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PREPARING HIGH-QUALITY NEPA DOCUMENTS FOR TRANSPORTATION PROJECTS

This handbook describes good practices for improving the quality of environmental documents prepared for transportation projects under the National Environmental Policy Act (NEPA).

Issues covered in this handbook include:

Before the NEPA Process
- Building the NEPA document team
- Planning the NEPA document
- Planning the NEPA document review process

Overall Document Quality
- Page layout
- Writing quality and style
- Document structure
- Navigation
- Summary and abstracts
- Presentation of data
- Figures
- Visualizations

- Use of appendices
- References
- Electronic publication

Compliance with NEPA and Related Requirements
- Purpose and need
- Alternatives
- Methodologies
- Commitments
- Regulatory compliance and permitting
- Responses to comments on NEPA documents
- Changes during the NEPA process

The Center for Environmental Excellence by AASHTO produces the Practitioner's Handbooks. The Handbooks provide practical advice on a range of environmental issues that arise during the planning, development, construction, and operation of transportation projects.

Each Handbook is developed by the Center in cooperation with an advisory group that includes representatives of the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), state departments of transportation, and other agencies as appropriate. The advisory group for this handbook also included representatives of the consultant community.

The Handbooks are primarily intended for use by project managers and others who are responsible for coordinating compliance with a wide range of requirements. With their needs in mind, each Handbook includes:

- A background briefing;
- Key issues to consider; and
- Practical tips for achieving compliance.

In addition, key regulations, guidance materials, and sample documents for each Handbook are posted on the Center's web site at http://environment.transportation.org

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American Association of State Highway and Transportation Officials

Overview

The purpose of this handbook is to help practitioners bridge the gap between the theory and practice of producing high-quality National Environmental Policy Act (NEPA) documents. In general, a high-quality NEPA document is one that:

- Is readily understandable by all audiences, including those without technical expertise
- Provides key information in an easy-to-navigate format
- Focuses on pertinent information and avoids unnecessary bulk
- Includes supporting technical information in appendices
- Meets all legal requirements

This handbook focuses on preparation of environmental impact statements (EISs) and environmental assessments (EAs), because those documents tend to be more complex and therefore present greater challenges in achieving both readability and legal sufficiency. Many of the tips in this handbook also apply to documented categorical exclusions (CEs).

This handbook is accompanied by a separate document, *Examples of Effective Techniques for Improving the Quality of Environmental Documents* (2014), which contains excerpts from recent NEPA documents issued by FHWA and FTA. The examples illustrate the techniques described in the Practical Tips section of this handbook.[1]

Key Issues to Consider

Expectations for the NEPA Document

- What type of NEPA document will be prepared (EIS, EA, or CE)?
- Who are the audiences for the NEPA document and what are their expectations?
- Have the lead agencies provided any specific direction regarding the format or content of this document? Is there a strong commitment to preparing a high-quality document?
- Will another federal agency be adopting the document? Does that agency have specific requirements that need to be met by this document?
- Have the resource agencies provided input regarding the format and content of the document?
- Is it expected that there will be litigation challenging the document? Are there any legal sufficiency issues that will require special attention?
- What is the desired schedule for the NEPA process and project delivery?

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1   The examples document is available, along with this Practitioner's Handbook, on the Center for Environmental Excellence by AASHTO website at http://environment.transportation.org.

Organization and Format

- How will the main body of the document be organized? Will it follow the standard format in the Council on Environmental Quality (CEQ) regulations or a modified format—e.g., combining chapters?
- What page layout techniques will be used to enhance readability?
- Have the lead agencies provided specific direction regarding the format or organization of the document—e.g., set a page limit?
- Will the summary chapter be circulated as a stand-alone document?
- What documents, if any, will be incorporated by reference?
- Will the document include appendices, and if so, what technical reports, correspondence, or other documents will be included in the appendices?
- Will any technical reports be included in the project file but not in the appendices?
- What are the lead agencies' (and resources agencies') expectations about the level of detail in the main body vs. the appendices?
- In what formats will the document be published (paper, electronic, etc.)? Does the page layout work well in each of these publication formats?

Writing Quality and Style

- What steps will be taken to ensure quality writing and a consistent writing style in the NEPA document?
- At what point in the review cycle will writing quality be addressed, and who is responsible for this review?
- Will a "lead editor" (sometimes called an "editor-in-chief") be assigned to manage the preparation of the NEPA document?
- Are there specific issues or processes that will be especially challenging to explain clearly—e.g., complex methodologies or legal requirements?
- Is there a need to assign a technical writer (in addition to the subject-matter experts) to assist in drafting or reviewing certain chapters or technical reports?

Graphics

- What kinds of graphics—charts, maps, photo-simulations, aerials—will be used in the document?
- Are there some issues that are especially important to convey visually, and what visual tools are best suited for those topics?
- What steps will be taken to ensure a consistent appearance for all graphics and maps? For example, will standard base maps and figure templates be developed?
- Will the team include a graphic designer, GIS specialist, or both to support this work?

Data

- For each major topic in the document, what data will be presented in the main body of the document? What data will be in an appendix or incorporated by reference?
- What technical reports will be prepared? Are there any major topics for which a supporting technical report will *not* be prepared?
- Where will data sources, methodologies, and other technical aspects of the data be explained? To what extent does this explanation need to be in the main volume?
- What kinds of data are important to the regulatory agencies that will be reviewing and commenting on the document? What can be done to ensure that their data needs are met?

- ☐ What decisions need to be made by the lead agency (and by any other agencies that may adopt this NEPA document)? What information should be included in the NEPA document to support those decisions?

- ☐ What are the essential elements of the project's purpose and need, and how can those elements be communicated most clearly?

- ☐ What facts underlie the project's purpose and need? Is it possible to communicate those facts visually?

- ☐ What process was used to develop and screen alternatives? How can you tell the story of that process most effectively?

- ☐ What is important for the reader to know about the alternatives carried forward for detailed study? How can you best convey the key differences among those alternatives?

- ☐ What technical terms need to be explained in order for the reader to understand the impacts analysis? Where will those terms be introduced?

- ☐ What important commitments have been made, such as environmental mitigation commitments? How will those commitments be communicated to the reader?

- ☐ What important changes occurred during the NEPA process—e.g., changes in methodology, new alternatives, new data? Where will these changes be described in the final NEPA document?

Regulatory Issues and Permitting Processes

- ☐ What regulatory requirements and permitting processes need to be specifically discussed when comparing alternatives and describing project impacts in the NEPA document?

- ☐ How will the NEPA document demonstrate compliance with consultation requirements under other laws—for example, Section 106 of the National Historic Preservation Act?

- ☐ Are there any regulatory requirements that play an important role in the choice among the alternatives—for example, Section 4(f) of the U.S. Department of Transportation Act?

- ☐ Are there cross-cutting regulatory issues? For example, issues that involve a tension between different requirements, such as Section 4(f) and Section 404?

- ☐ What aspects of regulatory compliance are best documented in appendices?

Background Briefing

This section summarizes regulations, guidance, and other materials that provide direction regarding the organization, content, and readability of NEPA documents.

CEQ REGULATIONS AND GUIDANCE

The Council on Environmental Quality (CEQ) regulations and guidance identify a range of good practices for achieving readability and brevity in NEPA documents:[2]

- ☐ Focusing on significant issues
- ☐ Discussing issues in proportion to their significance
- ☐ Using a format that allows for clear presentation of the alternatives

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2   CEQ, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 Fed. Reg. 18026 (March 23, 1981); CEQ, "Final Guidance on Improving the Process for Preparing Efficient and Timely Environmental Reviews Under the National Environmental Policy Act," 77 Fed. Reg. 14473 (March 12, 2012).

- Identifying the methodologies used in the analysis
- Including explicit references to scientific sources used in the analysis
- Providing "reasonable and proportionate" responses to comments
- Placing technical discussions in appendices
- Incorporating by reference

Attachment 1 to this handbook includes excerpts from the CEQ regulations and CEQ guidance documents discussed in this section.

FHWA AND STATE DOT GUIDANCE

In 2006, FHWA issued a memorandum encouraging efforts to improve the quality of NEPA documents. The 2006 memorandum embraced the recommendations included in a report prepared by FHWA, AASHTO, and the American Council of Engineering Companies (ACEC), *Improving the Quality of Environmental Documents.*[3] This report identified three core principles to guide the preparation of high-quality NEPA documents:

- **Tell the Story:** Tell the story of the project so that the reader can easily understand the purpose and need for the project, how each alternative would meet the project goals, and the strengths and weaknesses associated with each alternative.
- **Keep It Brief:** Keep the document as brief as possible, using clear, concise writing; an easy-to-use format; effective graphics and visual elements; discussion of issues and impacts in proportion to their significance; and an appendix for supporting information.
- **Meet Legal Requirements**: Ensure that the document meets all legal requirements in a way that is easy to follow for regulators, technical reviewers, and courts.

Several state DOTs contributed to the *Improving the Quality of Environmental Documents* publication and have issued their own guidance or training documents that incorporate and build upon recommendations in this book, including the following:

- The Washington State Department of Transportation developed the *Reader-Friendly Toolkit*, a comprehensive manual that provides specific suggestions on issues such as page layout, figures, clear writing, and appendices.
- The California Department of Transportation has developed annotated outlines for use in preparing EAs and EISs. The outlines are required to be used for federal-aid highway projects in California. The outlines include a standard format and chapter organization; they also provide specific instructions for the content that should be included in each chapter and in major sections within those chapters.
- The Colorado Department of Transportation has issued a manual that provides detailed instructions for preparing all types of NEPA documents. The NEPA manual includes guidance on quality assurance/quality control (QA/QC) procedures for use by agency staff in reviewing CEs, EAs, and EISs.
- The Ohio Department of Transportation has developed training on the preparation of quality environmental documents for both in-house staff and consultants.
- The Oregon Department of Transportation and FHWA's Oregon Division Office jointly produced a memorandum, *"NEPA Document Dos and Don'ts, 2nd Edition,"* which includes tips for NEPA document preparers on issues such as readability, formatting, figures and tables, and terminology, as well as tips on each of the standard chapters in an EIS. The Oregon Department of Transportation also has developed an EIS template based on California's annotated outlines.

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3   FHWA, AASHTO, and ACEC, "Improving the Quality of Environmental Documents" (2006).

In 2012, as part of its Every Day Counts program, FHWA initiated a collaborative effort with state DOTs and the consultant community to broaden the implementation of good practices for preparing high-quality NEPA documents. This effort is known as Implementing Quality Environmental Documents. To date, this effort has focused primarily on good practices for preparing purpose and need statements and alternatives analyses.

Attachment 2 to this handbook includes a bibliography that lists the guidance documents and other materials discussed in this section.

Practical Tips

This section of the handbook describes good practices for achieving quality NEPA documents. These tips are organized into three groups:

- **Preparing for the NEPA Process.** These tips focus on steps that can be taken before the NEPA process begins, in order to lay the foundation for preparing a high-quality NEPA document. These tips involve building the NEPA team, planning the NEPA document, and establishing the internal review process for the NEPA document.
- **Overall Document Quality.** These tips focus on the characteristics of a high-quality NEPA document without regard to specific compliance requirements. They address issues such as page layout, writing style, and graphics.
- **Compliance with NEPA and Related Requirements.** These tips focus on compliance with specific requirements in NEPA and other environmental laws. They address issues such as purpose and need, alternatives analysis, methodologies, mitigation, commitments, and responding to comments.

As noted above, this handbook is accompanied by a separate document, *Examples of Effective Techniques for Improving the Quality of Environmental Documents* (2014). The examples illustrate the techniques described in the Parts B and C of the Practical Tips section of this handbook.

A. PREPARING FOR THE NEPA PROCESS

1 | Building the NEPA Document Team

The preparation of a NEPA document involves synthesizing the results of technical work from many disciplines into a single document that is understandable by a wide range of readers. Thus, there is an important role in the NEPA process not only for the technical experts who prepare individual discipline reports, but also for writers, editors, designers, and project managers—those who can take complex technical analyses prepared by multiple authors and explain them clearly to readers who do not necessarily possess technical expertise.

For relatively straightforward documents, including most CEs and many EAs, the NEPA document team will be relatively small. For more complex EAs, and for most EISs, the NEPA team is more likely to include members with specialized skills in document preparation. For complex studies, it is often useful to include one or more of the following specialists:

- **Lead editor.** The lead editor coordinates the development, drafting, and review of the entire document, including supporting technical reports. Ideally, the lead editor will be involved from initiation to completion of the document and will have an in-depth knowledge of the entire document. For large projects, the lead editor role is distinct from the role of project manager; for smaller projects, the roles may be combined.[4]
- **Technical writers and editors.** Technical writers translate technical analyses into plain English; they also help to ensure consistency in writing quality and style across the entire document, so that the document speaks with a single "voice." Technical editors also contribute to achieving a clear and consistent writing style, while also combing the docu-

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4   Other names are used to describe this position are "environmental lead," "editor-in-chief," and "principal editor."

ments to eliminate inconsistencies and errors. One of the most valuable roles of technical editors is to eliminate excess bulk by making the writing more succinct and by shifting technical detail to appendices.

- **Graphic artists and designers.** Graphic artists and designers find ways to tell the story visually—through content-rich graphics, effective integration of figures and text, easy-to-use navigational aids, and a consistent appearance for the entire document.

- **Legal counsel.** For projects that face the potential for legal challenges or delays in the permitting process, or that otherwise involve complex legal issues, it is useful to incorporate legal counsel into the project team. Involving legal counsel as part of the team as soon as the potential for legal challenges becomes apparent allows legal issues to be identified and addressed in real time, rather than after the document is produced.

2 | Planning the NEPA Document

Preparing a high-quality NEPA document requires careful planning, even before the NEPA process begins. The planning process should involve consideration of basic questions such as the type of NEPA document that will be prepared; the issues that are likely to be most complex or challenging; the data that will need to be collected; the important audiences; and the organization and format that will be used for the NEPA document.

In addition to those issues, it is important to develop a plan for the document itself. Developing a clear plan for the document can help all members of the team to work more efficiently, by reducing the time needed to meld documents produced by different authors into a single, coherent document.

Developing a plan for the NEPA document may include:

- **Annotated outline.** An annotated outline is simply an outline that includes brief descriptions of the information that should be included in each section of the document. Developing an annotated outline will prompt discussion within the project team about issues such as document structure, level of detail, page format, and other aspects of document quality. In this way, an annotated outline can help to establish shared expectations among team members at the outset of the NEPA process.

- **Style guide.** A style guide promotes consistency by establishing conventions regarding commonly used words, writing tense, acronyms, citation formats, fonts, headings, and other elements of the NEPA document. A style guide is typically prepared early in the process and then is updated as needed while drafting of the document is under way. The style guide can be used to:

  - Establish key terms and acronyms—for example, whether to use "Corps" or "USACOE" when referring to the U.S. Army Corps of Engineers.

  - Establish standard terminology used in the document—for example, the exact names of the alternatives and/or options being evaluated in the document.

  - Establish conventions for describing alternatives and impacts—for example, should authors describe the project from north to south, or south to north?

  - Establish guidelines for use of terms such as "would," "could," "will," and "may."

- **Templates for tables and figures (including base maps).** Templates establish the standard appearance of the tables and figures that will be used in the document. These templates are the equivalent of a style guide for graphics. Creating templates early in the process helps to establish good practices regarding clarity and readability and ensure that those practices are applied consistently throughout the NEPA document. Developing templates also helps save time and money by reducing the time spent revising tables and figures during the editing process.

- **Standard page layout.** The standard page layout involves issues such as font size and type, use of white space (size of margins), heading styles, use of color, and many other details that collectively give the document its appearance. (See Practical Tips, B.1, "Page Layout.") Addressing these issues early in the process helps ensure consistency and gives drafters a toolkit of options for enhancing readability, such as the use of sidebars to explain technical terms and to highlight important conclusions.

3 | Planning the Review Process for the NEPA Document

Environmental documents typically undergo many rounds of review by multiple reviewers. For large and complex EIS projects, the document becomes an efficient means for a project development team to communicate details about the project as new information is developed and project decisions and conclusions are proposed. As such, the document content necessarily evolves over time as a project development team reaches consensus on important decisions and conclusions. While this process generally is a source of consensus building and strengthens the document, it can have the unintended effect of introducing inconsistencies or even errors as the NEPA team seeks to satisfy the comments of different reviewers with different perspectives.

To help keep the review process on track, it is useful to think about the following issues and, especially for complex projects, address them in a quality control plan:

- **Communication between project leadership and NEPA document team.** Decisions made by project leadership can require adjustments in approach to the NEPA document, and information developed for the NEPA document can require adjustments in approach to the project. Thus, regular communication with project leadership is essential to avoid wasted effort by the NEPA team and delays in production of the NEPA document.

- **Document review schedule.** The production of an EA or EIS, especially a large EIS, involves overlapping reviews of multiple chapters and technical reports. In addition to preparing an overall project schedule, it is helpful to prepare a document review schedule that lists the assignments and timeframes for reviews of chapters and discipline reports, so that all team members are aware of their roles and deadlines.

- **Staged reviews of discipline reports.** It is a good practice to stage the reviews of discipline reports that support the analysis in the NEPA document. With a staged review, the draft discipline reports are initially reviewed before the NEPA document chapters are drafted and then are reviewed again after the NEPA document chapters are nearly complete in order to ensure consistency between the NEPA document and the discipline reports.

- **Tracking lead agency reviewers' comments and how they were addressed.** The document team should have a system for tracking the comments submitted by lead agency reviewers (e.g., FHWA and state DOT staff) and documenting how they were addressed.

  - One option is to prepare matrices that list comments from lead agency reviewers and explain how they were resolved. Comment–response matrices help to reduce the risk that reviewers' comments will be overlooked; they also provide a useful tool for identifying common issues in reviewers' comments and for resolving conflicting comments. The main drawback of this approach is that the matrices can be time-consuming to prepare and maintain.

  - Another option is to use the track–changes feature in Word for reviewers to enter comments and for authors to respond to those comments. This approach generally is less time-consuming than preparing comment-response matrices. The main drawback of this approach is that it can be more difficult to keep track of the comments received and how they were resolved.

  Where practical, comments received from lead agency reviewers should be maintained in a central location, such as a secure website accessible to members of the project team. This repository also can be used to maintain copies of each version of a document that was circulated to the lead agencies for review.

- **Seeking input from cooperating and participating agencies during preparation of the NEPA document.** Cooperating agencies often are given the opportunity to review a draft of the entire NEPA document before the document is published. Even when that is not done, it can be useful to share specific portions of the NEPA document with cooperating agencies (or other participating agencies) prior to publication. Seeking agency input prior to publication takes time, and is not always feasible, but it can help to improve the overall quality of the document and reduce the risk of receiving negative comments on the published document.

- **Creating a "core team" to resolve comments.** When there are many reviewers, or there are divergent views among reviewers, it is especially important to have a rigorous system for resolving conflicting or unclear reviewers' comments. One effective approach is to create a core team—ideally, a half-dozen individuals or less—who meet regularly to review and resolve difficult questions raised by reviewers' comments.

B. OVERALL DOCUMENT QUALITY

1 | Page Layout

A reader's ability to absorb complex information can be enhanced by effective page-layout techniques. These techniques include:

- **Sidebars and call-out boxes.** Sidebars and call-out boxes can be used to highlight important conclusions, explain technical terms, provide cross-references, and provide background that is important but not central to the main point covered in the text. For example, if there was a debate about which model to use for an impact analysis, a sidebar could be used to explain the models that were considered and the reasons why one model was chosen over another. If sidebars are to be used, the page layout should include a wide margin (white space) that allows room for the sidebar.

- **Use of fonts and white space.** The appearance of a document makes an important difference in the reader's ability to absorb information. Readability can be enhanced by a well-designed layout that includes an easily readable font and effectively employs white space. In general, an effective layout breaks up information into digestible chunks rather than overwhelming the reader with lengthy blocks of dense text.

- **Use of headings.** Headings can both enhance and detract from the reader's ability to absorb information. When used effectively, headings help to break up the text and help the reader to navigate easily within the document. On the other hand, too many headings can be distracting and make the document harder to follow; the same is true for lengthy heading numbers (e.g., Section 1.1.2.1.2). To strike the right balance, it is useful to review the table of contents and assess whether the headings—when read in isolation from the text—provide an effective roadmap to the content of the chapter or report.

- **Placement of graphics, tables, and text.** Graphics and tables can be distracting if the reader has difficulty correlating those elements to the information provided in the text. Graphics and tables should always be specifically referenced in the text, and the text should explain the key points that are made by the graphic or table. In addition, to the extent possible, graphics and tables should appear in close proximity to the corresponding text—ideally on the same page or on the following page.

- **Use of color.** Color can help to break up the monotony of black-and-white text. For example, an accent color is sometimes used for section headings, figure headings, and text boxes. If an accent color is used, care should be taken to ensure that it does not impair readability; colored text on colored backgrounds can be difficult for elderly or other visually impaired readers. Cost considerations also may preclude the use of accent colors; the use of color on every page can significantly increase production costs for paper copies of the NEPA document.

Using these techniques may require the involvement of team members with expertise in document layout and design. In addition, some of these techniques may introduce additional steps into document production. Therefore, while layout techniques may improve the quality of the NEPA document, they do not necessarily simplify preparation. It is important to take these additional efforts into account when preparing project schedules and budgets.

2 | Writing Quality and Style

Text in the main body of a NEPA document should be written for readers who lack technical expertise in the subjects being addressed. As one court explained, the document "must be organized and written so as to be readily understandable by governmental decision-makers and by interested non-professional laypersons likely to be affected by actions taken...."[5]

Clear writing involves explaining complex topics in a way that can be readily understood by most readers. Some effective techniques include:

- **Clear, succinct sentences.** Using plain language, the active voice, and short sentences helps to make complex topics easier to understand. For example, one recent NEPA document defined mobility very simply: "Mobility is the easy movement of people and goods through an area."

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5   *Oregon Environmental Council v. Kunzman,* 817 F.2d 484, 494 (9th Cir.1987).

- **Use of bullets.** Bullets provide a way to highlight a series of distinct points, which could be blurred together if they were all lumped into a single block of text. For example, bullets can be used to summarize the elements of an alternative, the reasons an alternative was eliminated, and the consequences of the preferred alternative and other alternatives.

- **Key terms and concepts defined.** Clear writing does not require avoiding the use of technical terms. In some cases, clarity *requires* using a specific term—for example, when that term plays an important role in the environmental analysis. The key to clear writing is to explain those terms when they are first used. The explanation should be easy to understand and should be prominent—for example, in a text box, sidebar, or boldface font in the body of the text. Footnotes also can be used to define key terms.

- **Consistent use of subjective terms.** NEPA documents commonly use subjective terms to describe impacts—for example, words such as minor, moderate, severe, or substantial. If similar terms are used interchangeably, the overall effect can be confusing. It is useful to establish a limited set of terms that all drafters are required to use, and define those terms in the NEPA document.[6]

- **Consistent use of "would" and "will."** The verb tense in a NEPA document should be consistent with the status of the lead agency's decision regarding the alternatives. The word "would" conveys that a decision has not yet been made; the word "will" conveys that a decision *has* been made. Therefore, as a general matter, "would" should be used when more than one alternative remains under consideration; "will" should be used in a NEPA decision document when referring to the selected alternative.[7]

- **Logical, well-reasoned conclusions.** One of the most important attributes of a high-quality NEPA document is the logical reasoning that supports important conclusions. Drafters should be encouraged to develop outlines that identify the major points in support of important conclusions, and then use those outlines as the framework for developing the text in the NEPA document. Reviewers should attempt to identify the major points in support of a conclusion and ensure that each is supported by relevant facts with citations to supporting data. If the logic is not clear to reviewers on the NEPA team, it will not be clear to the public, agencies, and the courts.

- **Fairness and objectivity.** The writing in a NEPA document should reflect a neutral, objective tone; it should convey a sense of detachment and impartiality. Achieving this tone requires careful attention to word choice. Words that are emotionally charged (e.g., "destroy" or "devastate") generally should be avoided, as should words that convey salesmanship. Impartiality also is conveyed through the substance of the writing, by:

  - avoiding overstatement;

  - describing alternatives in a comparable level of detail;

  - acknowledging opposing points of view, and;

  - disclosing potential shortcomings in the agency's own analysis.

3 | Document Structure

For many years, it was common practice for all EISs (and most EAs) for highway projects to conform closely to the standard format described in the CEQ regulations. If the format was modified, the changes were typically modest. Departures from the standard format were discouraged by the FHWA Technical Advisory on NEPA document preparation (T6640.8A), which recommended following the standard format in the CEQ regulations.

In a July 2006 memorandum, FHWA clarified that alternative approaches are encouraged if they convey information more effectively.[8] As recommended in that guidance, the state of the practice has evolved to include variations on the standard format. Some variations include:

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6   As a general rule, it is advisable to avoid use the word "significant" (or variations of that term) in a NEPA document, *except* when that term is being used deliberately as part of a determination of significance under NEPA or under a state law such as the California Environmental Quality Act (CEQA).

7   Practices vary regarding whether to use "would" or "will" when a preferred alternative has been identified but a final decision has not yet been made. In some cases, "will" is used when describing the preferred alternative; in others, "would" continues to be used. Practitioners should look to the lead agency for guidance on whether to use "would" or "will" when referring to the preferred alternative.

8   F. Skaer, FHWA, *Memorandum: Improving the Quality of Environmental Documents* (July 31, 2006).

- **Combining the Affected Environment and Environmental Consequences chapters.** Combining these chapters helps to reduce duplication and can be easier for readers to follow because information about a resource is consolidated in one place. Typically, the combined chapter addresses regulatory setting, existing conditions, impacts, and potential mitigation measures.

- **Placing the Affected Environment chapter before the Alternatives chapter.** This approach reverses the normal order of the Alternatives chapter and the Affected Environment chapter. By placing the Affected Environment chapter first, it gives the reader an understanding of the environmental context—including any important environmental constraints—before presenting the alternatives. This approach is permissible but has not been widely used. A variant of this approach condenses the Affected Environment chapter and re-names it "Environmental Context."

- **Adding a "Comparison of Alternatives" chapter.** This approach breaks the Alternatives chapter into two parts: "Alternatives Considered," which describes the alternatives development and screening process, and "Comparison of Alternatives," which evaluates the detailed-study alternatives.[9] With this approach, the Comparison of Alternatives is placed after the Environmental Consequences chapter.

- **Adding a Mitigation Chapter.** Mitigation commitments are routinely included in NEPA documents, but often they are scattered throughout the document, making it difficult for the reader to understand the full extent of those commitments. This concern can be addressed by including a single chapter that includes a comprehensive list or summary of the commitments contained elsewhere in the document. If a mitigation chapter is included, it is important to check that chapter for consistency with mitigation discussions elsewhere in the document (e.g., in the environmental consequences chapter).

- **Adding a Transportation Issues Chapter.** Many NEPA documents for highway and transit projects include a separate transportation chapter. This format provides an efficient way to present information that otherwise would be scattered—such as the data sources and methods used in traffic modeling; the description of the existing transportation system; the alternatives' effects on the existing transportation system; and the alternatives' ability to meet the purpose and need.

- **Adding a Cost and Finance Chapter.** Issues related to project cost and financing (including tolling) may play an important role in the NEPA process, especially for large-scale projects where the availability of funding is uncertain. Where these issues are important to the analysis of alternatives, a separate chapter can be included to present cost estimates; explain how cost estimates were developed; describe potential funding sources, including tolls; and address any related issues, such as potential use of public-private partnerships or other innovative financing methods. A variation of this approach is to include a separate section on cost and financing in the Alternatives chapter.

- **Adding a Phasing Chapter.** For large projects, phased implementation is sometimes proposed as a way to accommodate funding constraints. While not required, a phasing chapter can be included to describe the potential implementation phases as well as the potential impacts associated with each phase. Unless the phasing sequence has been determined, the phasing chapter should note that actual implementation will not necessarily follow the exact phasing sequence that is described in the EIS. A variation of this approach is to include a separate section on phasing in the Alternatives chapter.

When a non-standard format is used, it is important to make sure that all of the required information is included and can be easily found. To this end, it may be helpful to include a table that correlates the document's chapters to the elements required in the CEQ regulations. To be most useful, this table should be included early in the document—for example, in the Summary chapter or in a preface to the document.

4 | Navigation

The basic aids to navigation in any published document are a table of contents and an index. These tools, while useful, are limited: they require a reader to turn to the front or back of a large document and then hunt for a specific page. Readability can be enhanced by providing additional navigational aids that help to orient readers within the document. One way to think about a navigational aid is to imagine a reader who opens the document at a random page and begins flipping through the document looking for a specific topic—without using the table of contents or index. Can that reader locate the information he or she is looking for?

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9   See NCHRP Report 25-25(01), *Synthesis of Data Needs for EA and EIS Documentation: A Blueprint for NEPA Document Content* (Jan. 2005).

Including useful navigational aids can be done relatively easily, without greatly adding to the work involved in preparing the NEPA document. Some examples include:

- **"How to Use This Document (or Chapter)."** A brief guide for readers—as short as a single paragraph—can be included at the very beginning of the document or at the beginning of a chapter. This guide is especially useful if the structure or layout of the document includes any unusual features. For example, if the document does not follow the standard organization recommended in the CEQ regulations, the guide for readers could be used to explain where all of the required information can be found.

- **Roadmaps.** A roadmap is an overview of the content of a document. The overview serves a similar purpose to a table of contents, but can be more effective because it includes some explanation of the content rather than simply listing chapter or section titles. The roadmap is often presented in bullet-point form; each bullet describes a chapter or section. Text boxes or sidebars also are effective at making the roadmaps readily visible to the reader.

- **Table of contents in each chapter.** Readers often engage with a document by going directly to a specific chapter and then looking for information within that chapter. In addition, because NEPA documents are now made available electronically, some readers will only download individual chapters. For those readers, it is useful to find a chapter-specific table of contents that leads the reader directly to the relevant information within that chapter.

- **Sections names/numbers in headers or footers.** Including section names and numbers in the header or footer of an EA or EIS helps to orient the reader. For example, a reader may know that wetlands are covered in Section 4.14, and then turn to Chapter 4 and begin looking for that section. If the headers and footers contain the section names and numbers, the reader can easily locate Section 4.14 without needing to remember the exact page on which that section begins.

- **Contents of CD or DVD listed in main document.** It is increasingly common for some of the contents of an EA or EIS—typically, appendices—to be included on a CD or DVD rather than being included in the printed copy of the document. When this is done, it is a good practice to list the contents of the disc in the table of contents of the printed copy of the NEPA document. This practice alerts the reader to the type of information that is included on the disc, which is especially beneficial for readers who do not have a copy of the disc.

- **Searchability of PDFs.** Most NEPA documents are now published in electronic form - typically, Adobe portable document format (PDF). One of the most efficient ways to find information is by searching within the electronic version of the document, but this can be done only if the document is text-searchable. Appendices, in particular, often include scanned copies of documents that are not text-searchable. Converting these documents to a text-searchable format makes it much easier for readers to locate information in appendices.[10]

- **Cross-referencing.** Cross-references provide a vital link to supporting information contained in other parts of the NEPA document. With many chapters in progress at the same time, individual chapter authors may not be able to include accurate or complete cross-references in their initial drafts. Therefore, the review process should include a deliberate effort to insert cross-references where appropriate and to ensure that all cross-references are accurate. On a related note, cross-references to specific pages are prone to error because of pagination changes during production; cross-references to sections or sub-sections usually are sufficient and are much less prone to error.

- **Hyperlinks in electronic documents.** Most NEPA documents are now produced in electronic formats, in addition to paper copies. Electronic formats allow for the inclusion of hyperlinks, which also assist the reader in navigating quickly and easily within the NEPA document.

5 | Summary and Abstracts

The *Improving the Quality of Environmental Documents* publication noted that the Summary chapter of a NEPA document "is a vital component, as it may be the only part of the document that many people read. It must adequately and accurately summarize all key aspects of the EIS."[11] The report suggested that the Summary provide "provide a synopsis of why the project is needed, what alternatives were considered, how the alternatives affect the environment, and (at least in the FEIS) the rationale for selecting the preferred alternative."[12]

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10 EPA now requires that all EISs be filed with EPA in electronic format, and its electronic filing requirements specify that the EIS must be text-searchable. See EPA, "Electronic Submittal of Environmental Impact Statements to EPA" (undated).

11 FHWA, AASHTO, and ACEC, "Improving the Quality of Environmental Documents" (2006), p. 12.

12 Ibid.

As the *Improving the Quality of Environmental Documents* publication suggests, a strong Summary chapter presents in distilled form the key conclusions of the NEPA document. The Summary chapter can be circulated as a stand-alone document, in lieu of the full EIS, when the EIS is unusually long.[13] Because the Summary chapter is intended to summarize the NEPA document as a whole, it can be a substantial document. The Summary in an EIS is often 20 to 30 pages long.

An abstract is a complementary tool that can be used—along with a Summary chapter—to ensure that essential facts are not overlooked. In contrast to a summary, an abstract is an even more condensed distillation of information. Abstracts can be used in two different ways:

- **Abstract for the entire document.** An abstract (sometimes called a fact sheet or preface) can be included at the beginning of the NEPA document, typically just after the title page and before the table of contents. In this form, an abstract typically provides a brief description of the proposed action, the structure of the document, key points of contact for the project, an overview of the study process, and instructions on how to comment. Unlike the summary chapter, an abstract is short—typically one to three pages.
- **Abstract for a chapter or section.** An abstract to a chapter or section summarizes the information included in that portion of the NEPA document. For example, some EAs and EISs have included a short abstract at the beginning of each major section in the impacts chapter. The abstract for each section summarizes, in just a sentence or two, the key findings in that section.

6 | Presenting Data

In any NEPA document for a transportation project, it is necessary to present data on issues such as population growth, traffic congestion, air emissions, and noise levels. The volume of data can be overwhelming, even for readers with technical expertise.

The presentation of data can be improved simply by moving unnecessary detail out of the main body into appendices. For example, a table that list traffic congestion levels at dozens of intersections could be included in a technical report, with the main body of the NEPA document listing only those intersections where traffic congestion will exceed acceptable levels.

The presentation of data also can be improved by ensuring that standard practices for discussing data are followed consistently—for example, giving the units of measurement, providing citations to data sources, and explaining in text the significance of the numbers presented in a table. For example, when describing noise impacts in decibels, it is helpful to draw analogies to familiar noises of similar levels and to give the thresholds at which most people find noise levels unacceptable. It also is a good practice to explain any anomalies or apparent inconsistencies in the data.

Visual elements also can help the reader to grasp the significance of the data, with less need for lengthy explanation.[14] Some good practices include:

- **Overlaying data on project area figures.** Data often are used to describe conditions in a specific location. For example, a NEPA document may include data regarding traffic congestion on a region's road network or noise impacts within a residential area. For this type of data to be meaningful, the reader needs to connect the numbers to the location that is being described. Figures can help the reader to make this connection. For example, data regarding traffic back-ups (queue lengths) can be presented on a figure showing the roads where those back-ups would occur.
- **Using bar charts.** Bar charts provide a simple but effective way to convey the relative magnitude of different numbers. Bar charts are most effective when the reader can quickly grasp the relevant point of comparison. The reader should "get it" without having to read a paragraph that explains what the chart means.
- **Using tables that are easy to understand.** Tables used in the main body should be concise and easy to understand. They should have short titles that convey the purpose of the table—for example, "Variation in Transit Use by Income Group." The accompanying text should explain the key conclusions drawn from the data in the table. In addition, for

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13   The CEQ regulations authorize "circulating the summary instead of the entire environmental impact statement if the latter is unusually long." 40 CFR §1502.19.

14   For additional ideas on how to "make it visual," refer to the Washington State Department of Transportation's *Reader-Friendly Toolkit* (2008).

ease of navigation, the table should be located close to the corresponding text and the text should always include a clear cross-reference to the table.

- **Color-coding data in a table.** When data are presented in a table, colors can be used to highlight important differences among the numbers—for example, to distinguish acceptable vs. unacceptable levels of service when presenting traffic congestion data.

- **Using symbols to summarize differences.** In some cases, symbols are used as a tool for summarizing the differences among alternatives. For example, the summary chapter of a NEPA document can include a table that summarizes the impacts of the alternatives by assigning symbols of varying shapes or colors to signify high, moderate, or low impacts. If symbols are used, care should be taken to avoid glossing over important distinctions or exaggerating differences among alternatives.

7 | Figures

Figures help to enhance readability by enabling a reader to visualize conditions that are described in the text. But a figure can detract from readability if the figure itself is not clear, or if the reader finds it difficult to correlate the description in the text to the features shown on the figure.

The following good practices can help to maximize the effectiveness of figures in NEPA documents:

- **Seek simplicity.** The most effective figure is one that can be readily understood without referring to the corresponding text. Document preparers should consider "what is the simplest way to convey this information?" In some cases, a simple line-drawing may be more effective than a more sophisticated graphic.

- **Label key elements that are discussed in the text.** For a figure to be effective, features discussed in the text should be labeled on the figure. For example, if the text refers to a series of intersections or noise-sensitive receptors, the reader expects those features to be labeled on the accompanying figure. Readers are likely to become frustrated if the figures do not clearly identify roads, receptors, or other features discussed in the text.

- **Make important elements stand out against the background.** The background of a figure—e.g., the base map—should provide enough information to orient the reader, but not so much that it distracts from the primary focus of the figure. In addition, it is helpful to use light colors for the background map and bold colors for the major elements.

- **Ensure that the legend is clear and complete.** Including a clear and complete legend should be a standard practice. To ensure that this is done, the review process for a NEPA document should include special attention to legends. In addition, if colors are used for different features, the review process should ensure that colors are clearly distinguishable from one another on both the figure and the legend.

- **Include citations for figures.** The credibility of data depends on whether the data can be traced back to its source. Therefore, it is a good practice to include a citation to data sources in a footnote to a figure. For example, if a figure shows the locations of environmental justice populations, the figure should include a citation to the Census data or other sources used to identify those populations.

- **Include a succinct "headline."** Figures are most effective when they are designed to highlight a single major point. One way to achieve that goal is to include a succinct phrase—a headline—above the figure. For example: "Study Area Population Projected to Double by 2050." This approach also can be used for tables. If this approach is used, care should be taken to ensure that the headline does not misstate or oversimplify the conclusions to be drawn from the figure.

- **Include scale and north arrow on maps.** Maps should always include a scale and a north arrow. If the map is not to scale, that fact should be noted on the map.

- **Boldface references to figures in the text.** Readers may view a figure first and then search for the text that refers to that figure. For these readers, it is helpful to boldface the reference to the figure, so that it stands out from the surrounding text. The bold font will help the reader find the text that explains the figure.

- **Create a review checklist for figures.** Ensuring that figures are clear and error-free requires a concentrated effort during the final review process for the NEPA document. To facilitate this effort, it is helpful to prepare a review checklist for figures. The checklist could include specific requirements for various types of figures, such as maps, bar charts, and visualizations.

As these practices illustrate, the effective use of figures does not require unusual steps or specialized expertise (although of course that expertise can be useful). The key is to take basic steps that enable the reader to understand what is shown on the figure and to make the connection between the figures and text.

8 | Visualizations

Visualizations help the reader to "see" what the project would look like in the real world. For many readers (including those with technical expertise), visualizations will be among the most valuable parts of an EIS. Lengthy text and engineering drawings can be confusing; a visualization that shows what a project would look like can be the picture that is worth a thousand words.

There are many visualization techniques that can be used in NEPA documents. Some common examples include:

- **Computer-generated 3-D renderings.** Transportation projects include complex structures that can be difficult to describe in text or to depict in two dimensions on plan sheets. Computer-generated renderings give the reader a better understanding of the size and configuration of the structure.
- **Photo simulations.** By inserting project elements into a photograph of the existing landscape, photo simulations can help to show how the project would alter the existing conditions. This approach can be especially useful in depicting the visual impacts of a project.
- **Realistic backdrops for drawings.** Realistic backdrops showing human figures or vegetation can help to make engineering drawings more easily understandable to readers. For example, the value of a cross-section drawing can be enhanced by adding artwork that gives the reader a sense of context and scale. The artwork could include vehicles, pedestrians, bicyclists, or roadside vegetation.

If visualizations will be needed, it is important to allow for their development in the project schedule and budget.

9 | Appendices and Technical Reports

One of the most common strategies for increasing the readability of NEPA documents is to shift some content from the main body to appendices.[15] Technical reports that are relied upon in preparing an EIS are usually included in appendices or are made available on the project website when the NEPA document is published. Techniques for using appendices and technical reports effectively include:

- **Discussing relevant technical reports at the beginning of each chapter or section.** Most major sections of the NEPA document are supported by one or more technical reports. One way to help the reader locate these supporting documents is to include, at the beginning of each chapter or section, a brief paragraph identifying the technical reports that were relied upon in the development of that chapter or section. For example, the introduction to the cultural resources section in the environmental consequences chapter could list the key cultural resources technical reports or studies.
- **Provide specific cross-references to relevant content in the appendices.** Many appendices are quite lengthy, often hundreds of pages. If the main body includes a cross-reference to the appendix as a whole, it can be difficult for the reader to know where to find the relevant information *within* that appendix. When the appendix is large, it is more useful to include a cross-reference to a specific section or sub-section in the appendix.
- **Provide a detailed list of the appendices (and other technical reports) in the main volume of the NEPA document.** It is important to provide the reader with a roadmap to the information contained in the appendices and in any technical reports that are not published as part of the appendices. One effective way to provide that roadmap is to include a complete list of all appendices and technical reports in the table of contents to the main body of the EIS—because that table of contents is the first place that most readers will turn when attempting to locate a specific chapter, section, or appendix.

15　This approach was recommended by the CEQ in guidance more than 30 years ago. *See* CEQ, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" (March 1981), Question 25.

- **Provide aids to navigation *within* the appendices, if the appendices are lengthy or include several parts.** The appendices themselves should be organized and formatted in a manner that enables the reader to find relevant information. Relatively simple aids to navigation can be very effective—for example, providing a table of contents at the beginning of a lengthy appendix and providing consistent pagination throughout the appendix. It also is helpful to make electronic versions of the appendices (PDFs) fully text-searchable.

- **Include key appendices in the printed document if they are not voluminous.** Reducing the length of the printed NEPA document is not an end in itself; the goal is to make the document more usable. In some cases, usability is enhanced by including key appendices in the printed volume. For example, the printed appendices might include important agency correspondence, alternatives screening reports, Section 4(f) documentation, or a Section 106 memorandum of agreement.

- **Be selective in deciding what to include in appendices.** Appendices to the NEPA document should be used to ensure that readers have access to *important* supporting documents; overly voluminous appendices should be avoided. If technical reports or other documents are not included in the appendices, they should be maintained in the project file. A well-organized filing system complements a well-organized NEPA document: the more efficient the filing system, the easier it is to respond quickly and accurately to public requests for supporting documentation.

It is important to remember that effective use of appendices requires planning, which should begin early in the development of the NEPA document. It is a good practice to develop a written plan for the document (e.g., an annotated outline) that identifies the list of appendices and the materials that will be included in each appendix. This plan is likely to evolve, but developing it early in the NEPA process helps to provide a framework for deciding what to include in the main body and what to include in each of the appendices.

10 | List of References

Many NEPA documents include a references chapter, which lists the sources that were relied upon in developing the document. The usefulness of this bibliography can be enhanced by grouping the references so that they correspond to the chapters in the main body of the document. Variations of this approach include:

- **Insert chapter headings within the references chapter.** With this approach, all of the references are listed in a single chapter, but within that chapter they are grouped under headings that correspond to the chapters in the main body of the NEPA document—for example, Purpose and Need, Alternatives Considered, etc.

- **List the references at the end of each chapter.** This approach eliminates the references chapter altogether; instead, there is a separate list of references at the end of each chapter in the main body of the NEPA document.

- **List the references at the beginning of each chapter.** Another possible approach is to list the references at the beginning of each chapter—for example, in a text-box or sidebar placed in the introduction. This approach introduces the reference documents at the outset of the discussion, which may be helpful to readers. This approach works well when the list of references is relatively short.

11 | Electronic Publication

Both the CEQ regulations and FHWA/FTA regulations—issued in 1980 and 1987, respectively—presume that the "publication" of a NEPA document involves the printing and circulation of paper copies.[16] Today, of course, it is common practice to circulate NEPA documents primarily by distributing an electronic version on the internet and on discs (CDs or DVDs), with paper copies available for viewing at libraries and other locations and additional paper copies available free or for purchase.

With the increasing reliance on electronic publication, any discussion of readability must also take into account the practical aspects of downloading, printing, and searching electronic versions of the document. The following practices can help make the electronic versions of the document as easy to use as possible:

16   *See* 23 CFR 771.125 ("The initial printing of the final EIS shall be in sufficient quantity to meet the request for copies which can be reasonably expected from agencies, organizations, and individuals. Normally, copies will be furnished free of charge. However, with Administration concurrence, the party requesting the final EIS may be charged a fee which is not more than the actual cost of reproducing the copy or may be directed to the nearest location where the statement may be reviewed.").

- **Provide a range of downloading options.** Some readers want an electronic version of the entire NEPA document, while others want only specific chapters. To accommodate both types of readers, the project website should give readers the ability to download the entire document (or at least an entire volume) with a single click, while also allowing them to download chapters individually. Another helpful approach is to give users the ability to select specific chapters and then download those specific chapters in one batch.[17]

- **Use 8.5 x 11 format to facilitate printing.** Many readers will only have the ability to print on letter-size paper (8.5 x 11 inches), if they are printing the NEPA document at home. For these readers, pages in larger formats can present special challenges, because they may not be legible—or may be difficult to read—when printed on letter-size paper. This concern can be addressed, at least to some degree, by printing NEPA documents primarily in letter-size format, with larger sizes (e.g., legal-size or 11 x 17) used only for certain large figures.

- **Ensure that electronic documents are fully searchable.** Electronic documents produced as PDFs should allow readers to conduct full-text searches within the main body of the document and, ideally, in the appendices.[18] PDFs created directly from word processing files are text-searchable. PDFs created from scanned documents can be converted to a text-searchable format by using the optical character recognition (OCR) function.

C. DEMONSTRATING COMPLIANCE WITH NEPA AND RELATED REQUIREMENTS

1 | Purpose and Need

The Purpose and Need statement is among the most important chapters in a NEPA document, because it provides the basis for determining the range of alternatives considered in detail and also plays a key role in determining the alternatives that can be approved under Section 404 of the Clean Water Act and Section 4(f) of the USDOT Act.

A strong Purpose and Need statement should (1) clearly describe each of the purposes and needs; and (2) provide specific factual information that supports the existence of those needs.

For practitioners, the challenge lies in translating this advice into practice. The following approaches can help:

- **Use plain language to describe purposes and needs.** The Purpose and Need statement should use words that most readers can easily understand and relate to their own experience. Jargon (e.g., "roadway deficiencies") should be replaced with plain language (e.g., "By today's standards, the bridge is too narrow.") When jargon is used, it should be explained in the Purpose and Need chapter itself. A sidebar or text-box can be used to introduce technical terms.

- **Use bullets or numbering to itemize purposes and needs.** Many transportation projects serve multiple purposes—for example, to reduce congestion and to improve safety. Attempting to capture all of the elements of the purpose in a single lengthy sentence may create confusion. If the project serves several distinct purposes, they can usually be expressed most clearly in a series of bullets.

- **Provide specific supporting data for each need.** Each of the project needs should be supported with data or other relevant information. In deciding what data to include, it is useful to consider each element of the need separately and ask "Do we have the data to support *this* need?" For example, if safety is identified as a need, the Purpose and Need statement should include data demonstrating the existence of the safety problem.

- **Use graphics to illustrate needs.** Figures, maps, renderings, and other visual elements should be used to illustrate important aspects of the Purpose and Need. For example, if the need is to address road congestion, a map could be included showing the locations where congestion will occur and, ideally, the severity of the congestion in those locations. If the need is to replace a structure at risk of catastrophic failure, a figure could be included showing the problems with the existing structure.

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17 The website for the Intercounty Connector EIS, which was published in 1996, allows readers to "create your own PDF" by selecting specific chapters for download: http://www.iccproject.com/feis-download.php.

18 EPA requires the electronic versions of a NEPA document to be filed with EPA in text-searchable PDFs. *See* EPA, "Electronic Submittal of Environmental Impact Statements to EPA" (undated).

- **Describe agency and public involvement in developing the purpose and need.** Under 23 USC 139, FHWA is required to give participating agencies and the public an "opportunity for involvement" in developing the Purpose and Need for an EIS. To document compliance with this requirement, the EIS should describe the process for gathering input on the Purpose and Need, identify any major issues that were raised, and explain how those issues were addressed. One good practice is to include this discussion in the Public Involvement chapter and provide a cross-reference to that discussion in the Purpose and Need chapter. It also is acceptable to include this discussion in the Purpose and Need chapter itself.

For additional information on developing a Purpose and Need statement, refer to the *AASHTO Practitioner's Handbook, Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects* (2006).

2 | Alternatives

In recent years, FHWA has placed renewed emphasis on improving the readability and reducing the length of the alternatives chapter. It is now a common practice to document alternatives development and screening in a technical report, with a brief summary of that process in the main body of the NEPA document. In some cases, the structure of the alternatives chapter itself is changed: the chapter begins by describing the alternatives carried forward for detailed study and discusses alternatives screening at the end.

Condensing the alternatives chapter helps to focus the analysis on the issues of greatest interest to most readers; organizational changes also can help to improve readability. But as these changes are made, it is important to ensure that the analysis remains rigorous and precise. Some effective approaches that promote both readability and legal sufficiency include:

- **Use simple, easy-to-remember names for alternatives.** Project team members should give careful attention, early in the project, to the naming conventions that will be used for the alternatives. A numbering system is logical and simple to implement, but can be confusing because the number itself does not describe any aspect of the alternative. Descriptive names are easier to remember, but can be more cumbersome. One way to strike the balance is to assign each alternative both a number and a brief descriptive "nickname." This approach provides the flexibility to use the number alone (e.g., "Alt. 2") where space is constrained, or to use the number and nickname together where space allows (e.g., "Alt. 2 - Eastern Loop").
- **Explain the reasoning, not just the results, of the screening process.** The alternatives chapter, even if condensed, should describe a logical process that led to the screening decisions. This explanation should describe the preliminary alternatives considered, the criteria used to screen alternatives, and the rationale for eliminating some alternatives while others were carried forward. Visuals can be useful in depicting the steps in the screening process. Tables can be useful in listing the screening criteria and performance measures for those criteria.
- **Summarize the major elements of each detailed-study alternative.** The main body of the NEPA document should describe the major elements of each detailed-study alternative in a way that makes it easy for the reader to see the key differences. One effective approach is to provide a bullet-point list of the key elements of each alternative, with detailed descriptions of the alternatives in an appendix.
- **Describe the improvements included in the No Action alternative.** The No Action alternative is always one of the alternatives carried forward for detailed study. Like other detailed-study alternatives, it should be clearly described. The main body should summarize any noteworthy future improvements that are assumed as part of the No Action alternative; details should be provided in an appendix.
- **Use side-by-side figures to show differences among alternatives.** One useful technique for describing alternatives is to present them in a series of side-by-side figures, in which each alternative is shown on a separate figure.
- **Describe refinements made during the NEPA process.** After the detailed-study alternatives are identified, their design may be modified based on stakeholder input, additional engineering, more information about environmental impacts, or for other reasons. While not every minor change needs to be described in the NEPA document, it is helpful to summarize the noteworthy changes and explain why they were made.
- **Describe agency and public involvement in developing alternatives.** Under 23 USC 139, FHWA is required to give participating agencies and the public an "opportunity for involvement" in developing the alternatives for an EIS. To document compliance with this requirement, the EIS should describe the process for gathering input on the alter-

natives, identify any major issues that were raised, and explain how those issues were addressed. One good practice is to include this discussion in the Public Involvement chapter and provide a cross-reference to that discussion in the Alternatives chapter. It also is acceptable to include this discussion in the Alternatives chapter itself.

- ☐ **Document alternatives development and screening in a technical report.** The main body of the NEPA document should summarize the development and screening of alternatives; the detailed explanation of that process should be included in a separate technical report in the appendices to the NEPA document. Where the alternatives development process occurs over many years, the description of that process may be covered in several separate reports, prepared at different times. In those cases, it is helpful to prepare a single report that summarizes the history of the alternatives development process.

For additional information on developing the range of alternatives, refer to the AASHTO *Practitioner's Handbook, Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects* (2006).

3 | Methodologies

In the interest of brevity and readability, it might seem logical to describe methodologies solely in appendices or elsewhere outside the NEPA document. But there are good reasons to describe methodologies, briefly and in plain language, within the main volume of the document:

- ☐ Describing the methodology can enhance the credibility of the NEPA document by helping the reader to see the careful, systematic process that was used to reach the results.

- ☐ Describing the methodology can be a useful a way to explain anomalies in the data. In some cases, the results may be misleading if the reader does not understand how they were developed.

- ☐ Describing the methodology can be a useful way to introduce technical terms or concepts that are important for the reader to understand—e.g., how noise levels are measured.

In general, detailed descriptions of methodologies should be provided in appendices or technical reports. However, the main body of the NEPA document should summarize important methodologies so that the reader has a basic understanding of how the results were developed. The following approaches can be used to discuss methodologies in the main body without adding excessive detail:

- ☐ **Include a methodology section just before the impacts analysis for each resource.** Many NEPA documents include a brief description of the relevant methodology just before the impacts analysis for each resource. For example, the methodology for noise analysis can be summarized at the beginning of the chapter or section that presents the noise impacts.

- ☐ **Explain methodologies in steps and use plain language.** One effective way to describe a methodology is to list the steps in bullets or a table. Even a complex process is easier to understand if it is broken down into steps. When describing methodologies, plain language is essential. A more detailed description can be included in an appendix.

- ☐ **Prominently define important technical terms.** If a technical term is used and is important to the analysis, the NEPA document should define it early and display the definition prominently (for example, in a text box or sidebar).

- ☐ **Explain noteworthy changes in methodologies.** There are times in any NEPA process when a methodology changes, new data becomes available, or there is some other change that alters the results of the previous analysis. When this happens, the credibility of the analysis is enhanced if the document acknowledges and explains the change.

- ☐ **Address any over-arching methodology issues at the beginning of the environmental consequences chapter.** The introduction to the environmental consequences chapter is a good place to address any over-arching issues regarding the methodology for impact assessment—for example, explaining the use of GIS mapping to calculate impacts.

4 | Commitments

Most NEPA documents include commitments relating to project design elements, measures to minimize or mitigate impacts, or other actions. A high-quality NEPA document clearly describes these commitments and explains how they will be implemented.

The following practices can help to improve the discussion of environmental commitments in a NEPA document:

- **Include a commitments list in the document.** Many NEPA documents now include a master list of commitments. This list can be included as its own chapter, as a section in the environmental consequences chapter, as part of the summary chapter, or elsewhere. One concern with including a master list is the potential for inconsistency between the master list and mitigation discussions elsewhere in the NEPA document. This risk can be managed by finalizing the master list and then going back through the document to ensure that all other references to mitigation are consistent with the master list.

- **Use definite language when describing a commitment.** The wording of a commitment is important. Wording that simply describes a possibility (such as "may") does not make a commitment. Definite wording (such as "will," "shall," or "must") conveys that a commitment is being made. Regardless of the specific term that is used, the wording should be consistent for all commitments.

- **Create and document a process for tracking and implementing commitments.** The credibility of the commitments in a NEPA document is enhanced if the document describes a systematic process for ensuring that the commitments are implemented. One good practice is to commit to establishing a commitment tracking database and assigning an independent environmental monitor to ensure that the commitments are carried out.

- **Cross-reference commitments in other documents.** Many of the commitments in a NEPA document are based on other documents, such as a Section 106 memorandum of agreement. There is always a risk of error when restating commitments from another document. This risk can be minimized by summarizing and cross-referencing the commitments in the other document, rather than re-stating them.

5 | Regulatory Compliance and Permitting Processes

Projects that require compliance with NEPA typically also require compliance with a host of other federal environmental laws, which protect historic properties, parklands, water resources, air quality, endangered species, and other resources. Federal actions also must comply with Executive Orders on wetlands, floodplains, environmental justice, and other topics.

When an EIS or EA is prepared, FHWA's NEPA regulations require that the FEIS or FONSI either (1) "document compliance" with the requirements under other laws and Executive Orders or, if that is not possible, (2) "reflect consultation with the appropriate agencies and provide reasonable assurance that the requirements will be met." (23 CFR 771.133)

Because of this requirement, compliance with other laws and Executive Orders should normally be discussed in a NEPA document. The appropriate level of detail will vary from project to project.

The following practices should help to ensure that the NEPA document sufficiently documents compliance with other laws and Executive Orders:

- **Describe the regulatory setting.** Many NEPA documents include a brief discussion of the regulatory setting before discussing impacts on a resource. This practice is an effective way to introduce relevant legal requirements and set the stage for documenting compliance. This approach is most effective if the requirements are described; it is less useful to recite a list of laws without explaining what they require.

- **Use correct terminology when describing findings.** Compliance with other laws often involves specific findings—for example, a finding that the project is "not likely to adversely affect" a threatened or endangered species. It is important to use precise wording when stating these findings, so that there is no confusion about whether the required findings have been made.

- **Document the steps taken to comply with consultation requirements.** Some laws define a consultation process that must be followed—for example, Section 106 consultation for historic resources. For these laws, demonstrating compliance involves showing that the required consultation has occurred. One effective way to document compliance with such laws is to include a table that lists the required consultation steps and shows when each one occurred.

- **Include dates of important documents and events.** Documentation of compliance should include specific dates— month, day, and year—for important events. For example, if the U.S. Fish and Wildlife Service issues a Biological

Opinion for a project, the NEPA document should not just say that the Opinion was issued; it should give the exact date on which the Opinion was approved.

- **Describe permitting requirements that affect the NEPA decision.** NEPA documents typically include a table listing required permits, with a brief description of the relevant requirement and the permitting agency. Some of these permits may have a major bearing on the NEPA decision, while others may be granted as a matter of routine regardless of which alternative is selected. For major permits that have the potential to affect the choice among alternatives, it is a good practice to explain the interplay between the permitting process and the NEPA decision—for example, summarize coordination with the permitting agency, analyze consistency with the permitting requirements, and describe the anticipated timing of the permit application.

- **Include key correspondence and reports in appendices.** The appendices to the NEPA document can be used to compile documents that help to demonstrate compliance with other laws. It is especially valuable to include correspondence in which other agencies have made or concurred in findings—for example, letters in which officials concur in "de minimis" findings under Section 4(f).

6 | Responses to Comments on NEPA Documents

The CEQ regulations require the final EIS to include responses to comments on the draft EIS and require copies of "all substantive comments on the DEIS (or summaries thereof where the response has been exceptionally voluminous)" to be attached to the final EIS. (40 CFR 1503.4) While the CEQ regulations do not require a comment period on an EA, it is common practice to make an EA available for public review before issuing a Finding of No Significant Impact; if comments on the EA are received, the FONSI typically includes or cross-references response to those comments.

The CEQ has not prescribed any specific format for responding to comments. However, in its "40 Questions" guidance, the CEQ does acknowledge that grouping comments is an acceptable practice: "If a number of comments are identical or very similar, agencies may group the comments and prepare a single answer for each group."[19] That guidance also emphasizes the need for specificity, especially when responding to specific criticisms of methodologies.

In more recent guidance, issued in 2012, the CEQ has emphasized that responses to comments on a draft EIS should be "reasonable and proportionate."[20] The 2012 guidance suggests that brief responses are adequate in some cases, while more complex questions should be addressed in greater detail.

In general, high-quality responses to comments will ensure that:

- Readers can readily ascertain the overall range of issues raised in the comments and understand how those issues have been addressed.
- Individual commenters can readily locate their own comments and the responses to their comments.
- Responses to similar comments are consistent with one another.
- The main body of the NEPA document is consistent with the responses.
- Specific, substantive comments receive specific, substantive responses.

The following practices are especially beneficial when responding to voluminous comments. These practices are suggestions only. It also is acceptable to respond to each comment individually in a traditional side-by-side format, where the comment is shown on one page and the response is shown on the facing page. The federal lead agency is responsible for determining the specific approach used for responding to comments in each case.

- **Include an index of commenters.** One of the simplest and most effective aids to navigation is an index that lists all commenters individually, with a cross-reference to the locations where responses to their comments can be found.

- **Provide summary responses to common issues.** As noted above, the CEQ allows similar comments to be grouped and addressed in a single response. This approach reduces duplication and streamlines the preparation of responses;

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19   CEQ, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" (March 1981), Question 29a.

20   CEQ, "Process for Preparing Efficient and Timely Environmental Reviews Under the National Environmental Policy Act," 77 Fed. Reg. 14473 (March 12, 2012).

it also makes it easier for readers to understand the range of issues presented and how those issues have been addressed. One variant on this approach is to provide summary responses to frequent comments (e.g., a "top 10" list), combined with individual responses for all comments.

- **Summarize key issues raised by regulatory agencies.** Many readers have an interest in understanding the concerns raised by agencies that have a role in reviewing or approving the project—for example, the U.S. Environmental Protection Agency. For these readers, it is helpful to include a synopsis of the comments received from the agencies. The synopsis can be included in the public involvement chapter of the final NEPA document, or in the appendix that includes responses to comments.

- **Where needed, prepare separate memoranda responding to detailed technical comments.** In some cases, commenters submit detailed technical comments prepared by their own experts—for example, a report challenging the methodology used in traffic forecasting. It may be difficult to respond adequately to these types of comments in a few paragraphs. Where a more extended response is needed, a technical memorandum should be prepared and attached to the responses.

- **If comments are addressed with summary responses, annotate comment letters with cross-references to relevant responses.** When summary responses are provided, it can be difficult for readers to understand how their individual comments have been addressed. It is beneficial to provide a tool that correlates the individual comments to the summary responses. One effective approach is to annotate the comment letters—for example, by bracketing each comment and assigning it a code that refers to the applicable summary response.

7 | Changes During the NEPA Process

The environmental analysis presented in a final NEPA document frequently includes updates to the analysis presented in the draft document. Some common examples include updates that result from the availability of new data; changes in background conditions; revisions to traffic or air quality models; changes in the design or location of alternatives themselves; or subsequent coordination, actions, or commitments.

When the updates are minimal, an agency can publish a final EIS that consists of "errata pages" and responses to comments on the draft EIS. [21] (40 CFR 1503.4(c)) For the reader, this format makes it easy to locate the new information; the new information is contained in the errata pages. One drawback of this format is that the reader has to refer to both the draft EIS and the final EIS, which can be cumbersome. FHWA guidance also allows the option of preparing a "condensed final EIS," which summarizes the draft EIS rather than re-publishing it in full. [22]

When the errata-page and condensed formats are not used, the final EIS consists of an updated version of the entire draft EIS. This format avoids the need for the reader to refer back to the draft EIS. For readers, the main drawback of this format is that it can be difficult to discern the new information within the final EIS.

The following techniques can enhance the readability and completeness of the final EIS by making it easier for the reader to identify content that has changed and new events that have occurred since the draft EIS:

- **Provide a roadmap to key changes at the beginning of each chapter.** One useful technique is to include a brief paragraph at the beginning of each chapter or major section of the final EIS, summarizing the key changes made to that chapter or section since the draft EIS. This approach is especially effective if the key changes are listed in bullets, with cross-references to the locations where the new information can be found.

- **Summarize agency coordination activities.** Much of the work that occurs between the draft EIS and final EIS (or between EA and FONSI) involves agency coordination, and often includes important agency actions—for example, a concurrence, finding, or other approval. Documenting these steps in the final EIS helps to demonstrate compliance with regulatory requirements. It also can be a good way to explain additional analysis that was performed at the request of another agency.

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21 Section 1319 of the Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted on July 6, 2012, also authorizes the preparation of a Final EIS consisting of errata pages. *See* FHWA, "Interim Guidance on MAP-21 Section 1319 Accelerated Decisionmaking in Environmental Reviews" (Jan. 13, 2014).

22 *See* FHWA, Technical Advisory T 6640.8A, "Guidance for Preparing and Processing Environmental and Section 4(f) Documents" (Oct. 30, 1987).

- **Acknowledge and explain any important changes to the analysis (e.g., new data, new models, new guidance).** When the final EIS contains updated analysis, it is important to give the reader some understanding of what actually changed. For example, rather than simply saying that traffic forecasts have been updated, the final EIS can explain that a new traffic model became available and was used. Similarly, when an agency issues a revised EA, or issues a draft EA followed by a final EA, it is advisable to acknowledge and explain any changes in the analysis.

- **Describe refinements to alternatives since the draft EIS.** It is common to make refinements to one or more alternatives—and, most often, to the preferred alternative—between the draft and final NEPA documents. The readability of the final document will be enhanced if the document clearly and succinctly summarizes refinements that affected the impacts analysis (rather than simply describing the preferred alternative without noting what has changed). If the refinements were made in response to comments on the draft NEPA document, the final document should point out the connection between the comments and the refinements, so that readers can see how the comments influenced the refinement of the alternatives.

- **Summarize the results of a reevaluation, if one was prepared.** When analyses are updated between the draft EIS and final EIS, the lead agency may need to prepare a reevaluation as the basis for determining whether a supplemental EIS is required. When a reevaluation is prepared, it is a good practice (although not required) for the final EIS to acknowledge the reevaluation and summarize its findings.

Reference Materials

Statutes, regulations, and guidance documents cited in this handbook, along with additional materials and sample documents, are listed in Attachment 2 and available on the Center for Environmental Excellence by AASHTO web site: http://environment.transportation.org.

Attachment 1: CEQ Regulations and Guidance

CEQ REGULATIONS AND GUIDANCE		
Topic	**Regulations/Guidance**	**Source**
Level of Detail	"Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail."	40 CFR 1500.1(b)
Reducing Length	"Agencies shall reduce excessive paperwork by: (a) Reducing the length of environmental impact statements by means such as setting appropriate page limits. (b) Preparing analytic rather than encyclopedic environmental impact statements. (c) Discussing only briefly issues other than significant ones. (d) Writing environmental impact statements in plain language. (e) Following a clear format for environmental impact statements. (f) Emphasizing the portions of the environmental impact statement that are useful to decisionmakers and the public and reducing emphasis on background material. (g) Using the scoping process, not only to identify significant environmental issues deserving of study, but also to deemphasize insignificant issues, narrowing the scope of the environmental impact statement process accordingly. (h) Summarizing the environmental impact statement and circulating the summary instead of the entire environmental impact statement if the latter is unusually long. ... (j) Incorporating by reference. (k) Integrating NEPA requirements with other environmental review and consultation requirements. (l) Requiring comments to be as specific as possible. (m) Attaching and circulating only changes to the draft environmental impact statement, rather than rewriting and circulating the entire statement when changes are minor. ..."	40 CFR 1500.4
Readability	"Environmental impact statements shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can readily understand them. Agencies should employ writers of clear prose or editors to write, review, or edit statements, which will be based upon the analysis and supporting data from the natural and social sciences and the environmental design arts."	40 CFR 1502.8
Page Limits EISs	"The text of final environmental impact statements ... shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages." Note: *The CEQ regulations themselves do not provide a recommended length for Environmental Assessments or Categorical Exclusions.*	40 CFR 1502.7
Organization	"Agencies shall use a format for environmental impact statements which will encourage good analysis and clear presentation of the alternatives including the proposed action. The following standard format for environmental impact statements should be followed unless the agency determines that there is a compelling reason to do otherwise: (a) Cover sheet. (b) Summary. (c) Table of contents. (d) Purpose of and need for action. (e) Alternatives including proposed action... (f) Affected environment. (g) Environmental consequences... (h) List of preparers. (i) List of agencies, organizations, and persons to whom copies of the statement are sent."	40 CFR 1502.10
Methodologies	"They [EISs] shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix."	40 CFR 1502.24

CEQ REGULATIONS AND GUIDANCE		
Topic	**Regulations/Guidance**	**Source**
Methodologies	"When a commenting agency criticizes a lead agency's predictive methodology, the commenting agency should describe the alternative methodology which it prefers and why."	40 CFR 1503.3
Appendices	"Lengthy technical discussions of modeling methodology, baseline studies, or other work are best reserved for the appendix. In other words, if only technically trained individuals are likely to understand a particular discussion then it should go in the appendix, and a plain language summary of the analysis and conclusions of that technical discussion should go in the text of the EIS."	CEQ, 40 Questions Guidance, # 25a
Incorporation by Reference	"Material that is not directly related to preparation of the EIS should be incorporated by reference. This would include other EISs, research papers in the general literature, technical background papers or other material that someone with technical training could use to evaluate the analysis of the proposal. These must be made available, either by citing the literature, furnishing copies to central locations, or sending copies directly to commenters upon request."	CEQ, 40 Questions Guidance, # 25b
Responses to Comments	"If a number of comments are identical or very similar, agencies may group the comments and prepare a single answer for each group. Comments may be summarized if they are especially voluminous. The comments or summaries must be attached to the EIS regardless of whether the agency believes they merit individual discussion in the body of the final EIS."	CEQ, 40 Questions Guidance, # 29b
Length of EAs	"While the regulations do not contain page limits for EAs, the Council has generally advised agencies to keep the length of EAs to not more than approximately 10–15 pages. Agencies should avoid preparing lengthy EAs except in unusual cases, where a proposal is so complex that a concise document cannot meet the goals of Section 1508.9 and where it is extremely difficult to determine whether the proposal could have significant environmental effects. In most cases, however, a lengthy EA indicates that an EIS is needed."	CEQ, 40 Questions Guidance, # 36a, 36b
Level of Detail	"Environmental analysis should focus on significant issues, discussing insignificant issues only briefly. 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."	CEQ, 2012 Guidance, 77 Fed. Reg. at 14,476.
Length of EISs	"[A]gencies should keep EISs as concise as possible (continuing to relegate to appendices the relevant studies and technical analyses used to support the determinations and conclusions reached in the EIS) and no longer than necessary to comply with NEPA and the other legal and regulatory requirements being addressed in the EIS, and to provide decision makers and the public with the information they need to assess the significant environmental effects of the action under review."	CEQ, 2012 Guidance, 77 Fed. Reg. at 14,476.
Length of EAs	"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. The EA should be no more detailed than necessary to fulfill the functions and goals set out in the CEQ Regulations."	CEQ, 2012 Guidance, 77 Fed. Reg. at 14,476.
Responses to Comments	"Agencies should provide a reasonable and proportionate response to comments on a draft EIS by focusing on the environmental issues and information conveyed by the comments."	CEQ, 2012 Guidance, 77 Fed. Reg. at 14,479.

Attachment 2: Reference Materials

CEQ

- *Final Guidance on Improving the Process for Preparing Efficient and Timely Environmental Reviews Under the National Environmental Policy Act* (2012)
  http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/efficiencies-guidance

- *Forty Most Asked Questions Concerning CEQ's NEPA Regulations* (1981)
  http://ceq.hss.doe.gov/nepa/regs/40/40p3.htm

EPA

- *Electronic Submittal of Environmental Impact Statements to EPA* (undated)
  http://www.epa.gov/compliance/nepa/submiteis/e-nepa-guide-on-registration-and-preparing-an-eis-for-electronic-submission.pdf

FHWA

- *Interim Guidance on MAP-21 Section 1319 Accelerated Decisionmaking in Environmental Reviews* (Jan. 13, 2014)
  https://www.fhwa.dot.gov/map21/guidance/guideaccdecer.cfm

- *Memorandum, Improving the Quality of Environmental Documents* (July 31, 2006)
  http://www.environment.fhwa.dot.gov/projdev/pd_doc_quality.asp

- *Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (Oct. 30, 1987)
  http://environment.fhwa.dot.gov/projdev/impta6640.asp

AASHTO, FHWA, and ACEC

- *Improving the Quality of Environmental Documents* (2006)
  http://environment.transportation.org/pdf/nepa_process/QUALITY_NEPA_DOCS.pdf

NCHRP

- *NCHRP Report 25-25(01): Synthesis of Data Needs for EA and EIS Documentation—A Blueprint for NEPA Document Content* (2005)
  http://onlinepubs.trb.org/onlinepubs/archive/NotesDocs/25-25(1)_FR.pdf

California Department of Transportation

- *Standard Environmental Reference* (comprehensive manual for NEPA documents)
  http://www.dot.ca.gov/ser/index.htm

- *Annotated Outlines* (part of the *Standard Environmental Reference*)
  http://www.dot.ca.gov/ser/forms.htm

Colorado Department of Transportation

- *CDOT NEPA Manual*
  http://www.coloradodot.info/programs/environmental/nepa-program

Ohio Department of Transportation

- *Training Toolkits* on NEPA, Section 106, Section 4(f), and other topics
  http://www.dot.state.oh.us/Divisions/Planning/Environment/training/Pages/Toolkits.aspx

Oregon Department of Transportation

- *NEPA Document Dos and Don'ts*
  http://www.oregon.gov/ODOT/hwy/geoenvironmental/Pages/nepa.aspx

Washington State Department of Transportation

- *Reader-Friendly Document Tool-Kit*
  http://www.wsdot.wa.gov/environment/readerfriendly.htm

ADDITIONAL RESOURCES

PRACTITIONER'S HANDBOOKS AVAILABLE FROM THE CENTER FOR ENVIRONMENTAL EXCELLENCE BY AASHTO:

01   Maintaining a Project File and Preparing an Administrative Record for a NEPA Study
02   Responding to Comments on an Environmental Impact Statement
03   Managing the NEPA Process for Toll Lanes and Toll Roads
04   Tracking Compliance with Environmental Commitments/Use of Environmental Monitors
05   Utilizing Community Advisory Committees for NEPA Studies
06   Consulting Under Section 106 of the National Historic Preservation Act
07   Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects
08   Developing and Implementing an Environmental Management System in a State Department of Transportation
09   Using the SAFETEA-LU Environmental Review Process (23 U.S.C. § 139)
10   Using the Transportation Planning Process to Support the NEPA Process
11   Complying with Section 4(f) of the U.S. DOT Act
12   Assessing Indirect Effects and Cumulative Impacts Under NEPA
13   Developing and Implementing a Stormwater Management Program in a Transportation Agency
14   Applying the Section 404(b)(1) Guidelines in Transportation Project Decision-Making
15   Preparing High-Quality NEPA Documents for Transportation Projects

For additional Practitioner's Handbooks, please visit the Center for Environmental Excellence by AASHTO web site at: **http://environment.transportation.org**

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