The Shipley Group
Environmental Training • Consulting • Staffing

Feature Article
June 2011

Plain Language and a High-Quality EIS or EA

by Larry Freeman, PhD
The Shipley Group, *Senior Consultant*

Can users of your documents (or your agency's website)—

- **"find what they need,**
- **understand what they find, and**
- **use what they find to meet their needs"?**

These three quoted goals come from www.plainlanguage.gov. As in these goals, this government website asks writers to answer their readers' questions clearly and efficiently. Any less signals a document or website that is outdated and unacceptable.

The concepts on this government website reinforce a recent Federal law: Plain Writing Act of 2010 (signed by President Obama on Oct 13, 2010). This law has as its primary purpose "to improve the effectiveness and accountability of Federal agencies to the public by promoting clear Government communication that the public can understand and use" (Section 1(a) of the law). President Obama also issued Executive Order 13563 on January 18, 2011. This Executive Order extends the authority of the Plain Writing Act to Federal regulations. Both the law and the Executive Order mandate that agencies prepare regulations that the public can understand and use.

For years, Shipley consultants have encouraged writers to test the usability of their documents. Such a usability approach differs from classic editing and proofreading concerns. The classic editor often focuses on sentence structure, grammar, word choice, and punctuation. Editors may question the relevance of content, but will usually defer to the writer's decisions about content.

Remember, however, that a document with impeccable grammar and exemplary punctuation may not be a useful document. A useful document has to begin with information that readers need. Without relevant information, a well-designed document/website and grammatically correct text will not be useful.

Shipley Group has designed a series of workshops; Right Writing, Writing for Technical Specialists, and Clear Writing for NEPA Specialists that reinforces the concepts in the Plain Writing Act and in Executive Order 13563. Please refer to our calendar at http://www.shipleygroup.com/environmental/index.html?pg=calendar for dates and locations of these upcoming workshops.

Contact Sid Allen or Jeff Stewart at The Shipley Group for more information.

The Shipley Group
Environmental Training • Consulting • Staffing

Feature Article
June 2011

Usable writing is so important that I thought readers of this newsletter would be interested in some tests or strategies for navigating an unfamiliar document. These tests often apply to National Environmental Policy Act (NEPA) documents, some of which are, even today, confusing, poorly designed documents. Just within the last few months I have seen several marginal NEPA documents. A few were so poorly done that I was surprised that the agency issuing the documents would expect that the document would survive external review.

Here, then, are some of the main test strategies I use when dealing with an unfamiliar and perhaps confusing NEPA document:

1. **Turn pages in a traditional document or scroll through an on-line version, checking for format features and a clear, useful organization.**
2. **Look for the summary of impacts on resources of concern, usually in Chapter 2 of an EIS or EA.**
3. **Verify that the impacts in the Chapter 2 summary are 100 percent consistent with the impact discussions in Chapter 4: Environmental Consequences.**
4. **Review the Index for its clarity and ease of use.**

I use these strategies to become familiar with a new NEPA document. In this initial orientation, I rarely read entire sections from start to finish. I am skipping and scanning for key information. Most readers of technical documents (or websites) use a skip-and-scan approach because they are trying to answer high-priority questions.

The following newsletter explains and illustrates the four tests or preview strategies listed above.

1. Turn pages in a traditional document or scroll through an on-line version, checking for format features and a clear, useful organization.

This initial survey will usually tell you within a few minutes if you are dealing with a competent, professional NEPA document. What should you look for? Here are some suggestions:

- **Do typical pages or screens signal their position and role in the document/website?** For each page or screen, ask yourself if you know exactly where you are in the document, both chapter and major subsections. Clues are the well-done headers and footers. Also, the headings and menus should be rich content signals. Documents and websites do differ, but many beneficial features of traditional documents can be adjusted so that they apply to a web environment.

- **Do the headings use a clear numbering system?** The preferred system for documents is now the quasi-decimal format: 3.4, 5.3.9, and 1.2.3.1. The old Roman numbering system (I.A.1.a)

is now gone. It vanished from published references in the natural sciences more than 30 years ago. Numbering also help keep website information clear and organized.

- **Are the headings and subheadings content specific and helpful?** Headings should not be mysteries. Yet, I still see writers using vague traditional headings like **1.1 Introduction** or **1.2 Background**.

What kinds of headings should appear in a well-designed document? Here are examples:

1.2 Summary of the site conditions at the Three Medicines Mine and its leasing history [This could replace the vague Background heading mentioned above.]

4.5.3 Direct effects of Alternative B (Proposed Action) on water temperature

2.4.3 Water quality mitigations included in both Alternative B (Proposed Action) and Alternative C (optional discharge site)

Note that these sample headings help readers interpret key information. Are readers likely to remember what the focus of Alternative C is? A short subtitle is useful every time Alternative C is mentioned. As a reader, I am frustrated by a NEPA document that does not provide short titles for all alternatives. Yet, I recently opened a major EIS and found this heading:

Alternative E Effects

This heading does not help readers who are struggling through dense text. Who can remember what Alternative E includes? Similarly, if the Table of Contents has only this heading, what effects are going to be discussed? What resource features will be measured to show these effects?

Notice, also, the absence of a subsection number(s) for the above heading. So references to this subsection are likely to be clumsy: "Refer to the effects discussion of Alternative E on topics related to water quality." In what section do these effects appear? Readers are left to search back and forth in text. And as in this example, the format does not clearly signal that this is a second- or third-level heading.

Navigation through poorly planned documents is frustrating and, too often, futile.

Questions as Headings. The recognition that readers' questions are important has led the Federal Highway Administration to encourage NEPA writers to use content questions for subsection headings. Here is a sample question heading:

1.6.2 What public scoping activities has the Oregon DOT used to solicit information from the public?

This question heading replaces the more opaque traditional heading:

1.6.2 Scoping

The Role of a Table of Contents. A common assumption for decades is that a Table of Contents should be a useful, content-rich guide to the details in a technical text. Technical editors routinely suggested that a good Table of Contents include second- and third-level subheadings. Technical editors sometimes even find that fourth-level headings may be necessary to make the Table of Contents useful. Readers who look at a Table of Contents should be able to identify key content points and to frame their own questions about essential content. And as I observe above, information in the headings and subheading should be project specific, thus helping readers navigate through the whole document.

So, to summarize, a well-designed NEPA document has an organization and a format that assist readers to "find what they need" efficiently and quickly. A detailed Table of Contents is a useful roadmap for readers to follow.

2. Look for the summary of impacts on resources of concern, usually in Chapter 2 of an EIS or EA.

As Council on Environmental Quality (CEQ) Regulations state in Section 1502.14, Chapter2 should "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the [resource] issues and providing a clear basis for choice among options by the decisionmaker and the public."

CEQ Regulations and nearly 40 years of case law have highlighted the value of a clear profile of impacts. Any NEPA EIS or EA without such a profile is neither technically adequate nor legally defensible.

The Value of a Comparative Matrix. NEPA practitioners now prefer a summary matrix with alternatives on one axis and resource impact topics. This matrix records any quantified impact projections (as in acres of affected habitat or tons of projected sediment); text comments supplement the numerical projections. But NEPA practitioners are still wrestling with how best to summarize impacts. Many summary matrices are overly complex and even confusing, so NEPA practitioners need to invest time designing and conceptualizing useful summary matrices.

As a reviewer of an EIS or a lengthy EA, I often copy this Chapter 2 impact matrix and use it as roadmap to the rest of the document. Then I annotate this matrix, adding section numbers (if they exist) or page numbers where impact rationales appear. So if the matrix is missing or poorly done, I fail to have an adequate roadmap guiding me to see the different types of impacts (their context and intensity).

Problems with the Traditional Text Summary. A traditional text summary, with only standard paragraphs and text, is usually not a satisfactory summary. No judge or decisionmaker wants to

invest time translating long, rambling paragraphs into a clear comparative summary. And members of the public are likely to feel that the agency has deliberately hidden key impact information. In traditionally written text, impact conclusions are inevitably fuzzy and often missing, so readers are forced to do their own summary of impacts.

In some cases, as a paid reviewer, I have lined out a blank matrix on butcher paper and filled in the spaces. On one axis I have major resource topics (often called significant issues) and the other axis lists alternatives. My goal in this matrix is to provide my own roadmap for the impacts of concern.

In one recent EIS, I discovered a dozen pages of text summarizing impacts in Chapter 2. This rambling text did not provide clear profiles of the impacts, and several paragraphs were long and unreadable. I decided that I wouldn't waste time preparing my own review matrix. If an agency can't communicate the relevant information clearly and professionally, I am not going to do their legal disclosure work for them.

Copying the Chapter 2 Summary for the EIS Summary. The recommended Chapter 2 summary of impacts often provides core information for a separate summary of an entire EIS (or complex EA). CEQ Regulations ask for a separate document summary for all EISs. Many agencies now prepare such an overall summary in a stand-alone format, so that it can circulate to interested parties in place of the full EIS. In such instances, agencies often reprint the summary matrix from Chapter 2 in this document summary. Note that this practice assumes that Chapter 2 has a clear and useful summary. If Chapter 2 in an EIS (or EA) is weak, the overall document summary is likely to be weak.

3. Verify that the impacts in the Chapter 2 summary are 100 percent consistent with the impact discussions in Chapter 4: Environmental Consequences.

The major legal mandate of NEPA is that an EIS or an EA disclose all potential impacts of the agency's Proposed Action and reasonable alternatives.

So in this test of an EIS or EA, pick two or three resource impacts of concern. Then locate their discussions of resource impacts in Chapter 4 of the typical EIS (optionally, a combined Chapter 3 and 4). For each resource discussion you have chosen, ask these questions:

1. **Where in the Chapter 4 text are the projected impacts recorded?**
2. **How are these impact projections marked or identified?**
3. **Where is the credible chain of reasons/evidence for projected impacts?**
4. **Do these impact projections match the summary information in Chapter 2?**

These questions are important because frequently resource specialists bury impact projections in dense technical information. Writers should always mark or flag their impact projections. A mechanical way to do this is to use a run-in heading as in the following example:

Projected impacts on wetlands of Alternative E (maximum new trails). Up to 2.5 acres of the existing 30 acres of existing wetlands in the project area would be adversely affected. Resources on these 2.5 acres (such as vegetation, marshy habitats, small mammals, and aquatic organisms) would be lost for up to 3 years. Mitigation commitments for Alternative E mandate wetland restoration actions, which would return the affected acres to a functioning and productive wetland within 5 years after initial construction starts. [Note that the stated projections provide a context and intensity estimate for each projection.]

This projection of impacts on wetlands relies on the following evidence and associated assumptions:

1. Reason number 1
2. Reason number 2
3. . . . and so on. . .

As in the preceding example, each impact projection should be stated clearly and identified by a visible format. A run-in heading is one of several options. Others include an icon in the margin that signals a resource conclusion. Or, a NEPA writer/editor might decide to put all impact projections into shaded call-out boxes. The goal for such format options is to guarantee that even the poorest reader cannot miss the relevant impact conclusions and the associated chain of evidence.

The chain of evidence is or should be a credible explanation of the technical basis for the impact projections. The evidence should prove that the agency is using the best available science. For details about the "best science," go to www.shipleygroup.com, click on the environmental training icon and look for the menu heading for the Shipley newsletters (called Enews). Best Science appears in Shipley news (Vol 55) [http://www.shipleygroup.com/news/0706.html].

As suggested above, check the impact projections for at least two or three of the affected resources. Be sure to verify the information with the Chapter 2 summary of impacts. If the impact projections are consistent and if they have the features discussed above, the EIS or EA is a high-quality professional document.

4. Review the Index for its clarity and ease of use.

I only include the index in this list of test items because the index to an EIS should be carefully designed and professionally prepared. An excellent, useful index is just one further indication that the whole EIS is a high-quality professional document.

I rarely rely on an index if the chapters are well designed and clear. But an index is helpful if you are searching for a specific topic. For instance, if you want to know whether an EIS has discussed

Environmental Justice and it is not listed in the Table of Contents, go to the Index. This advice assumes that an Index exists and that it is comprehensive!

CEQ Regulations in Section 1502.10 list an index as a requirement in any EIS. CEQ also notes that all of the 1502.10 requirements are mandatory "unless there is a compelling reason to do otherwise." An index for an EA is not required and is unnecessary unless the EA is very complex and lengthy (for example, well over 100 pages long).

Over the years I have seen only a few high-quality indexes. Most often, NEPA agency folks explain that time ran out before they got around to working on an index. In a few cases, they admit that they didn't intend to waste their time and money on an index. Whatever the reasons, nearly half of the issued EISs do not have an index, especially at the Draft EIS stage.

If an agency provides an index, then it should be useful and a quality product. The following comments reflect this assumption.

A typical computer-generated index is usually not useful. Here is an index entry from the typical word-search computer index:

> impact/impacts ii, iv, v, vi, vii, x, xi, 2, 3, 6, 7, 9, l4, 18 [and so on, for every page in the EIS where the word "impact" appears]

In a typical EIS, the list of page numbers for "impact" could well number nearly 200. How is the user/reader of the EIS supposed to use this list of 200 page numbers? This entry is clearly not useful, perhaps even insulting. So, if you open to an EIS index and find one like the above entry for "impact," you can conclude that either the preparers didn't know what a real index looks like or, more likely, they chose not to spend the time (and money) on a professional index.

What does a professional index look like? Each index entry is broken down into its separate and conceptually related topics. So for the word "impact," the index entry might begin with the following subheadings:

> Impact/impacts. *See also* effect/effects.
>
> > CEQ definition (Section 1508.8), 7, 48, and 79
> >
> > cumulative (CEQ definition, Section 1508.7), 8, 48 and 79-84
> >
> > direct (defined and illustrated) 7, 48
> >
> > on spotted owl habitat. *See also* Endangered Species Act. 11, 19-20, 41-42, 112-114
> >
> > on visual quality, 12, 68-69, 153-154

This single entry might continue for a column or two, with alphabetized subheadings that direct readers to different topics linked to “impact” or “impacts.”

Also, notice the use of *See also* as a link to topics with overlapping meanings. Most indexes also have a *See* notation when one topic is discussed elsewhere, not under the term listed; such cases appear when an indexer knows that reader will likely look up a synonym or an out-of-date term. For example, now that the original CEQ heading of Worst Case is gone from the current CEQ Regulations, a NEPA indexer might insert this entry:

> worst case. *See* incomplete and unavailable information (Section 1502.22 of the CEQ Regulations)

As in the preceding examples, an index should provide helpful information. The cross references to the CEQ Regulations would be helpful information. They also tell users of the index where the quoted CEQ Regulations dealing with effects/impacts would appear in an EIS or EA.

A Final Challenge

Go back to one of your own EISs or EAs (if you dare). How would you rate it on the four test items discussed in this newsletter? Optionally, ask colleagues to take time to rate one of their recent team products. If you are like most writers, you will see things to improve in even your most recent documents. Possible improvements are reasonable because document preparation (and associated writing) is a complex, evolving skill.

I recommend this sort of post-project review for most major projects. After all, future teams should profit from the lessons and insights of past and current teams of writers and editors.).