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Feature Article
October 2010

Objectives and NEPA's Purpose and Need

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Objectives are an often missing piece of the required National Environmental Policy Act (NEPA) Purpose and Need. Many NEPA practitioners are still framing a project's Purpose and Need without any way to measure whether the proposed project is meeting an agency's goals and intentions. Such NEPA analyses rely on unsupported assertions that an alternative meets the purpose and need. Proof is missing.

I routinely discuss in all Shipley NEPA sessions the need for measurable project objectives. But I still find that many seasoned NEPA practitioners are unfamiliar with techniques for developing objectives. Thus, I was surprised in a Shipley session a week ago when a participant remarked that my approach to NEPA objectives was similar to one discussed in a recent forestry publication.

The publication turned out to be a field note published in the *Western Journal of Applied Forestry* by James N. Long, Frederick W. Smith, and Scott D. Roberts (Volume 25(2) 2010, pp. 96-98). The title of their publication is "Developing and Comparing Silvicultural Alternatives: Goals, Objectives, and Evaluation Criteria." I agree with much in their article, especially their argument that measurable objectives provide a structured tool that can assist technical specialists to develop and to compare alternatives. I would recommend their article to all NEPA practitioners, especially those from the land management agencies, who often manage forested acres. In the following newsletter, I don't review their article directly, but I do intend to revisit some the basic Shipley Group concepts related to the framing of objectives for the NEPA Purpose and Need.

Here, then, are some basic suggestions for preparing a NEPA Purpose and Need:

1. **Identify the undesirable resource conditions (often called the problems) that trigger the agency's bringing forward a proposed action.**
2. **Link these resource conditions (from suggestion 1) to agency guidance (law, regulations, agency policy, or a prior NEPA analysis).**
3. **Frame the agency's initial goals as clearly as possible, with reference to the site-specific resource conditions that the agency expects to exist in the project area at a future date.**
4. **Rework the goals (from suggestion 3) into measurable objectives (usually linked to measurable features of the proposed action).**
5. **Set a target "goal" or threshold value for successfully achieving each objective.**

6. **Track these objectives throughout the NEPA documentation, including the final decision document for a proposed action.**

The following newsletter briefly covers the preceding six steps. I avoid using the separate terms "need" and "purpose" because they are ambiguous and misleading. Folks often waste time arguing if an idea is a need or a purpose or both. Instead, if a NEPA Purpose and Need summarizes the six steps listed above, it will be a legally defensible and measurable version of the classic Purpose and Need.

1. Identify the undesirable resource conditions (often called the problems) that trigger the agency's bringing forward a proposed action.

Problems can be minor or major. Minor ones might be too much sediment in a stream or unnecessary congestion at an existing highway intersection. If truly minor, these would be addressed with a NEPA categorical exclusion or, perhaps, a brief Environmental Assessment. A major one might be a plan to bury a new gas pipeline on federal land.

A simple description of such minor problems goes along in answering two key questions: "Why here?" and "Why now?" These two questions are good starting points for any project planning. If an agency answers them convincingly, they will be delivering a credible message to any groups or individuals likely to be interested or affected by possible agency actions. Remember that a credible message gives reasons, not just assertions. For example, an agency should not describe the problem with an assertion: "The stream is in poor condition." Readers should not have to guess exactly which poor conditions are the problems. Instead, the NEPA text should profile the problems: a sheen of oil from nearby industrial discharges, almost no vegetative cover for banks (thus no hiding habitat or breeding areas for fish), and maybe a discarded tire and several garbage bags with unknown trash.

The proposed gas pipeline also starts with a problem. It might be natural gas shortages and the inability of the company to provide gas service to new homeowners. The gas company also has its own financial and operational goals (its own version of a purpose and need).

Federal analysis of the gas pipeline request becomes subject to NEPA when a Federal agency has to respond to a legitimate request from the gas pipeline company for a permit to cross Federal land. So, in this case, the agency's NEPA purpose and need is one with regulatory implications. The problem for the Federal agency involves responding to a bona fide request for a permit and objectives ensure that proposed activities don't unnecessarily affect environmental resources.
Remember, NEPA analyses of both minor and major projects should credibly answer "Why here?" and "Why now?"

2. Link resource conditions (from suggestion1) to agency guidance (law, regulations, policy, or a prior NEPA analysis).

Agency employees are often so close to an identified problem that they assume their legal responsibilities are clear. But members of the public rarely have a clear picture of an agency' legal responsibilities. So if the BLM under its grazing regulations is to assess allotment's grazing conditions, the agency should identify and discuss the specific regulatory provisions.

Or, if the National Fire Plan (from a decade ago) is still relevant, the agency should identify what features of the fire plan are relevant and how these features arise from specific language in the plan and identify applicable features for a proposed action. Notice that the Fire Plan is not a signed NEPA document, so this is not an example of tiering.

A clear example of relevant legal linkages appears in a recent Black Hills National Forest FEIS: Rattlesnake Forest Management Project (April 2010). The FEIS links proposed actions in the Rattlesnake FEIS with their NEPA source, which includes the specific standards and guidelines from the Black Hills Land and Management Plan and its parallel FEIS. Page 15 in the Rattlesnake FEIS lists applicable standards and guidelines down one column, with parallel general goals down a second column. A copy of page 15 is an attachment at the end of this newsletter. Notice as in this example that prior legal guidance, especially from a signed NEPA document, properly triggers later decisions that are resource specific. This is tiering under NEPA. *See the Rattlesnake Forest Management Project FEIS on the Black Hills NF website.*

3. Frame the agency's initial goals as clearly as possible, with reference to the site-specific resource conditions that the agency expects to exist in the project area at a future date.

As the Rattlesnake FEIS (mentioned in step 2) illustrates, an agency's early NEPA analysis should move toward a list of major resource goals. Often such goals are best framed along with text describing resource conditions that the agency hopes to establish. For example a project affecting bighorn sheep might focus on the creation of new lambing areas or the added protection of additional escape terrain up hillsides near where bighorn graze. Notice that such resource conditions for the bighorn sheep are specific, while still allowing for different alternatives that would achieve these desired resource conditions. So if an agency identifies a shortage of lambing areas, the agency can choose to address the problem in various ways, with lambing areas at different sites or with different vegetative conditions at different sites, etc.

So resource goals don't mandate a specific action. For example, constructing 3 miles of new asphalt road up Bear Canyon is an action, not a useful resource goal. A goal would be to

improve the road system that accesses Bear Canyon. The problems in this case would be inefficient and limited access to Bear Canyon, especially when rain is heavy and roads become muddy quagmires. Alternatives might include improved drainage culverts, new rights of way, or different paving options.

4. **Rework the goals (from suggestion 3) into measurable objectives (usually linked to measurable features of the proposed action).**

Measurable objectives are useful because they allow agencies to assess how different alternatives meet the agency's identified purpose and need.

To continue with the big horn sheep example (from suggestion 3), the agency might be responding to its responsibility to provide useful habitat for big horn sheep. (This was precisely the problem addressed by the Forest Service in an actual NEPA analysis over 20 years ago. In that era bighorn sheep were listed as a sensitive species in California and thus subject to special management by the Forest Service.)

A basic goal might begin with a generic phrasing:

Improve bighorn habitat in the project area.

This generic goal is a valuable starting point, but it needs to be linked to measurable features. One strategy might be to identify a shortage of perhaps 500 acres of big horn habitat in the project area. In this case, the agency could frame a more quantified objective:

Provide up to 500 acres of additional habitat for bighorn sheep.

Notice that the identified acres are an indirect measure of effects on bighorn sheep. More specific habitat features might include lambing sites, salt licks, and escape terrain. Even more specific information might exist if the agency has a computer model of bighorn populations. So another objective might be framed like this:

Provide suitable habitat for up to an additional 50 bighorn sheep in the project area.

Numerical estimates of wildlife populations are not always available. And Federal agencies often argue that they manage only habitat, not the animals. Agencies have to decide what they wish to measure, and such decisions then become de facto evaluation criteria.

Notice that the suggested objectives above have a numerical goal. Inclusion of a numerical target within the stated objective is an option. As in the James N. Long et al. article cited above, some authorities prefer to have separate evaluation criteria. The conceptual framework does not change however. Both the James N. Long et al. article and the Shipley Group recommend that agencies develop measurement indicators so that alternatives can be

compared. Such measurement tools should be included either in the objective or in separately listed evaluation criteria.

5. Set a target "goal" or threshold value for successfully achieving each objective.

James N. Long et al., as cited above, recommends a goal or threshold measurement of success. A firm goal or target threshold is not always possible. But for NEPA purposes, an objective is often framed with a target, such as in this objective:

> **Reduce fire hazards on up to 1000 high-risk acres in Dry Gulch Valley.**

From a NEPA perspective, reasonable action alternatives would treat up to 1000 acres (but perhaps not all 1000 acres). For mitigation purposes, all action alternatives might treat slightly fewer acres. The usual NEPA definition of a reasonable alternative is one that meets the purpose and need (that is, the stated objectives) as fully as possible. Reasons for not meeting an objective might be resource mitigations, which could move a few acres out of the treatment area. In the Dry Gulch example, such mitigations might arise from visual quality concerns or from USFWS mandates dealing with habitat for listed species.

6. Track these objectives throughout the NEPA documentation, including the final decision document for a proposed action.

Shipley recommends two primary tracking topics for a NEPA document: (1) measureable project objectives (as in a well-crafted purpose and need discussion) and (2) major issues (often called "impact topics of concern").

Measureable objectives from Chapter 1 of an EIS or EA should link to topics in every other chapter. Chapter 2 should describe the alternatives and explain how each action alternative is designed to meet the Chapter 1 objectives. Chapter 2 should also compare the alternatives in light of their achievement of the listed objectives. Notice that the comparison of impacts across alternatives and the comparison of objectives across impacts appear in the same comparison matrix. Then resource discussions in Chapters 3 and 4 should also reference project objectives from Chapter 1. As an example, a Chapter 1 objective might identify a decrease in sediment as a major project objective; any discussion of water quality impacts would obviously link to the Chapter 1 objective that mentions sediment.

Chapter 1 objectives are also an essential tool in the writing of a NEPA decision document (Record of Decision for an EIS or a Finding of No Significant Impact for an EA). Both decision documents identify the agency's chosen/selected alternative, along with a rationale for the choice. This rationale properly lists and discusses just how the chosen alternative meets the

stated objectives (from Chapter 1). So conceptual tracking of agency decision making begins early in an EIS or EA and continues through the agency's explanation of its final decision.

Major issues are also a linked topic throughout each chapter of an EIS or EA. Chapter 1 usually identifies major issues of concern either to members of the public or to agency resource specialists. Note that issues are not exclusively from the public. And as with objectives in the preceding paragraph, Chapters 2, 3, and 4 of the EIS or EA includes appropriately linked discussions of major issues.

Recommendation: Give readers an issue and objective tracking matrix as a secondary Table of Contents in any EISs and in complex EAs. An issue and objective tracking matrix is an excellent way to show readers just how discussions of issues and objectives tie together all chapters and sections in an EIS or EA. A sample section of such a matrix link appears at the end of this newsletter. *The sample comes from p.28 in the Shipley Group's How to Write Quality EISs and EAs (Third Edition, published in 2003).*

Additional References:

Black Hills National Forest – Rattlesnake Forest Management Project ***Page 15***

Developing and Comparing Silvicultural Alternatives: Goals, Objectives, and Evaluation Criteria
Authors: Long, James N.; Smith, Frederick W.; Roberts, Scott D.
Publisher: Society of American Foresters

How to Write Quality EISs and EAs (Third Edition, published in 2003), *Page 28*
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1.5 Purpose of and Need for Action

The purpose of and need for the Rattlesnake project are based on the needs and opportunities identified above. The relationship of these needs and opportunities to each element of the purpose and need statement is summarized below.

Need/Opportunity (Forest Plan Goal or Objective)	Purpose and Need Element
Reduce crown fire hazard adjacent to developed areas and across the landscape (201, 204, 205, 10-01). Reduce crown fire hazard in specific locations where uncharacteristically intense fire could threaten rare plant populations (234).	Reduce crown fire hazard and wildfire threats to private property.
Reduce acres of pine at medium and high risk of infestation by mountain pine beetle (10-07).	Reduce risk of mountain pine beetle infestation.
Produce sawtimber and roundwood now and contribute toward future production (303). In MA 5.1, use a variety of silvicultural management techniques that would provide timber products while promoting understory forage growth for grazing by wildlife and livestock and maintaining or improving water yield (5.1-201).	Produce commercial timber now and create conditions for future timber production.
In MA 5.4, maintain meadows and the Boundary fire opening and reduce oak brush where it crowds out other species (5.4-204). In MA 5.4, maintain non-pine cover types, increase young stands while retaining the oldest stands, and increase uneven-age stands (5.4-201). In MA 5.4, keep winter open road density low (5.4-207).	Conserve and enhance big game winter range.
Maintain or expand aspen stands and inclusions in pine stands (201). Maintain birch stands (204). Maintain meadows (205, 218, 221). Conserve existing snags and provide conditions for development of additional large-diameter snags (211, 221). Provide down woody material through forest management and project design (212). Improve quality and quantity of forage and arrangement of forage and cover (217). Diversify stand structure and composition through vegetation management (218). Conserve and develop structural stage 5 (218, 221). Conserve riparian habitat (221). In MA 4.1, reduce the number of stands 85–135 years old and/or with crown cover over 40 percent while retaining some of the densest and oldest stands (4.1-202). In MA 5.1, reduce the number of stands 85–135 years old and/or with crown cover around 40 percent while retaining some of the densest and oldest stands (5.1-202). In MA 5.6, reduce the number of stands 89–132 years old while retaining the oldest stands (5.6-202).	Enhance forest structural/compositional diversity.
In MA 3.7, perpetuate existing structural stage 5 and facilitate development of these characteristics in additional stands (3.7-201).	Conserve and enhance late successional landscapes.

Issue and Objective Tracking Matrix							
Issues	Summary	1.0 Purpose and Need	2.0 Alternatives	3.0 Affected Environment	4.0 Environmental Consequences	Appendix A Public Involvement	Appendix B
1. Soil Stability	2	6–7	12, 14–15	22–25	61–65, 81	A–3, A–5	B–6, B–11, and B–15
2. Water Quality	2–3	7	12, 15–16	26–30	66–70, 81–84	A–3, A–5	B–5, B–8, and B–20
3. Wildlife	3	7–8	12, 17	33–37	73, 78, 84–85	A–5, A–14, A–20, and A–24	B–13 and B–22
Objectives							
1. Maintenance Area (sq.ft.)	4–5	8	12, 18	38–41	85–86, 92	A–5, A–15, and A–24	B–22 and B–24
2. Construction Costs ($)	5	8	12, 18	42–45	87–88, 91	A–5 and A–23	B–23 and B–24
3. Two-Way Access	5	9–10	12, 19	46–49	89–90, 92	A–15 and A–16	B–22 and B–24

Example 8—Issue and objective tracking matrix. *An issue and objective tracking matrix tells readers you have covered each issue and objective thoroughly and consistently.*