may not be versed in the agency culture or lingo.
6	Purpose and Need	Shapes the range of alternatives that need to be evaluated in the EA (see BPP 2).
7	Description of the Proposed Action and Alternatives	Both an adequate description of the proposed action and the consideration of reasonable alternatives are important for the adequacy of the impact analyses (see BPP 4).
8	Combined affected environment, environmental consequences, and cumulative effects sections (Combination optional but recommended to support concise EAs that emphasize analysis of potentially significant issues)	The body of the analysis documenting the "hard look" required under NEPA. The description of the affected environment should briefly describe the affected environment that would change, focusing on resources and issues that have the potential to be significantly impacted by the proposed action. The environmental consequences should provide a thorough description of the analysis done to determine the level of direct, indirect and cumulative impacts. It should use thresholds to show how the impact would be less than significant (*see* BPP 6). There is no single uniform list of resources, ecosystems, human communities, or issues that should be considered across all proposals or agencies.
9	List of preparers	Identifies who was responsible for preparing the EA and their qualifications.
10	Agencies and persons consulted	Lets decision-makers and the public know who was contacted for information presented in the EA.
11	References	Provides a list of the references cited in the text to help the reader understand the validity of the statements made in the EA.

The CEQ Guidance on Efficient and Timely Environmental Reviews states that environmental analysis should focus on significant issues, discussing insignificant issues only briefly. 40 C.F.R. §§ 1502.2(a); 1502.2(c). Impacts should be discussed in proportion to their significance, and if the impacts are not deemed significant there should be only enough discussion to show why more study is not warranted. 40 C.F.R. § 1502.2(b). CEQ Regulations on EISs, 40 C.F.R. §§ 1500.4(g) (scoping); 1500.4(j) (incorporation by reference); 1500.4k (integration of other environmental analyses), provide additional guidance that may be used to avoid redundant or repetitive discussion of issues. *Compare* 40 C.F.R. § 1502.8 ("EISs should be written in clear language . . . so that decision makers and the public can understand them").

BPP 4: CUMULATIVE EFFECTS ASSESSMENT AND MANAGEMENT (CEAM)

Background Information

Responses to Question 6 (Inadequacies in EAs) indicated that the absence of a hard look regarding specific types of impacts, including cumulative impacts, was a highly rated inadequacy. Four comments in response to Question 6 specifically addressed cumulative effects assessment and management (CEAM), noting that EAs sometimes give no attention, or insufficient treatment, to CEAM. On the positive side, Question 7 (Features of Adequate EAs) included 16 comments that identified CEAM strengths within EAs. These focused on the importance of addressing cumulative impacts, documenting the results, and describing the rationale for concluding there would be no significant cumulative impact on a resource.

Responses to Question 19 (CEAM for Three Levels of EAs) showed strong support for addressing cumulative impacts in all EAs, whether at the brief or lengthy end of the spectrum or in between. Specifically, 72.8 percent of 233 respondents supported some consideration and documentation of cumulative impact concerns, if any, for traditional (small-scale) EAs. Higher percentages of support for more thorough consideration of cumulative impacts were noted for mitigated FONSI EAs (82.8 percent) and for expansive (large-scale) EAs (91.4 percent).

BPPs for Cumulative Effects Assessment and Management

1. CEQ Regulations and Guidance on CEAM

With respect to CEQ Regulations, cumulative impacts (effects) are defined in in 40 C.F.R. § 1508.7 and included as an intensity factor in defining the term *significantly* in Section 1508.27 (b)(7). A finding by an EA of a significant cumulative impact can thus be a trigger for requiring preparation of an EIS.

On January 1, 1997, the CEQ released a handbook titled *Considering Cumulative Effects under the National Environmental Policy Act,* [hereinafter CEQ Cumulative Effects Guidance], which applies to both EAs and EISs, *available at* http://ceq.hss.doe.gov/publications/cumulative_effects.html. It contains an 11-step CEAM process that the handbook relates to three key components of environmental impact assessment as follows:

Scoping

1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.
2. Establish the geographic scope for the analysis.
3. Establish the time frame for the analysis.
4. Identify other past, present, and reasonably foreseeable future actions affecting the resources, ecosystems, and human communities of concern.

Describing the Affected Environment

5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stresses.
6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds. [Agency management plans and goals apply to many resources not subject to regulatory thresholds and should also be taken into account.]
7. Define a baseline condition for [each of] the resources, ecosystems, and human communities.

Determining the Environmental Consequences

8. Identify the important cause-and-effect relationships between human activities and [the] resources, ecosystems, and human communities.
9. Determine the magnitude and significance of cumulative effects.
10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.
11. Monitor the cumulative effects of the selected alternative and adapt management.

Using a subset of the steps and topics within these steps could provide a framework for consideration of CEAM at an EA level, and for determining if significant cumulative impacts are of concern.

2. Other Regulations and Guidance on CEAM

The U.S. Environmental Protection Agency (EPA) in 1999 issued guidance titled *Consideration of Cumulative Impacts in EPA Review of NEPA Documents, available at* http://www.epa.gov/compliance/resources/policies/nepa/cumulative.pdf.

The Federal Highway Administration (FHWA) has been a consistent leader in advancing the CEAM state of practice. In 2003, FHWA issued a memorandum with an attachment titled *Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process*. The attachment includes 12 questions and answers, along with extensive lists of CEAM references and training opportunities current to 2003, *available at* http://www.environment.fhwa.dot.gov/guidebook/ qaimpact.asp. FHWA also supports an active online NEPA community of practice, *re: NEPA*, with a multitude of CEAM resources, *available at* http://nepa.fhwa.dot.gov.

Finally, there is a growing base of CEAM guidance at the state level. In 2008, for example, the Washington State Department of Transportation, in cooperation with FHWA and EPA Region 10, released *Guidance on Preparing Cumulative Impact Analyses, available at* http://www.wsdot.wa.gov/nr/rdonlyres/1f0473bd-be38-4ef2-beef-6eb1ab6e53c2/0/ cumulativeeffectguidance.pdf.

4. Case Law on CEAM

Even with this wealth of available guidance, cumulative effects assessment has been the subject of many court cases involving EAs. Whereas most court decisions involving CEAM have approved the cumulative effects analyses contained in NEPA documents, many cases have included plaintiff claims that proponent agencies have inadequately addressed cumulative impacts, not considered such impacts at all, or included unsubstantiated statements regarding findings of no cumulative impacts. *See* Mandelker at 10:42.30. Courts have especially emphasized the importance of discussing cumulative impacts in environmental assessments. *See, e.g.*, *Kern v. United States BLM*, 284 F.3d 1062 (9th Cir. 2002).

5. Recommendations for Cumulative Effects Assessment and Management

Every EA should address cumulative effects, because the rationale for their inclusion in EAs and EISs is the same. These impacts affect the resource regardless of the type of document used to describe them. When addressing cumulative effects in an EA, begin by identifying the physical, biological, and social resources (hereafter referred to by the single word resources) that will be affected directly and indirectly by the proposed action and alternatives. An action cannot contribute to a cumulative effect on a resource in the absence of direct or indirect impacts on that resource.

Use the results of the scoping process to identify impact mechanisms and pathways that link the proposed action and alternatives to specific resources of public or agency concern. These are often identified as issues requiring analysis (e.g., construction or operation noise affecting a school or hospital). In addition, note the criterion or threshold established to determine the significance of predicted direct and indirect impacts on each resource, and use that same metric to characterize the expected significance of any cumulative effect anticipated for that same resource.

Designate preliminary spatial and temporal (past to future) boundaries to be considered for the resources to be addressed by the cumulative effects assessments. The geographic scope for CEAM will likely vary from one resource to another. For example, for a development project the geographic scope of the cumulative impact assessment on soils will typically be localized, whereas the geographic scope for air quality may include multiple airsheds. Consider the occurrence and status of past, present, and reasonably foreseeable future actions within the spatial and temporal boundaries which have affected or could contribute to effects on the same resources as the proposed action and alternatives.

The guidance documents identified in the Background section above explain how to establish spatial and temporal boundaries; how to address other past, present, and reasonably foreseeable future actions; and other components of CEAM practice. For past actions, *see* CEQ, "Guidance on the Consideration of Past Actions in Cumulative Effects Analysis" (June 24, 2005), *available at* http://ceq.hss.doe.gov/nepa/regs/Guidance_on_CE.pdf. Pay particular attention to trends in the past status or condition of the resource and how such trends might

continue into the future. Note also the degree to which managed resources have met and are likely to continue to meet the regulatory standards or management objectives set by agencies with jurisdictional or management responsibility for the resources.

If it is concluded from the scoping process (CEAM steps 1-4) that no other past, present, or reasonably foreseeable future actions are expected to add to or interact with direct or indirect effects of the proposed action or its alternatives on a specific resource, summarize these findings and explain that neither the proposed action nor any alternative will contribute to a cumulative effect on the subject resource.

If other past or present actions are concluded to be of concern, research and describe how the condition, health, or status of the resource has changed over time in response to past actions, and describe any trend that can be discerned, particularly if a past action or actions had impacts that persist into the present. Identify other present actions, and other future actions that are reasonably foreseeable and not speculative, which presently affect the resource or will likely affect the resource in the future (CEAM steps 5 to 7).

If the condition of the resource is not presently stressed, and if the contributed effects from the proposed action or its alternatives, along with other actions, are expected to be minimal, then document these findings and indicate that no significant cumulative impact on this resource will occur because the previously defined significance threshold will not be reached.

If the assessment concludes that the proposed action or its alternatives would directly or indirectly contribute to a significant cumulative effect on the resource, identify implementable and effective mitigation measures for the direct and indirect effects of the proposed action and alternatives (CEAM steps 8 to 10). If the residual cumulative effect after mitigation is still significant, consider the development of a collaborative program with other Federal agencies to encourage adaptive management of impact contributions from other actions (CEAM step 11). If cumulative impact concerns still remain following the assessment of these mitigation and management measures, consider the preparation of an EIS.

In summary, cumulative effects assessments should be guided by the following considerations:

- Every EA should address cumulative effects.
- If no cumulative effect is expected on a specific resource, the EA should state this and provide a supporting rationale.
- The cumulative effects assessment in an EA should be concise and limited to key resources which combine two attributes:
    - They would receive direct or indirect impacts from the action (because there is no cumulative effects contribution in the absence of direct or indirect effects); and

    - They are the subject of publicly available information, including input from scoping if conducted, documenting concern on the part of stakeholders, agencies, or the public regarding their current or future status.

- The cumulative effects assessment conducted for each EA should follow the recommended approach as described in the CEQ Cumulative Effects Guidance and other relevant Federal and state guidance.
- The potential significance of each identified cumulative effect on a particular resource should be evaluated according to the same significance criterion or threshold applied to direct and indirect effects on that resource.
- If an adverse cumulative effect is predicted to be significant, identify feasible and realistic mitigation measures for the direct and indirect effects of the proposed action and alternatives on the resource.
- If the cumulative effect would still be significant after mitigation of the direct and indirect effects of the proposed action and alternatives on the resource, consider the development of a collaborative program with other federal agencies to encourage adaptive management of contributions from other actions (CEAM step 11).

If it is likely that an adverse cumulative effect will persist following these mitigation and adaptive management steps, consider the preparation of an EIS.

BPP 5: REGULATORY CONSULTATION AND COORDINATION

Background Information

With regard to the survey, Question 6 asked participants, based on their general NEPA knowledge and EA experience, to prioritize the relative importance of a list of inadequacies identified in litigation, public comments, and criticisms of specific EAs. Participants used a numbering scale of 1 to 3, with 1 denoting highly important, 2 denoting medium importance, and 3 indicating minor importance. Two inadequacies were identified in Question 6 specifically relating to omission or inadequate agency coordination: one having to do with the Endangered Species Act (ESA) and the other concerning cultural resources laws such as the Natural Historic Preservation Act (NHPA). A total of 279 respondents answered the part of Question 6 related to ESA coordination. The rating average for ESA coordination was 1.86, which means it fell somewhere between highly important and of medium importance — 102 participants (36.6%) rated this highly important, 114 participants (40.9%) rated it of medium importance, and 63 participants (22.6%) rated it of minor importance.

Question 7 asked respondents to list three features, based on their general NEPA knowledge and EA experience, which are typically associated with adequate EAs. Of the total 269 responses to this question, there were 30 comments specifically directed toward the importance of regulatory integration and/or engaging in coordination with agencies having subject matter expertise for adequate EAs.

BPPs for Regulatory Consultation and Coordination

1. NEPA, CEQ Regulations and Guidance

NEPA addresses integration in Section 102(2)(A), stating that "all agencies of the Federal Government shall [ ] utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and decision making . . . " NEPA § 102, 42 U.S.C. § 4332. It specifics that "prior to making any detailed statement, the responsible federal official shall consult with and obtain the comments of any federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved." 42 U.S.C. § 4332. Section 102(2)(G) reinforces the importance of collaboration, that "all agencies of the Federal Government shall make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment . . ." 42 U.S.C. § 4332; *see also* NEPA § 104, 42 U.S.C. § 4334 ("Nothing in Section 102 [ ] or 103 [ ] shall in any way affect the specific statutory obligations of any Federal agency (1) to comply with criteria or standards of environmental quality, (2) to coordinate or consult with any other Federal or State agency, or (3) to act, or refrain from acting contingent upon the recommendations or certification of any other Federal or State agency").

The CEQ Regulations concerning NEPA integration and coordination are referenced in a multitude of sections. *See* 40 C.F.R §§ 1500.2(c)("Federal agencies shall to the fullest extent possible . . .integrate the requirements of NEPA . . .so that all such procedures run concurrently . . ."; 1500.5 (requiring agencies reduce delay by integrating the NEPA process, emphasizing interagency cooperation, . . ."); 1501.2 ("Agencies shall integrate the NEPA process with other planning at the earliest possible time . . ." The regulations directly address cooperating agencies and consultation requirements in 40 C.F.R. §§ 1501.6; 1502.25(a) and (b) ("The purpose of this section is to emphasize agency cooperation early in the NEPA process"); and 1506.2 (emphasizing the elimination of duplication with state and local procedures). These CEQ regulations all emphasize the importance of early agency coordination and integrating other regulatory and consultation processes with the NEPA process.

The CEQ FAQs address integration and coordination in Question 8 and Answer (Early Application of NEPA), Question 14 and Answer (Rights and Responsibilities of Lead and Cooperating Agencies; Question 22, State and Federal Agencies as Joint Lead Agencies; and Question 23, Conflicts of Federal Proposals with Land Use Plans.

The CEQ has also issued guidance on Cooperating Agencies and Collaboration in NEPA. *See* CEQ Collaboration Handbook; CEQ "Cooperating Agencies in Implementing the Procedural Requirements of NEPA" (January 30, 2002), *available at* http://ceq.hss.doe.gov/nepa/regs/cooperating/cooperatingagenciesmemorandum.html; and CEQ "Designation of Non-Federal Agencies to be Cooperating Agencies in Implementing the Procedural Requirements of NEPA" (July 28, 1999), *available at* http://ceq.hss.doe.gov/nepa/regs/ceqcoop.pdf. In the 2002 guidance, the CEQ, in attachment 2, details the factors for determining whether to invite, decline or end cooperating agency status.

2. Other Relevant Guidance

In addition, various Executive Orders require integration and coordination, such as Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This particular Executive Order on Environmental Justice has received much attention since 2009. Plan EJ 2014, *available at* http://www.epa.gov/compliance/ej/plan-ej/, is a roadmap – a strategy – that assists the EPA in integrating environmental justice into EPA programs, policies, and activities. Plan EJ 2014 identifies Cross-Agency Focus Areas, Tools Development, and Program Initiatives as three essential elements that will advance environmental justice across the EPA and the Federal government.

3. Recommendations for Consultation and Coordination

The requirement to integrate NEPA with other laws is based on reducing delay; avoiding duplication; making decisions based on the understanding of environmental consequences; and taking actions that protect, restore, and enhance the environment. Without integration of other legal requirements into the NEPA process, laws would be satisfied sequentially rather than

simultaneously and could result in different or conflicting conclusions resulting in unnecessary environmental harm. Consideration of other laws is also necessary to determine the significance of an action and the appropriateness of a FONSI. *See* 40 C.F.R. § 1508.27(b)(8), (9) and (10).

What follows is a five-step approach that emphasizes engaging agencies with expertise or jurisdiction – through scoping or some other form of outreach – and working with those agencies to integrate other identified requirements with the NEPA process. The goal is to expedite the analysis and focus it on relevant impacts by using the expertise available across all agencies (Federal and non-Federal) to accomplish NEPA integration, coordination, and consultation.

- Make a thorough, clear, concise record of all consultation and coordination requirements and implementation efforts.
- Early in the process identify external entities and parties that may need to be consulted based on their expertise, their jurisdiction over a related planning process or permit that should be integrated with the NEPA process, and/or their access to information.
- Consult early with state agencies, local agencies, federal agencies, tribes, Alaska Native organizations (ANOs), and native Hawaiian organizations (NHOs) to determine if they have relevant jurisdiction, special expertise, and/or interest and ability to participate in the process.
- Request the participation of cooperating agencies (40 C.F.R. § 1501.6) at the earliest possible time.
- For those agencies (Federal and non-Federal) that have jurisdiction over the proposed action, special expertise in the environmental effects, and/or are a potential stakeholder, develop schedules and milestones that accommodate and align, as best possible, their specific processes and/or major decision points with the NEPA process.

For example, as applicable to the Proposed Action, coordinate with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service to discuss ESA Section 7 consultations and/or Marine Mammal Protection Act issues to include coordinating schedules and decision-making. Coordinate with applicable State Historic Preservation Offices, tribes, ANOs, and NHOs (and under certain circumstances the Advisory Council on Historic Preservation) to determine special expertise, access to information, consultation requirements, and integrating the NHPA Section 106 consultation and NEPA processes. Coordinate with EPA and/or the U.S. Army Corps of Engineers to determine special expertise, permitting and consultation requirements, and integrating the Clean Air Act, Clean Water Act, and NEPA processes.

BPP 6: DETERMINATION OF ENVIRONMENTAL IMPACT SIGNIFICANCE

Background Information

Responses to Question 6, which asked respondents to prioritize inadequacies for EAs, identified "No clear delineation of impact significance" as the most important concern. This inadequacy received an average rating of 1.52, which is between first and second on the importance scale, and the highest importance rating among all of the listed inadequacies.

Responses to Question 7, which asked respondents to list three features typically associated with adequate EAs, included 28 comments relevant to the determination of impact significance. These comments also emphasized the need for clarity and a defensible and logical significance determination. Finally, the responses to Question 13 indicated that the significance determination was important for all complexity levels of EAs.

To summarize, results of the 2012 survey identified "No clear delineation of impact significance" as the major inadequacy of EAs. This conclusion underscores the need to address this issue through a BPP that will help agencies develop EAs that are defensible.

BPPs for Determining Environmental Impact Significance in Environmental Assessments

1. CEQ Regulations for the Determination of Environmental Impact Significance

A CEQ regulation identifies the factors agencies should consider when making the significance determination. *See* 40 C.F.R. § 1508.27. It provides substantial guidance and states:

> "Significantly" as used in NEPA requires considerations of both context and intensity:
>
> > (a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.
> >
> > (b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:
> >
> > 1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
> >
> > 2. The degree to which the proposed action affects public health or safety.
> >
> > 3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Section 1508.27 not only informs best practice principles, but also imposes a compliance responsibility on NEPA practitioners. The bottom line from responses to Question 13 was that preparers of EAs should document the use of section 1508.27 to support their significance determinations.

2. Uncertainty and Incomplete or Unavailable Information

In some cases, the environmental effects considered in an EA will be uncertain. Uncertainty at the EA stage is covered in 40 C.F.R. § 1508.27(b)(5), which states that an EA should cover "[t]he degree to which the possible effects on the human environment are highly uncertain." The courts have supported this requirement. *See* Suzanne O. Snowden, *Judicial Review and Environmental Analysis Under NEPA: 'Timing Is Everything,'* 33 Envtl. L. Rptr. 10050 (2003).

Uncertainty may be created when necessary information is incomplete or unavailable. A CEQ regulation, 40 C.F.R. § 1502.22, covers what practitioners must do when this problem occurs during the preparation of an EIS. In a formal response to a comment on the regulation in the federal register, the CEQ made it clear that "Section 1502.22 is part of the set of regulations which govern the EIS process, as opposed to the preparation of an environmental assessment. It

is only appropriate to require this level of analysis when an agency is preparing an EIS." 51 FR 15618, 15625 (1986).

Though CEQ explained that section 1502.22 does not apply to EAs, the courts are not entirely clear on this question. For example, in *Environmental Prot. Info. Ctr. v. Blackwell,* 389 F. Supp. 2d 1174, 1188 (N.D. Cal. 2004) the court held that "[w]hile this regulation on its face applies to EISs and not EAs, it still provides some guidance to the Court as to whether an agency can be charged with having failed to take a hard look simply because information is incomplete or unavailable." In another case, *Shenandoah Ecosystems Def. Group v. United States Forest Serv.,* 144 F. Supp. 2d 542 (W.D. Va. 2001), however, the court held that section 1502.22 does not apply to EAs.

Because CEQ regulations require that the uncertainty of environmental impacts be a consideration in determining significance or non-significance in EAs, practitioners usually do not need a process modeled on section 1502.22. For complex EAs, practitioners may want to use this type of procedure if there are difficult questions of information availability.

3. Recommendation for the Determination of Significance

Comments to the questionnaire indicated that clarity and logic are necessary in the process that leads to a significance determination. Clarity and logic are possible only if an agency uses a disciplined procedure, in which the important issues that determine significance are considered. A number of accepted procedures are available for assessing impacts for affected resources or particular projects.

- For a procedure that uses thresholds of significance to determine environmental significance, s*ee* California Governor's Office of Planning and Research, Thresholds of Significance: Criteria for Defining Environmental Significance (Sept. 1994), *available at* http://ceres.ca.gov/ceqa/more/tas/threshld.pdf. *See also* New York Dep't of Envtl. Conservation, SEQRA Handbook, Ch. 4B, *available at* http://www.dec.ny.gov/permits/47716.html. These state guidelines can be applied under NEPA. Thresholds established under other environmental laws are not binding under NEPA, however, unless expressly made binding by statute.

- For a discussion of technical, collaborative, and reasoned argumentation approaches to the significance determination, *see* David P. Lawrence, *Impact Significance Determination -- Designing an Approach*, 27 Envtl. Impact Assess. Rev. 730 (2007), *available at* http://www.aseanenvironment.info/Abstract/41016131.pdf. *See also* David P. Lawrence, *Impact Significance Determination—Back to Basics*, 27 Envtl. Impact Assess. Rev. 755 (2007), *available at* http://www.aseanenvironment.info/Abstract/41016132.pdf.

- For a discussion of thresholds and methodologies for the determination of significance, including different methods for impact assessment for select resources, *see* Larry Canter,

Environmental Impact Assessment, pp. 21-25 (2nd ed. 1996), *available at* http://www.eiatraining.com/books.html.

4. The Legal Sufficiency of the Significance Determination

A significance determination will receive favorable judicial review only if it is legally sufficient. Courts will approve a significance decision unless it is arbitrary and capricious, but they will also require the agency to have taken a "hard look." Though there is no clear agreement in the courts on what a hard look means, the District of Columbia Court of Appeals provided a helpful explanation in *Maryland-National Capital Park & Planning Com. v. United States Postal Service*, 487 F.2d 1029, 1040 (D.C. Cir. 1973):

> First, did the agency take a 'hard look' at the problem, as opposed to bald conclusions, unaided by preliminary investigation? Second, did the agency identify the relevant areas of environmental concern? Third, as to problems studied and identified, does the agency make a convincing case that the impact is insignificant?

Practitioners can use these criteria to evaluate the legal sufficiency of their significance decisions. For additional discussion of how the hard look doctrine is applied by the courts, *see* Mandelker at § 3:7.

5. When Mitigation is Appropriate

In January 2011, CEQ provided guidance that specifically addressed the appropriate use of a FONSI or mitigated FONSI to conclude a NEPA review process relying on an EA. A mitigated FONSI is appropriate when mitigation is used to avoid or lessen potentially significant environmental effects of proposed actions that would otherwise need to be analyzed in an EIS. For the CEQ guidance, *see* "Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact" (Jan. 14, 2011), *available at* http://ceq.hss.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf.

BPP 7: EXTENT OF PUBLIC INVOLVEMENT FOR EAs

Background Information

This BPP for assessing the appropriate level of public involvement and participation in EAs is based primarily on CEQ regulations implementing NEPA, specifically 40 C.F.R. §§ 1506.6 and 1501.4(b), questionnaire survey responses, a review of case law, comments from the CEQ, and practitioner experience.

The survey respondents indicate the public involvement process is of high value to the adequacy of EAs. The responses indicate that lack of public involvement is strongly correlated with inadequate EAs.

Specifically, Question 6 asked respondents, based on their general NEPA knowledge and EA experience, to prioritize the relative importance of certain inadequacies identified with the absence of public participation for expansive EAs. Participants used a numbering scale of 1 to 3, with 1 denoting highly important, 2 denoting medium importance, and 3 indicating minor importance. A total of 279 people answered the part of Question 6 relating to the absence of public participation. The rating average was 1.90, which means it fell somewhere between highly and medium importance — 95 participants (34.1%) rated this highly important, 117 participants (41.9%) rated it as medium importance, and 67 participants (24.0%) rated it as minor importance. In addition, 34 people out of the 279 responders (12%) made comments, but none of them related to public participation.

Question 7 asked participants to list three features, based on their general NEPA knowledge and EA experience, which are typically associated with adequate EAs. A total of 269 people answered Question 7. In addition, there were 39 comments specifically directed toward public participation.

Question 18 asked if EAs of various types and sizes should be circulated for solicitation of public reviews and comments with the final EAs including responses to the received comments. As seen on a sliding scale, expansive EAs and mitigated FONSI EAs were strongly perceived as needing public participation (87.8% and 68.6%, respectively), while traditional EAs with lesser scope were not as likely to need public participation efforts (38.0%).

To summarize, results of the 2012 survey identified the lack of public participation and involvement as a major inadequacy of EAs. This conclusion underscores the need to address this issue through a BPP that will help agencies develop high quality EAs that support informed decision making and are defensible.

BPPs for Extent of Public Involvement for EAs

1. CEQ Regulations and Guidance on the Extent of Public Involvement

The CEQ established public involvement as a primary purpose of NEPA. 40 C.F.R. § 1500.1(b) ("NEPA procedures must insure that environmental information is available to public

officials and citizens before decisions are made. . ."). Public scrutiny is essential to the implementation of NEPA and a cornerstone of informed decision making. 40 C.F.R. § 1500.1(b).

CEQ's regulations define EAs as "a concise *public document*" and directs agencies to mandate that agencies "make diligent efforts to involve the public in preparing and implementing their NEPA procedures." 40 C.F.R. § 1506.6(a) (emphasis added). In doing so, agencies may "[p]rovide public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform those persons and agencies who may be interested or affected." 40 C.F.R. § 1506.6(b).

The CEQ FAQs address public involvement in its Question 38 and Answer, stating that EAs:

> must be available to the public. Section 1506.6 requires agencies to involve the public in implementing their NEPA procedures, and this includes public involvement in the preparation of EAs and FONSIs. These are public 'environmental documents' under Section 1506.6(b), and, therefore, agencies must give public notice of their availability.

The CEQ Regulations at 40 C.F.R, §1506.6 provide agencies with discretion on how to conduct public involvement in EAs. Each EA is different, and different circumstances will dictate different public participation approaches. CEQ Regulations further provide that "[t]he agency shall involve environmental agencies, applicants, and the public, to the extent practicable …" 40 C.F.R. § 1501.4(b). The CEQ requires that an agency make its FONSI available for public review when the proposed action is closely similar to one that normally requires an EIS or when the nature of the proposed action is one without precedent. *See* 40 C.F.R. § 1501.4(e)(2).

In determining when a public hearing or meeting is appropriate, the CEQ directs agencies to consider whether substantial environmental controversy exists concerning the proposed action or whether substantial interest exists in holding a hearing. *See* 40 C.F.R. § 1506.6(c)(1). Although this regulation does not distinguish between EAs and EISs, some courts have inferred that this regulation applies to EAs, when an agency implements its NEPA procedures. *See Theodore Roosevelt Conservation Partnership v. Salazar*, 616 F.3d 497, 519 (D.C. Cir. 2010); *California Trout v. FERC*, 572 F.3d 1003, 1016 (9th Cir. 2009).

The CEQ Task Force on Modernizing NEPA recommended that the CEQ issue guidance clarifying the requirements for public involvement, among other issues, for mitigated FONSIs. NEPA experts and public stakeholders expressed broad support for clarifying the requirements for public involvement, calling for consideration of public involvement in the use of mitigated FONSI, where the FONSI depends on mitigation in an adaptive management approach. The report noted concern for public involvement for those tiered EAs based on larger programmatic documents. The CEQ Mitigation and Monitoring Guidance incorporates and references these findings. These recommendations are consistent with the EA BPP survey results.

The CEQ Regulations explicitly address the role of scoping in preparation of an EIS. *See* 40 C.F.R. § 1501.7 ("There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This process shall be termed scoping."). The CEQ Guidance on Efficient and Timely Environmental Reviews states:

> agencies can also choose to take advantage of scoping whenever preparing an EA. Scoping can be particularly useful when an EA deals with uncertainty or controversy regarding potential conflicts over the use of resources or the environmental effects of the proposed action, or where mitigation measures are likely to play a large role in determining whether the impacts will be reduced to a level where a Finding of No Significant Impact can be made. A lead agency preparing an EA may use scoping to identify and eliminate from detailed study the issues that are not significant or that have been covered by prior environmental review. The scoping process provides a transparent way to identify significant environmental issues and to deemphasize insignificant issues, thereby focusing the analysis on the most pertinent issues and impacts. We recommend that agencies review their NEPA implementing procedures, as well as their NEPA practices, to ensure they have the option of scoping for EAs.

In this same guidance, the CEQ discussed the adoption of other agency NEPA documents by an action proponent. Here, the CEQ restated that the regulations do not do not require agencies to prepare a draft EA and circulate a draft or final EA for public review or comment. This guidance is consistent with the case law, which is further discussed below.

In summary of the regulations and CEQ guidance, federal agencies must engage the public in the EA process; however, the type and form of public involvement is left to the individual agency and on a case-by-case basis. Recent CEQ guidance encourages agencies to use the public scoping process to focus the EA analysis on potentially significant environmental issues.

2. Extent of Public Involvement, Case Law

The courts have disagreed on the extent to which and the manner in which agencies must afford meaningful opportunities for public involvement on a decision to prepare an EA instead of an EIS. While some cases don't require public involvement, a few courts have held that public involvement is required, with different formulations of this requirement. For an extensive discussion of the cases that discuss public commenting on EAs, *see* Daniel R. Mandelker et al., NEPA Law and Litigation § 7:14.

The Ninth Circuit, in *Bering Strait Citizens for Responsible Resource Development v. U.S. Army Corps of Engineers,* 524 F.3d 938 (9th Cir. 2008), adopted a moderate position when it stated that the circulation of a draft EA is not required in every case. The court opined that

"requiring the circulation of a draft EA in every case could require the reversal of permitting decisions where a draft EA was not circulated even though the permitting agency actively sought and achieved public participation through other means. The regulations do not compel such formality." The court enunciated the following rule: "[a]n agency, when preparing an EA, must provide the public with sufficient environmental information, considered in the totality of circumstances, to permit members of the public to weigh in with their views and thus inform the agency decision making process." The BPP process outlined below is based on the Ninth Circuit's moderate position.

3. Recommendation for the Extent of Public Involvement

Agencies should involve the public in preparation of EAs and FONSIs to permit members of the public to weigh in with their views. In determining the extent and type of public involvement, agencies should use methods for public involvement on a sliding scale and in consideration of the totality of the circumstances. The public should be given as much environmental information as is practicable, prior to completion of the EA, so that the public has a sufficient basis to address those subject areas that the agency must consider in preparing the EA. Depending on the circumstances, the agency could provide adequate information through public meetings or by a reasonably thorough scoping notice.

Public involvement, and specifically, scoping, can be particularly useful when an EA deals with uncertainty or controversy regarding potential conflicts over the use of resources or the environmental effects of the proposed action or where mitigation measures are likely to play a large role in determining whether the impacts will be reduced to a level where a Finding of No Significant Impact (FONSI) can be made.

At a minimum, the agency should provide a notice of the availability of EAs and FONSIs to interested or affected parties and the public, and to public agencies and applicants. This responsibility should not be confused with the formalized EIS public involvement process. The notice of available provides notice that the EA or FONSI is available for review by the public. Impacts to certain resources, such as coastal impacts, noise, visual impacts or involving access to public lands, or involving certain agencies, for example, may require additional public outreach or involvement, or possibly, circulation of a draft EA. Involving members of the public to weigh in with their views informs and thus, strengthens the agency decision-making process and analysis.

This sliding-scale approach may include a combination of public involvement methods depending on the particular circumstances, and as practicable, in accordance with 40 C.F.R. §§ 1506.6 and 1501.4(b). These methods include public involvement in the scoping process, public meetings or hearings or other methods of information dissemination, or providing the draft EA for public comment, as practicable.

ATTACHMENT A

BIOGRAPHIES FOR ALL PREPARERS INVOLVED THE CEQ PILOT PROJECT

Dr. Larry Canter is Professor Emeritus from the University of Oklahoma (August, 2000), during the 1990s he was the Sun Company Chair of Ground Water Hydrology, George Lynn Cross Research Professor, and Director, Environmental and Ground Water Institute. He is now engaged in teaching EIA-related short courses and consulting on the preparation and review of impact studies and the development of EIA policies, procedures, methods, and tools. In 2008, he was Co-Chair of the International Association of Impact Assessment's (IAIA's) Special Topic Meeting on Assessing and Managing Cumulative Environmental Effects. In 2009, he received the prestigious Rose-Hulman Award from IAIA. He received his Ph.D. in environmental health engineering from the University of Texas, M.S. in sanitary engineering from the University of Illinois, and B.E. in civil engineering from Vanderbilt University.

Ron Deverman is Associate Vice-President for HNTB, a national engineering, architecture and planning firm, managing environmental impact assessment projects for transportation infrastructure improvements such as transit, passenger and freight rail, roadways, and bridges. Ron has 30-years' experience in the National Environmental Policy Act (NEPA) with special expertise in community impact assessment, cumulative effects analysis, and federal environmental regulations, such as the Clean Air Act, Clean Water Act, National Historic Preservation Act, and Endangered Species Act. His education includes a BS in civil/environmental engineering from the University of Illinois in Urbana, an MA in literature and creative writing from the University of Illinois in Springfield, and post-graduate studies in NEPA and related environmental studies. Ron is the Past President of the National Association of Environmental Professionals (NAEP). He has also chaired NAEP's national NEPA Symposium, NEPA Working Group, Transportation Working Group (co-founder), and 27th Annual Conference (Dearborn, Michigan).

P.E. Hudson, Esq. is the Counsel, Department of the Navy Office of General Counsel in Ventura County, California, where she serves as the Environmental Law and Planning Training Director. The focus of her practice is environmental law and planning, and specifically NEPA; she also develops and teaches courses involving NEPA, environmental planning and impact analysis, and environmental law, with a special emphasis on coastal and ocean resources, to

federal employees. She has served as a litigator at a large firm in private practice, and as a federal clerk. She is a member of the bars of California, Florida and Georgia and the Supreme Court of the United States. Ms. Hudson retired from the Navy as a Commander (Oceanography). Any views expressed are Ms. Hudson's personal views and not necessarily those of the Department of Defense, Navy or Federal Government.

Karen Johnson, CEP has been an Environmental Scientist/Specialist for nearly 28 years. She was a Senior Environmental Scientist/NEPA Specialist for Geo-Marine, Inc. (now Versar, Inc.) in Plano, TX, from 2004 to 2013. Her primary responsibilities included managing NEPA documentation projects for numerous Federal agencies under the Departments of Defense, Agriculture, Energy and Transportation at both the individual project and the programmatic level. She also has completed more than 20 Environmental Site Assessments (Phase Is) or Environmental Baseline Surveys for both private and Federal clients. In 2007, she accepted an assignment to spend a year in Guam providing in-house NEPA support for NAVFAC Marianas, which she found both professionally and personally stimulating. Prior to her work with Geo-Marine, Ms. Johnson spent 12 years with Ecology and Environment, Inc. in San Francisco, CA, initially working under contract with the USEPA to do Superfund site assessments, then staffing and managing CEQA and NEPA projects. Her career started by spending five years with the US Geological Survey Water Resources Division in Sacramento, CA.

David Keys, CEP, is the NOAA Fisheries Service, Southeast Region, National Environmental Policy Act Coordinator where he is responsible for compliance with the Council on Environmental Quality's regulations throughout the NOAA Fisheries, Southeast Region. He is a Certified Environmental Professional in environmental documentation and earned his Master of Arts degree in environmental studies from the University of Illinois and his Bachelor of Science degree in forest management from Southern Illinois University. He is an adjunct faculty member at the University of South Florida, St. Petersburg Campus, where he teaches NEPA implementation. He earned the NEPA certificate from the Duke Environmental Leadership Program. He is a general member of the National Association of Environmental Professionals where he is the current chair of the Oceans Track and current vice chair of the Peak Oil Committee. He is a professional member of the American Association for the Advancement of Science.

Ronald E. Lamb, CEP is an environmental program manager and senior project manager with more than 25 years of experience in NEPA compliance, environmental compliance and policy, public involvement and community relations, waste management and pollution prevention; litigation support; and issue management. He is a NEPA Specialist at Headquarters, U.S. Marine Corps, where he reviews the adequacy of EISs on USMC actions, serves on the

Headquarters USMC Environmental Impact Review Board, and represents the USMC to the President's Council on Environmental Quality (CEQ), other Department of Defense services, and other Federal agencies. Ron is co-chair of the NAEP NEPA Practice and served two-consecutive terms on the Board of Directors. Previously, he was a Vice President and NEPA Program Manager for HDR|e2M. Ron has managed the preparation of dozens of EAs and 14 EISs for the Department of Homeland Security (DHS) Coast Guard (USCG) and Customs and Border Protection (CBP), U.S. Air Force, Bureau of Land Management (BLM), General Services Administration, National Park Service, U.S. Army Corps of Engineers (USACE), and NASA. Any views expressed are Mr. Lamb's personal views and not necessarily those of the Department of Defense, Navy, or Federal Government.

Paul Looney, CEP, CSE, PWS has worked in the field of ecology for 24 years in different areas of emphasis. His primary area of expertise is coastal plant ecology. He is directly involved in ecological field work as part of his daily professional life through wetland delineations, threatened and endangered species surveys, coastal ecosystem restoration, and NEPA studies. The issue of invasive species has been of great interest since attending a symposium sponsored by the state of Florida in 1994. Making the connection between listed species and invasive species has been long in developing, but it is of great interest to him to determine what is being done in this field and possibly establish more of a natural resources emphasis into NAEP.

Professor Daniel R. Mandelker is the Stamper Professor of Law at Washington University in Saint Louis, where he teaches a seminar in Environmental Land Use Litigation and a course in Land Use Law. He is the author NEPA Law and Litigation, a leading treatise on NEPA case law, and articles on NEPA, including a recent article, Growth-Induced Land Development Caused by Highway and Other Projects as an Indirect Effect Under NEPA, published in the Environmental Law Reporter. He has been a consultant on NEPA litigation and practice, and has presented training programs and lectured on NEPA at national conferences.

Stephen Pyle, Esq. is a Senior NEPA Project Manager at HDR Environmental, Operations, and Construction, Inc. Mr. Pyle has 14 years of experience within the environmental field and two years of legal/litigation experience. Mr. Pyle currently manages all aspects of NEPA projects, including EISs and EAs, for various Federal agencies. In addition to completing numerous EAs throughout his career, Mr. Pyle has successfully completed EISs for diverse Federal agencies including U.S. Coast Guard, National Park Service, U.S. Customs and Border Protection, and is currently completing a complicated EIS for the U.S. Air Force in the Mariana Islands region. Mr. Pyle has also conducted and taken part in a wide range of environmental compliance activities for Federal agencies related to hazardous waste management, storm water

management, and natural resource management. In addition, he is experienced as a litigation clerk, paralegal, legal researcher and litigation attorney for two law firms. Mr. Pyle's legal experience includes general contract law, construction defects, mechanics lien law, oil and gas law, Federal Mine Safety and Health Administration law, and general litigation. Mr. Pyle has represented clients before Texas County and District Court judges. He is a licensed attorney, admitted to the State Bar of Texas.

Dr. Robert Senner is the sole proprietor of Robert Senner Consulting in Seattle. Dr. Senner has successfully managed and completed many environmental impact statements and environmental assessments, including NEPA, Washington State Environmental Policy Act (SEPA), and Environmental, Social, and Health Impact Assessment (ESHIA) programs. His clients and lead agencies have included most Federal agencies involved in energy, resource development, and transportation, corresponding state agencies, and major energy and engineering companies. He received his Ph.D. in Public Policy (Environmental Law and Economics) from The University of Texas at Austin, Lyndon B. Johnson School of Public Affairs. He also completed advanced studies in biology as a Nuffield Scholar at the University of St. Andrews, served as a Royal Society Scholar at the Stazione Zoologica in Naples, and was a National Institute of Mental Health postdoctoral fellow at the California Institute of Technology. He received his Bachelor's degree from Yale University, where he was a National Science Foundation Scholar. Dr. Senner was an original member of the team selected by the CEQ to conduct the Pilot Project on Best Practice Principles for NEPA EAs. He has published a number of peer-reviewed papers on improving NEPA EAs, cumulative effects assessment and management, and sustainability.

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