GUIDE TO DEVELOPMENT OF THE DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA)

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The purpose of the Guide is to provide guidance, recommendations, and suggestions for preparing a DOPAA that is consistent with NEPA and its implementing regulations, but specific to US Army operations and activities. It can be applied to all Army NEPA analyses associated with on- and off-post training activities, materiel acquisition programs, facility construction and renovation projects, and other actions supporting installation operations. By following the approach and procedures presented in the Guide, users can reduce or eliminate the typical problems often associated with NEPA analyses, such as reanalysis of a constantly changing DOPAA, project delays, and cost overruns.

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PREFACE

The content of this guide incorporates direction and information contained in Environmental Analysis of Army Actions—Final Rule (Title 32 of the Code of Federal Regulations (CFR) Part 651), published in the Federal Register (FR) on 29 March 2002 (see 67 FR 15290).

This guide is a living document that is modified, as necessary, to incorporate changes in Federal Legislation, Executive Orders, and DoD and Army policy and guidance. Users are advised to periodically visit the ASA(ALT) Digital Library website at http://library.saalt.army.mil

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ACRONYMS AND ABBREVIATIONS

AGL	Above Ground Level
AOA	Analysis of Alternatives
BTU	British Thermal Unit
CDD	Capability Development Document
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CX	Categorical Exclusion
DoD	Department of Defense
DOPAA	Description of Proposed Action and Alternatives
EA	Environmental Assessment
EIS	Environmental Impact Statement
FNSI	Finding of No Significant Impact
FR	Federal Register
FY	Fiscal Year
gpd	gallons per day
IMA	Installation Management Agency
IRFNA	Inhibited Red Fuming Nitric Acid
ITAM	Integrated Training Area Management
kWh	kilowatt-hours
LOS	Level of Service
MACOM	Major Army Command
NAEP	National Association of Environmental Professionals
NEPA	National Environmental Policy Act
NTO	Nitrogen Tetroxide
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limit
POL	Petroleum, Oils, and Lubricants
Q	Quarter
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
ROD	Record of Decision
ROI	Region of Influence
RONA	Record of Non-Applicability
RPMP	Real Property Master Plan
TEMP	Test and Evaluation Master Plan
UDMH	Unsymmetrical Dimethyl Hydrazine
USAEC	US Army Environmental Center
USC	United States Code
WSMR	White Sands Missile Range

CHAPTER 1.0: INTRODUCTION

The Description of Proposed Action and Alternatives (DOPAA) forms the framework for conducting an environmental impact analysis in accordance with the National Environmental Policy Act (NEPA) and its implementing regulations. Comprising much of the beginning portions of any Environmental Assessment (EA) or Environmental Impact Statement (EIS), the DOPAA defines the scope of the action as well as viable or reasonable alternatives, and serves as the basis on which to predict potential impacts. Development of the DOPAA helps in early coordination with other Army offices and outside agencies and, in the case of an EIS, provides the foundation for conducting formal scoping. Most importantly, for the decision maker, the DOPAA serves as the basis for understanding alternative approaches to meeting mission needs. A flawed or incomplete DOPAA can mislead or delay the NEPA analysis process, and open the door for public controversy or, in rare instances, a court order stopping the action.

1.1 PURPOSE OF THE GUIDE

The purpose of this guide is to provide proponents, preparers, and other NEPA analysis participants with a more structured approach to creating DOPAAs that lead to more effective and defensible environmental documents (EAs and EISs). It provides guidance, recommendations, and suggestions for preparing a DOPAA that is consistent with NEPA and its implementing regulations, but is specific to US Army operations and activities. The information is presented in a simple, understandable, and manageable format, suitable for use throughout the Army. By following the approach and procedures presented in the guide, users can reduce or eliminate the typical problems often associated with NEPA analyses, such as reanalysis of a constantly changing DOPAA, project delays, and cost overruns.

The information in this guide is targeted for use by NEPA analysts familiar with the Army NEPA process and the Army's regulation for implementing NEPA: 32 CFR Part 651, *Environmental Analysis of Army Actions*. The guide has been prepared, as a supplement to the following Army NEPA manuals, for the purpose of improving the DOPAA development process:[1]

- *NEPA Manual for Materiel Acquisition* (July 2004)
- *Environmental Impact Analysis Manual for Off-Post Training and Deployments* (August 1998)
- *NEPA Manual for Installation Operations and Training* (June 1998)

1.2 USE AND ORGANIZATION OF THE GUIDE

The guide can be applied to all Army NEPA analyses associated with on- and off-post training activities, materiel acquisition programs, facility construction and renovation projects, and other

[1] Several of the Army's manuals and guides identified can be accessed at the ASA(ALT) Digital library website at http://library.saalt.army.mil

actions supporting installation operations. It should be used in conjunction with 32 CFR Part 651 and any applicable command- or installation-specific policies and procedures for conducting NEPA analyses. In addition, it should be regarded as a supplement to, not a replacement for, the Army NEPA manuals previously noted.

Following the Introduction of the guide in Chapter 1.0, Chapters 2.0 through 4.0 provide comprehensive guidance and information on DOPAA development. Chapter 2.0 identifies key participants and describes their levels of involvement in the DOPAA development process. Chapter 3.0 describes the components of a DOPAA, the recommended formats to use, and the types of information that are normally included. Chapter 4.0 details a multi-step process that can be used in the development of DOPAAs for larger and more complex Army actions (e.g., research and development projects, the fielding of new weapon systems, and large training exercises), including methodologies for defining the proposed action and identifying possible alternatives. Lastly, Chapter 5.0 lists the references that were used in the preparation of the guide.

Users of this guide should understand that the DOPAA process can vary widely, depending on the complexity of the action being analyzed. The overall approach to DOPAA development presented here is not meant to encourage or require lengthy documents when they are not warranted, nor is the full process suited to all NEPA analyses. While this process has proven useful for complex projects and programs where the proposed action and alternatives were not well defined, it may not be entirely appropriate for simple, straightforward analyses that do not require a large DOPAA effort.

CHAPTER 2.0: ROLES AND RESPONSIBILITIES

This chapter contains information on the roles and responsibilities of participants involved in the Army NEPA process, specifically as it relates to DOPAA development. To be successful, participants must understand their responsibilities and work as a team by maintaining a high degree of communication, interaction, and coordination.

2.1 PROPONENTS

As defined in 32 CFR Part 651, any Army structure may be a proponent. In general, the proponent is the unit, element, or organization that is responsible for initiating and/or carrying out the proposed action. The proponent has the responsibility for preparing and/or securing funding for preparing the environmental documentation. The proponent is also responsible for the content, accuracy, quality, and conclusions of the NEPA analysis, even if another organization or a contractor prepares the documentation. Although the proponent also serves as a decision maker,[2] he or she is not necessarily the only, or even primary, decision maker for the proposed action.

In developing a clearly defined and thorough DOPAA, the proponent must ensure that preparation and staffing of the resulting documentation includes those offices and individuals involved in the policy, planning, engineering, and operational aspects of the proposed action. In some cases, key stakeholders may also need to be considered. Depending on the type of action and the location where it is to take place, this involvement can include various installation support offices, system development contractors, legal staff, public affairs representatives, outside technical experts, regulatory agencies, and special interest groups. Such participation early in the NEPA process helps to better define the proposed action, identify a wider array of possible alternatives, and flush out potential problem areas. When staffing the DOPAA, the proponent must ensure that all appropriate review comments are considered and incorporated, and that key supporters of the action concur with the final document. Only then should the proponent allow a comprehensive and thorough analysis of the proposed action and alternatives to proceed.[3]

2.2 NEPA SUPPORT STAFF

In addition to relying on in-house environmental staff, the proponent often obtains NEPA analysis support through the Major Army Command (MACOM) or installation environmental offices, and/or through environmental contractor support. These preparers of the NEPA documentation are generally given the responsibility of collecting the necessary data, conducting the analysis of potential environmental impacts, and producing the draft and final reports. The NEPA support staff work for the proponent. Although they do not make any decisions about the action, they can

[2] The decision maker is the person or persons who make the final decision on how to implement the proposed action.

[3] The ongoing transformation of installation management will likely modify some of the roles and responsibilities under NEPA. Two chains of command are expected: one for the operation and management of the installation, and another focused on the performance of mission (e.g., training or war-fighting). While the identification of the proponent and the decision maker may present a greater challenge, it is critical that the responsibilities of the proponent be maintained. The proponent of the action must be responsible for the cost and quality of the NEPA analysis, the content of the NEPA analysis, and subsequent mitigation implementation and monitoring requirements.

provide the proponent with coordination support and other assistance needed to formulate a DOPAA that is thorough and consistent with 32 CFR Part 651.

2.3 INSTALLATIONS

Participation and coordination by installation management is often central to the NEPA process. When Army actions are proposed to occur at or near a home or host installation (including military facilities, ranges, and training lands), the appropriate offices at that installation should be involved in the preparation or, at least, the review of the DOPAA. Generally, an installation office should become involved only when the action itself, or critical environmental or other legal issues associated with the action, relate to the office's responsibilities. At that juncture, such support may include providing relevant data or activity descriptions, participating in DOPAA development workshops and interviews, coordinating DOPAA support activities at the installation, and/or reviewing drafts of the DOPAA. A list of key installation offices that might become involved in DOPAA development is provided below (note that at some Army installations, the structure of internal organizations may vary):

- Directorate of Plans, Training, Testing, and Mobilization
- Directorate of Public Works
- Environmental Office
- Public Affairs Office
- Real Estate Office
- Safety Office
- Staff Judge Advocate.

The Environmental Office should always be involved because it usually takes responsibility for the installation's NEPA compliance and any related coordination requirements.

2.4 MAJOR ARMY COMMANDS (MACOMs)

MACOMs provide oversight and assistance to proponents at various levels. As part of NEPA analyses, MACOMs often participate in DOPAA development, providing preparation support to subordinate installations and Program Offices, or acting as contributing office and reviewer. Such support is usually coordinated through the MACOM's designated NEPA Program Manager.

Whenever the garrison is the proponent, the Installation Management Agency (IMA) Region should be directly involved to do a "check" on the requirements and potential funding for all aspects of the proposal. Otherwise, the IMA Region should be coordinated with if the proposal is likely to have a measurable impact on installation–owned resources.

2.5 FACILITIES AND SYSTEMS ENGINEERING CONTRACTORS

Army contractors involved in the planning, construction, or renovation of buildings or other installation facilities, and those contracted for the development of weapon systems or other equipment, should provide the Army proponent with appropriate and adequate data and information to describe the proposed action and any applicable alternatives. Depending on the extent of contractor responsibilities, the proponent may want to include provisions that require the contractor to prepare a preliminary draft DOPAA (or only a description of the proposed action) to

help initiate the document's development in the NEPA analysis process. In such cases, the contractor should be given clear guidance on the level of detail needed for preparing the initial DOPAA, including key parameters, schedules, maps, and graphics information to be presented.

2.6 OTHER FEDERAL, STATE, AND LOCAL AGENCIES

NEPA requires that proponents consult early with other federal, state, and local agencies and organizations that have jurisdiction by law over some aspect of a proposed action, or that can provide special expertise during the NEPA process. Army proponents, however, do not always take the opportunity to consult with outside agencies during DOPAA development. For example, when proposing to conduct mechanized training or missile system tests in a new area, the proponent should consider conducting pre-scoping sessions with individual agencies to determine whether there are any environmental issues that could require major modification of the action or prevent the action from occurring altogether. Such pre-scoping sessions might include meetings with the US Fish and Wildlife Service on endangered species habitat, with the State Historic Preservation Office regarding historic structures or archaeological sites, with federally recognized Indian tribes on cultural issues, and with local municipalities on plans for future development.[4]

For an Army proponent to conduct interagency scoping, it is recommended that he or she coordinate such efforts through the Environmental Office of the affected installation. Typically, the Environmental Office has an ongoing rapport with the responsible regulatory agencies and can advise the proponent on potential agency concerns. It is also recommended that interagency scoping not be conducted until after the proponent has researched the proposed action thoroughly enough to present a coherent proposal, along with a list of possible alternatives.

2.7 ORGANIZATIONS AND INDIVIDUALS

Army proponents should encourage participation and assistance from private organizations and individuals who may have an interest in or jurisdiction over a resource that might be impacted. An example would be a proposal involving travel across private property for purposes of reaching training lands or to set up portable ground equipment for weapons tests. Private organizations and individuals can often provide valuable information or expertise on particular sites or subject matter. Although it is not necessary for private organizations and individuals to be directly involved in DOPAA development, the information they provide can sometimes lead to a wider range of reasonable alternatives or help to eliminate future controversies.[5]

Whenever Army proponents intend to involve the public through scoping or other means, the Public Affairs Officer at the affected installation and/or command level must be kept well informed and involved. When establishing partnerships with private organizations and individuals, it is recommended that proponents coordinate with the installation's Environmental Office to maintain contact and continuity with the regulatory and environmental communities.

[4] At this early stage in the NEPA analysis, the involvement of outside agencies, local government officials, or private organizations and individuals represents a form of pre-scoping, but does not replace formal scoping requirements, such as for an EIS. Involving such groups early on, however, can often eliminate later controversy and help build community support for the Army's actions.

[5] See footnote 4.

CHAPTER 3.0:
DOPAA COMPONENTS AND INFORMATION REQUIREMENTS

The DOPAA is the most critical element in guiding an environmental impact analysis. When preparing an EA or an EIS, the Region of Influence (ROI) and the affected environment description cannot be meaningfully determined, nor can the impact analysis be completed, until an adequate DOPAA is developed. All too frequently, DOPAAs simply do not contain the kind of information that is needed to adequately describe the proposal and thoroughly analyze the environmental consequences of implementing it. The result tends to be an ill-defined scope, an overdrawn ROI, a vague description of the affected environment, and an overly generalized and vague impact analysis. In contrast, a DOPAA that is properly prepared results in a well-defined scope, tightly drawn ROIs, a relevant description of the affected environment, and specific impact analyses.

Perhaps one of the best ways to improve the quality of EAs and EISs is to ensure that they are appropriately specific about the particular actions that are being evaluated. Too many EAs and EISs are not only vague and imprecise about predicted impacts, but they are also vague and imprecise about exactly what activity or subactivity of the proposed action they are analyzing. This vagueness sometimes reflects a lack of detail in the DOPAA, but it also reflects a lack of precision in the analysis. For example, a discussion of the impacts of building or facility construction on biological resources should identify exactly what construction activity or subactivity would affect what biological resources attribute. Specifics such as these are not only important for making tighter, more reasoned impact predictions, but are also necessary for identifying appropriate mitigation measures, which should be very precise if they are to have any real meaning.

It is also important to emphasize that the amount of detail to be included in the DOPAA should be proportionate to the complexity and uniqueness of the proposed action. Depending on the proposed activities, the level of detail that is appropriate within the document can vary greatly, particularly for EAs. In any case, the DOPAA should present enough information so that decision makers and the public can grasp the extent and intensity of the proposed action and any alternatives, with respect to potential impacts, but should not present so much information that the document becomes too large and burdensome. This balance is particularly important when considering that 32 CFR Part 651 now recommends an EA be no more than 25 pages long. For an EIS, Council on Environmental Quality (CEQ) guidance (40 CFR 1502.7) should be followed, establishing a limit of 150 pages (300 pages for complex projects). With these parameters in mind, the following sections provide guidance that can be used for large and complex programs, as well as for small and simple projects.

3.1 COMPONENTS AND ORGANIZATION OF THE DOPAA

This subsection provides detailed descriptions of the individual components of an Army DOPAA, based on the suggested DOPAA outline shown in Table 3-1. This outline is consistent with the latest Army guidance for preparing EAs and EISs, and is recommended for use as a model in the development of such documents. Although the organization of the outline applies to both EAs and EISs, some subsections are not necessarily required for an EA, but are considered optional. For example, when preparing EAs for small, discrete projects, all or most of those subsections of

Table 3-1. Suggested Outline for the DOPAA

CHAPTER 1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

- 1.1 INTRODUCTION
- 1.2 PURPOSE AND NEED
- 1.3 SCOPE AND CONTENT OF THE EA/EIS*
- 1.4 DECISION(S) TO BE MADE*
- 1.5 PUBLIC PARTICIPATION*

CHAPTER 2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

- 2.1 PROPOSED ACTION
- 2.2 ALTERNATIVES CONSIDERED
  - 2.2.1 Alternative A
  - 2.2.2 Alternative B
  - 2.2.3 Alternative C
  - 2.2.4 No Action Alternative
  - 2.2.5 Alternatives Eliminated from Further Consideration
- 2.3 COMPARISON OF ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION AND ALTERNATIVES**
- 2.4 MITIGATION MEASURES AND MONITORING PROCEDURES**
- 2.5 PREFERRED ALTERNATIVE**

* Although sometimes recommended, these sections are considered optional for inclusion in the DOPAA for Army EAs.

** These sections are normally not included in the DOPAA for Army EAs.

the DOPAA outline considered optional can easily be excluded, in which case a more simplistic outline may be used. It is also important to note that situations can occur in which this format might not be fully suited to addressing a particular Army action, in which case, other variations in format might be necessary.

3.1.1 Purpose of and Need for the Proposed Action *(DOPAA Chapter 1.0)*

Introduction *(DOPAA Section 1.1)*

This section briefly identifies the proposed action and the responsible agency or agencies involved, including any cooperating agencies. It provides a succinct summary of the history of events, and other relevant background information, leading up to the proposed action. It also identifies the regulatory authority under which the NEPA document is being prepared.

Purpose and Need *(DOPAA Section 1.2)*

This section should clearly state the nature of the problem and discuss how the proposed action or range of alternatives would solve the problem. In doing so, the need or requirement, to which the proposed action is responding, must be identified, along with the purpose or key objective(s) for the action.

The statement of the *purpose* should relate directly to the need or requirement identified. It should refer to the action, not to the document and not just to the preferred alternative. For example, the following statement is correct:

> *The purpose of the proposed action is to provide adequate test facilities for the development of armored combat vehicles.*

In contrast, *purpose* statements such as the following are inaccurate and misleading:

> *The purpose of the action is to construct and operate a combat vehicle test facility at Site A.*
>
> *The purpose of the action is to comply with NEPA.*

When describing the *purpose* in an EIS, 32 CFR Part 651 also requires that key operational, social, economic, and environmental objectives for the proposed action be summarized. If, however, the objectives for the action do not address each of these categories, include only those objectives that have been identified. Additionally, if a cost benefit analysis has been prepared for the proposed action, it can either be cited and discussed here, or be referenced here and attached as an appendix (see also Title 40 of CFR 1502.23).

Next, the *need* statement for a proposed action generally reflects the proponent's underlying mission goals and the main objectives to be achieved. It also serves to call attention to the benefits of the proposed action. Expression of the need for a proposed action, such as the following statement, is adequate:

> *To ensure safe and reliable equipment for Army personnel, and to ensure the military readiness of US ground forces to meet the nation's present and future warfighting requirements.*

A *need* statement such as that shown below is inadequate:

> *The Army requires the development of newer combat vehicles to replace outdated equipment.*

In reflecting the proponent's goals and objectives, the *need* statement also serves to identify the range of reasonable alternatives. Any alternative that does not meet the underlying *need* does not have to be analyzed and can be eliminated from further consideration. Alternatives that do meet the underlying *need*, and that are considered reasonable, should be analyzed, including those beyond Army jurisdiction.

While describing the *purpose* and *need* too broadly can lead to a wide range of possible alternatives, care should also be taken to ensure that the description does not inappropriately narrow the range of reasonable alternatives.

Because the *purpose* and *need* statements represent two separate conditions prompting the proposed action, they should be written as separate paragraphs or subsections.

Scope and Content of the EA/EIS *(DOPAA Section 1.3)* – Optional for an EA

A brief summary of the scope of the document should be provided in this section, reminding the reader of exactly what is and what is not covered. If the document is related to other actions that have been addressed in other NEPA documents, these relationships and other documents should be identified.

Decision(s) to be Made *(DOPAA Section 1.4)* – Optional for an EA

The decision(s) to be made regarding the proposal should be succinctly identified, along with the decision-making authority and responsible official. It is important that this information be clearly understood by reviewers of the NEPA document. If not included as a separate section in an EA, then this discussion should be provided elsewhere, such as in the Purpose and Need section (DOPAA Section 1.2).

As noted in 40 CFR 1500.1(c), "NEPA's purpose is not to generate paperwork – even excellent paperwork – but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment."

Public Participation *(DOPAA Section 1.5)* – Optional for an EA

This section should identify the public involvement activities that have occurred (*Federal Register* and newspaper notices, scoping period, meetings, etc.) and that are planned (e.g., review and comment on the Draft EIS, followed by release of the Final EIS). It should also summarize the key issues identified during scoping. This information will help ensure that the DOPAA provides sufficient detail on those proposed activities and sub-activities that have the potential to affect the significant issues identified. Later, the Final EIS should include a summary of all of the public involvement that has occurred, along with a brief summary of the key issues identified from comments received on the Draft EIS.

3.1.2 Description of Proposed Action and Alternatives *(DOPAA Chapter 2.0)*

Once the Purpose and Need have been well defined and described, the range of alternatives that encompass or match the *need* statement should be described. This section should provide a brief introduction/overview of the proposed action and alternatives. In particular, it should point out the location(s) (installations, ranges, off-post locations, etc.) that are involved. Leading off with a short and simple statement or two describing the action will greatly help the reader in comprehending the details presented in the sections that follow. The introduction that follows is a good example:

> *The Army proposes to construct and operate an armored combat vehicle weapon systems test facility at one of three locations. The three sites being considered are Fort X in Texas, Fort Y in Georgia, and Fort Z in Virginia.*

If any prior NEPA documentation exists, a brief explanation should be provided to indicate how the scope of the current document relates to the previous documents. For example, it may be tiered from an earlier NEPA document if the proposed action and alternatives derive from an earlier decision, or it may be related to earlier, or even ongoing, NEPA compliance efforts.

Proposed Action *(DOPAA Section 2.1)*

Having answered the w*hy* in the Purpose and Need section, this section of the DOPAA should describe the details of the *who*, *what*, *where*, *when*, and *how* of the proposed action such that it answers the following questions.

- ***Who*** is proposing to undertake the action and which agencies and/or organizations have authority over it and responsibility for it?

- ***What*** activities need to be accomplished to fully implement the action?

- ***Where*** is the proposed action going to be implemented, and where are all of the activities necessary for its implementation going to occur?

- ***When*** is the proposed action going to be implemented and how long will it take to complete?

- ***How*** will the proposed action be implemented, including details on the required support elements, and can it be broken down into various components or phases?

The proposed action should also contain the following elements, as appropriate and relevant to understanding the potential environmental issues that need to be addressed.

- **Project Timing and Progression.** Information that identifies project milestones, the frequency and duration of activities, and any aspects of the proposed action that could result in effects that vary over time (e.g., time of day or season of the year) should be included.

- **Pre-implementation Activities (Construction and Site Preparation).** Information on the nature and types of construction (either new construction or the modification or refurbishment of existing structures) and site preparation should include: number of construction workers and types of equipment used; site clearing and grading requirements; use of temporary access roads, staging areas, and borrow sites; and any other activities necessary to support construction should be described. This information is also relevant to the provision of new, or the modification and enhancement of existing, infrastructure, such as transportation (roads, rail, water, or air), utilities (electricity, potable water, and wastewater), and communications (telephone, fiber optics, and radio transmission).

- **Operational Activities.** Information on the project and related support operations should be included, such as facilities, equipment, and materials to be used; numbers of personnel

involved; any testing, training, and maintenance activities; utility demands; and related transportation and storage requirements.

- **Post-operational Requirements.** Information on reasonably foreseeable future requirements, including site and/or facility closeout, restoration, or demilitarization activities, should be described. This is particularly important when conducting programmatic or life-cycle analyses. If these activities are uncertain or unknown, include a statement to the effect that separate NEPA review may need to be undertaken before such activities can occur.

In general, for pre-implementation construction or site preparation, and operational and post-operational activities, the resulting emissions (air, water, electromagnetic radiation, noise, etc.) and waste streams (including rate and duration) should be identified, along with information on how they will be treated and/or disposed of. If such information, however, is not yet available and cannot be easily determined, then reasonable estimates and/or qualitative descriptions should be provided in the DOPAA. This information is particularly important when large increases or decreases in existing emissions or waste streams are expected. Maps, figures, photographs, drawings, and site/facility layouts should also be used in the DOPAA, as necessary, to explain the details of the proposed action.

The information presented in this section should be accurate, concise, comprehensive, and sufficiently detailed to permit a complete and objective analysis of the potential environmental impacts. In terms of DOPAA parameters, each environmental discipline or component typically has its own information needs and data requirements that are used for making impact determinations. Examples of these requirements are discussed in Subsection 3.2.

Alternatives Considered *(DOPAA Sections 2.2 through 2.2.3)*

In accordance with CEQ regulations (40 CFR 1502.14) and 32 CFR Part 651, the proponent of an action must identify and describe all reasonable alternatives to the proposed action, including the No Action alternative. Alternatives that meet the underlying *need* are reasonable alternatives and should be analyzed in an environmental document, particularly for an EIS. Alternatives that do not meet the underlying *need* do not have to be analyzed and can be eliminated from further consideration. The statement of *need* thus defines the range of alternatives, and is the reason why the clear, unambiguous definition of the Purpose and Need is so important. The more carefully and narrowly the underlying *need* is defined, the more limited is the range of alternatives that have to be analyzed, and the easier the document is to write, complete, and defend. Caution should be taken, however, to avoid making the Purpose and Need statement so restrictive that the proposed action becomes the only reasonable alternative for consideration.

Generally, the range of reasonable alternatives is broader and the number of alternatives whose impacts are appropriately analyzed is greater in an EIS than in an EA. For an EIS, the number of reasonable alternatives considered in detail should represent the full spectrum of alternatives for meeting the Army's Purpose and Need, but an EIS need not discuss every unique alternative when an unmanageably large number are involved. Reasonable alternatives include those that are practical or feasible from a technical, economic, and commonsensical standpoint. For both EAs and EISs, the development and application of screening criteria is recommended as a means of selecting or narrowing the list of alternatives to be analyzed. Such criteria (e.g., time or budget constraints, specific facility requirements, and limiting adverse effects) are often based on key objectives associated with the Purpose and Need for the proposed action, and on applicable

environmental and other legal standards. When such criteria or objectives are applied, they should be discussed in the NEPA document.

Since an EIS must devote substantial treatment to each alternative considered in detail, so that reviewers may evaluate their comparative merits (40 CFR 1502.14(b)), the same level of detail used in describing the proposed action should be used for each alternative. This detail is especially critical since the degree of impact analyses devoted to each alternative should be substantially similar to that devoted to the proposed action; something that would be difficult to do without answers to the *who*, *what*, *where*, *when*, and *how* questions identified earlier for each alternative. Indeed, enough information should be provided so that decision makers can readily understand and compare the alternatives against the objectives outlined in the Purpose and Need section.

The purpose of an EA is to briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a Finding of No Significant Impact (FNSI), and to aid in compliance with NEPA when no EIS is necessary (40 CFR 1508.9); thus, the focus of analysis is often on the proposed action and the No Action alternative. However, 32 CFR Part 651 specifies that all other appropriate and reasonable alternatives that can be realistically accomplished shall be considered in an Army EA. This is particularly important for EAs that deal with proposals in which: (1) there is a heightened technical controversy surrounding potential impacts from the proposed action, (2) the action is of national concern, (3) there are unresolved conflicts concerning alternative uses of available resources, or (4) there is otherwise greater potential for significant environmental impacts from the proposed action.

No Action Alternative *(DOPAA Section 2.2.4)*

32 CFR Part 651 requires the alternative of *no action* be included in the analysis for all Army EAs and EISs. Inclusion of the No Action alternative "provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives. It is also an example of a reasonable alternative—outside the jurisdiction of the agency—which must be analyzed" (CEQ *Forty Most Asked Questions*, Number 3). Here, rather than simply not implementing the proposed action, an analysis of the environmental impacts of not meeting the need identified in the Purpose and Need section should be performed.

There are two distinct interpretations of *no action*, depending on the nature of the proposal being evaluated. The first interpretation of *no action* is what most people commonly think of—the proposed activity does not take place. For example, the No Action alternative would be no new missile system versus a proposed action to develop and field the new missile system. In this case, the resulting environmental effects of permitting the proposed action to go forward are compared to the environmental effects of *no action* (i.e., no missile system).

The second *no action* interpretation is that no change from current practice occurs—i.e., present activities continue without substantial new ones proposed. In this interpretation, *no action* is equal to no change in the *status quo*. For example, in the case of a proposed action to either (1) field a new missile system to replace an existing system, or (2) implement a major component upgrade/modification to an existing missile system, the No Action alternative would be those activities associated with the continued operational use of the existing missile system at Army installations. To define the No Action alternative as based on no activities at all (i.e., no missile system) would be false. Therefore, in this example, the *no action* may be thought of in terms of

continuing with the present course of action—i.e., the storage, maintenance, training requirements, etc., that are associated with continued use of the existing missile system. Consequently, projected impacts of the proposed action and its alternatives are compared to impacts of the ongoing activities under the No Action alternative.

Furthermore, where a choice of *no action* could result in foreseeable actions by others, then this consequence of the No Action alternative must also be included in the environmental analysis. For example, if a decision not to permit a railroad line extension to an installation, needed to facilitate component re-supply for a deployed weapon system, could lead to increased truck traffic, then the consequence of this activity should be analyzed as well under the No Action alternative.

In summary, a No Action alternative must always be developed. An analysis of the No Action alternative is required even if the agency is under a court order or legislative mandate to act. The No Action alternative provides the "frame of reference" necessary for decision makers to evaluate the potential environmental effects caused by the proposed action and other alternative actions.

Alternatives Eliminated from Further Consideration *(DOPAA Section 2.2.5)*

Alternatives that do not meet the underlying *need* can be eliminated altogether. If there is no relationship between the action and the underlying *need* to which the Army is responding, there clearly is no need to include it in a NEPA document. However, alternatives that meet the underlying *need*, but do not meet other stated purposes, should nonetheless be identified (though they can be eliminated from detailed analysis). 32 CFR Part 651 and CEQ regulations [40 CFR 1502.14(a)] recommend that the final disposition of any alternatives that were initially identified should be discussed in the DOPAA. Such alternatives may include those with a high degree of technical uncertainty, that are not affordable, or that would result in levels of adverse impacts that are unacceptable. 32 CFR Part 651 also recommends that any criteria (or objectives) used for screening alternatives from full consideration should be presented. (See also discussions on DOPAA Subsections 2.2 through 2.2.3 presented in the preceding paragraphs for information on screening criteria applications.)

Comparison of Environmental Consequences of the Proposed Action and Alternatives *(DOPAA Section 2.3)* – Not Required for an EA

The comparative analysis of alternatives, including the proposed action, is the heart of an EIS (40 CFR 1502.14) and, per 32 CFR Part 651, is required for Army EISs. The environmental consequences of implementing the proposed action and alternatives must be presented in comparative form based on the information and analysis presented in the Affected Environment and the Environmental Consequences sections of the EIS. The comparison should sharply define the issues and provide a clear basis for choice among the alternatives by the decision maker and the public by highlighting the key differences among alternatives.

While the comparison information should be summarized in a brief, concise manner, and the use of graphics and a tabular or matrix format is encouraged, care should be taken not to reduce the quality of the information by using overly simple, summary charts that do nothing to illuminate cause-and-effect relationships. The more specificity provided here, the easier it will be for the reader to isolate and identify the particular implementing activities responsible for adverse environmental impacts, and thus highlight the differences between alternatives. It will also make

it easier to judge the appropriateness and likely effectiveness of any proposed mitigation measures.

Although not required in the DOPAA for an Army EA, 32 CFR Part 651 recommends presenting the comparison of environmental impacts later in the Environmental Consequences section of an EA.

Mitigation Measures and Monitoring Procedures *(DOPAA Section 2.4)* – Not Required for an EA

32 CFR Part 651 currently requires the incorporation of the following into the DOPAA for an EIS: "a description of the mitigation measures and/or monitoring procedures nominated for incorporation into the proposed action and alternatives, as well as mitigation measures that are available but not incorporated and/or (their associated) monitoring procedures."

This section of the DOPAA, which is normally prepared following completion of the impact analysis, should briefly summarize the mitigation discussions provided in the Environmental and Socioeconomic Consequences section of the EIS. It includes the identification of those mitigation measures likely to be implemented, as well as those that appear practical, but that are unobtainable within expected resources or that some other agency (including non-Army agencies) should perform. It should also describe any applicable mitigation monitoring and enforcement procedures or program that may be adopted. Providing this information up front in the document demonstrates good environmental stewardship and ethical management, and can serve to head off criticism from opponents.

Although not required in the DOPAA for an Army EA, discussions on practical mitigation measures available must be provided in the Environmental Consequences section of the EA. Those mitigation measures eventually selected for implementation must be identified in the Record of Decision (ROD) for the EIS or in the FNSI for an EA.

Preferred Alternative *(DOPAA Section 2. 5)* – Not Required for an EA

The Army's preferred alternative or alternatives, if known at the Draft EIS stage, should be identified as such in the DOPAA sections of the Draft EIS. If the preferred alternative is not known at this stage, it need not be mentioned in the document. However, by the time the Final EIS is filed, the preferred alternative generally must be identified unless another law prohibits the expression of such a preference (40 CFR 1502.14(e)). Identifying the preferred alternative in an Army EA is recommended only if the EA is to be circulated for public review in draft form.

It is also important to note that the action eventually selected as the preferred alternative can be the proponent's original proposed action, one of the alternative actions, or, in some cases, a mix of the alternatives that were analyzed.

3.2 DATA AND OTHER INFORMATION REQUIREMENTS

Unfortunately, the DOPAA often tends to be one of the weakest, and frequently confusing, elements of an EA or EIS. Once a proposal is identified and the Army actively begins preparations for a NEPA analysis of the action and any alternatives, it is imperative that adequate time be spent identifying and describing in some detail the various actions or activities that will

be necessary to implement the proposal. Special emphasis should be placed on describing in sufficient detail those features of the DOPAA that have the potential for significant environmental impact, and those features that will facilitate discrimination between alternatives. Much less emphasis should be placed on those features that have little or no potential for environmental impact and that do not aid in discrimination between alternatives. In addition, the tendency to overfill DOPAAs with policy statements, doctrine pronouncements, engineering and architectural details, and public relations material should be avoided.

A well defined DOPAA that briefly, but sufficiently, identifies the *who*, *what*, *where*, *when*, and *how* of a proposal can make all the difference in producing a useful document that truly satisfies the aims and purpose of NEPA, particularly the goals for reducing paperwork (detailed in 40 CFR 1500.4) and delays (detailed in 40 CFR 1500.5). To be useful, the DOPAA must contain sufficient information to enable the various environmental disciplines to complete an adequate analysis of the potential impacts, and to enable decision makers and the public to perceive the environmental implications of the proposal and its viable alternatives.

For small, simple, and non-controversial projects, providing a sufficient DOPAA should not be a difficult task. However, providing one for large, complex, and controversial programs (e.g., research and development for a new weapon system) can be considerably more difficult. It is often necessary to spend considerable time defining the DOPAA. This effort often becomes an organizational and functional planning task, where at the onset, very little is known about the proposal. With the careful identification of proposal participants, and the organization and conduct of well-structured workshops and interviews, the initial paucity of information changes and the understanding of the proposal quickly grows and evolves.

It is often through this process that proponents come to grips with the realities of operational and environmental constraints in the real world, and come to understand why various environmental disciplines have their own proposal questions that need to be answered. To give readers a better understanding of this connection between actions and environmental consequences, Table 3-2 provides a number of examples of the kinds of program/project information needed in the DOPAA to perform an effective impact analysis of individual resource components. The examples, listed in the second column of Table 3-2, should be quantitative rather than qualitative whenever possible, readily measurable and predictable, and should help in the identification of potential environmental issues. Only then can information be effectively used to perform an impact analysis that can highlight the differences in environmental consequences between alternatives and form the basis for a clear choice. Lists of specific data requirements typically associated with major types of Army actions are also identified in Appendix A.

Sources for such information can vary significantly, with much of it coming from project office staff, installation personnel, and facilities/engineering contractors. Depending on the type of proposal, standardized forms of program information or other documentation may be available to help satisfy some of these data requirements. Such documentation can include Capability Development Documents (CDDs) and Test and Evaluation Master Plans (TEMPs) for materiel acquisition programs, Real Property Master Plans (RPMPs) and other resource management plans for installation operations–related projects, and Integrated Training Area Management (ITAM) program documents for training actions. A combination of these sources, supplemented with site visits, is usually necessary to fulfill all of the data and information requirements needed to complete the DOPAA.

Marginal costs are associated with obtaining data and the utility of the data will eventually respond to the law of diminishing returns. At some point, the cost of acquiring information in terms of resources and delays may be more than the information is worth. However, the emphasis must be on collecting and presenting sufficient data and information for the various environmental disciplines to conduct their analysis. In general, sufficiency is driven by the nature of environmental issues that are identified, and the results of any formal or informal scoping process that is used.

Table 3-2. Examples of DOPAA Information and Data Needs by Principal Environmental Component (Sheet 1 of 3)

Environmental Component	DOPAA Information/Data Needs	Relevant Environmental Consequence
Aesthetics and Visual Resources	Dimensions and color, line and form of new structures	Alteration and degradation of scenic integrity, visual intrusion, degradation of aesthetic qualities
		Alteration and degradation of architectural integrity or style
		Blockage of, or decrease in, views
	Malodorous emissions	Offensive odor health and aesthetic effects
	Light sources and emissions (lux)	Light pollution; adverse wildlife impacts; adverse photoperiod response in plants
	Land disturbance (1)	Removal of aesthetically pleasing vegetation
Air Quality	Stationary (area and point) emission sources (2)	Degradation of air quality; adverse health effects
	Mobile emissions sources	Degradation of air quality; adverse health effects
	Fugitive emission sources	Degradation of air quality; adverse health effects
	Odorous emissions	Aesthetic considerations
Airspace Use	Special Use Airspace requirements	Reduction in navigable airspace
	Change in airport approach and departure patterns	Noise contour exposure and shifts
	Height of structures (buildings, antennas)	Obstruction to air navigation
Biological Resources	Land requirements	Habitat destruction; degradation & fragmentation; biodiversity reduction
	Amount of land disturbance (1)	Habitat loss & fragmentation; wildlife disturbance; nutrient cycling alteration; biodiversity reduction
	Nature of security fencing/lighting	Wildlife disturbance
	Noise generation	Wildlife disturbance
	Number of construction/operations personnel	Wildlife disturbance (population dynamics interference); exotic species introduction
Cultural Resources	Amount of land disturbance (1)	Destruction, alteration, removal or changing use of historic properties
		Destruction and/or disturbance of archaeological resources
	Noise (sound pressure) generation	Structural damage to historic properties
	Number of construction/operations personnel	Archaeological resource disturbance
	Architectural details of buildings/structures	Alteration of setting of historic properties, introduction of intrusive elements
Geology and Soils	Amount of land disturbance (1)	Soil loss, compaction, contamination and erosion
		Alteration of shape, morphology, and relative elevations (increased instability and erosion potential)
		Alteration of surface hydrology and drainage patterns
	Borrow and fill requirements	Increase in truck traffic, noise
	Fencing (property boundary demarcation)	Denial of accessibility to actual or potential geologic resources
Hazardous & Toxic Materials/Waste	Types and quantities of materials used (3)	Changes in current handling, storage, and transportation/distribution practices and capacity
	Types and quantities of waste produced (3)	Resource Conservation and Recovery Act (RCRA) compliance
	Pesticide and fertilizer applications	RCRA compliance; wildlife impacts; nutrient cycling alteration

Table 3-2. Examples of DOPAA Information and Data Needs by Principal Environmental Component (Sheet 2 of 3)

Human Health and Safety	Types and quantities of hazardous materials/wastes	Occupational and/or public health or safety risks from toxic, hazardous, or radioactive materials/wastes
	Types and quantities of ordnance	Participant and public safety risks
	Explosive Safety Quantity Distance Arcs	Participant and public safety risks; land use compatibility; restricted public access
	Types and quantities of fuels	Participant and public safety risks
Land Use	Land requirements	Changes in land use; conflicts with existing land use plans, policies and controls; land use incompatibility
	Amount and type of land cover alteration	Increase in imperviousness, increased runoff, alteration of surface drainage patterns Increase in non-point-source water pollution
	Restrictive easement requirements	Public access to adjacent land (e.g., beaches and other recreation areas)
Noise	Sources of subsonic continuous and impulse noise [4]	Physiological effects to humans and wildlife; land use compatibility
	Sources of supersonic noise (overpressures produced)	Physiological effects to humans and wildlife; land use compatibility; structural damage
Socioeconomics	Construction and operations period employment	Direct, indirect and induced employment impacts; demographic impacts; community services & fiscal impacts
	Construction and operations period procurements	Direct, indirect, and induced earning and income impacts
Transportation	Pre-construction and construction related traffic [5]	Level of Service (LOS) degradation; disruption of local, area and regional traffic patterns Traffic noise physiological effects on humans and wildlife
	Operations related traffic	LOS degradation; disruption of local, area and regional traffic patterns Traffic noise physiological effects on humans and wildlife
Utilities [6]	Electricity power demands (kWh)	Capacity of tap lines, the main distribution lines, local substations, transmission substations
	Potable water demands (gpd)	Capacity of water pumping, treatment, and distribution system
	Wastewater collection and treatment demands (gpd)	Capacity of sanitary sewer collection and treatment system
	Telephone line needs	Capacity of local lines, trunk cables, local exchange switching equipment
	Fiber optic needs	Capacity of fiber optic cables, microwave radio relays
Water Resources	Point source inventory (conventional and toxic)	Reduction or degradation in water quality
	Non-point source inventory	Reduction or degradation in water quality Change in receiving water's temperature, flow, turbidity
	Land disturbance [2]	Change in impervious cover; soil erosion and stream sedimentation and aggradation; aquatic life impacts
	Water demands [gallons per day (gpd)]	In-stream flow reduction; groundwater drawdown
	Well construction	Groundwater withdrawal

Table 3-2. Examples of DOPAA Information and Data Needs by Principal Environmental Component (Sheet 3 of 3)

Notes:

(1) Construction-related ground disturbance activities such as site preparation and earthwork during the pre-construction phase, and foundation preparation, road and parking lot surfacing, landscaping, security fence/system installation, and utility installation during the construction phase, should be identified. Site preparation may involve clearing, grubbing, tree removal, existing structure removal, and the disposal of demolition debris. Earthwork may include the stripping of topsoil; excavation; borrow material selection; drainage and dewatering; grading; trenching; jacking, boring and tunneling; subgrade preparation; filling and backfilling; shoulder and berm construction; topsoil spreading; finishing; and subgrade and embankment protection.

Training-related activities associated with tank and mechanized units, artillery and infantry units, combat aviation units, and special operations forces have their own set of ground disturbance activities that should be identified.

(2) Information required includes potential to emit inventory, including the identification of the individual pollutant, its source (e.g., boiler, emergency generator, food service area, cooling tower, etc.), hourly rate, annual rate, emission factor, etc.

(3) Construction-related hazardous and toxic materials that may be handled during pre-construction activities include: combustible and flammable liquids (e.g., petroleum fuels such as diesel, gasoline, and oil), corrosive solids (e.g., concrete mix containing calcium carbonate, aluminum oxide, silica, and calcium oxide), flammable gases (e.g., propane, acetylene), and combustible solids (e.g., asphalt). Additional hazardous materials that may be encountered during the removal of existing structures include: combustible and flammable liquids (e.g., petroleum fuels such as diesel, gasoline, and oil); corrosive liquids (e.g., sulfuric acid and sodium hydroxide); metal-bearing solid or liquids (e.g., products with lead, cadmium, arsenic, mercury, etc.); flammable and inert gases under pressure (e.g., propane, acetylene, and oxygen); chlorinated, aromatic, and flammable solvents (e.g., acetone, methylene chloride, and trichloroethane); and asbestos, PCBs, lead-based paint, pesticides, herbicides and insecticides. During construction, in addition to the hazardous materials identified above for the pre-construction activities, water-based and possibly solvent-based paints, and miscellaneous liquids and solids with regulated chemical components (e.g., concrete curing agents, adhesives, epoxy, and grout) may be used and stored routinely.

Manufacturing processes and other operations use a multitude of hazardous and toxic materials and generate a wide variety of wastes. US Environmental Protection Agency Sector Notebooks are a useful source of information on both the materials used and wastes produced.

(4) Noise emission duration and frequency of occurrence, time of day, and year, are additional factors that should be identified.

(5) Details of transportation requirements should be provided for all modes of transportation (roadway, railway, air, and water) anticipated.

(6) The concern is the local utilities' capacity to handle the proposed action's requirements. If capacity has to be upgraded or new facilities have to be constructed to meet the proposed action's requirements, the DOPAA should include a description of those upgrades and new facilities (e.g., tap lines, distribution lines, substations, etc., for electricity) that would be built to accommodate the proposed action or one of its alternatives.

CHAPTER 4.0:
DOPAA DEVELOPMENT PROCESS

4.1 BACKGROUND AND OVERVIEW

The traditional approach to developing a DOPAA is to meet with key program/project personnel who will be responsible for executing the proposed action. These meetings are sometimes supplemented by site visits to installations or facilities where the proposed action is to occur. Key personnel are often interviewed to discover the *who*, *what*, *where*, *when*, and *how* of the action, as well as the larger program/project context in which the action is to occur. Documents, briefing materials, and other data are also collected for study by the DOPAA authors to help provide needed details. Following a generally limited review, the DOPAA document is given to the NEPA practitioners to conduct the necessary analyses and EA/EIS development. In some cases, the DOPAA has actually been prepared concurrently with the environmental analysis activities.

For NEPA analyses supporting smaller and simpler actions, this traditional approach is usually adequate. However, in the case of larger and more complex Army actions (e.g., research and development projects, the fielding of new weapon systems, and large training exercises), reliance on interviews and responses to various data calls frequently does not go far enough. Such programs do not always have a well-defined proposed action, and even when they have one, it is frequently subject to change as the program develops. Additionally, alternatives are not easily identified, in part because program personnel are typically resource constrained and singularly focused on planning to execute the proposed action. In these cases, the traditional DOPAA development approach is usually applied multiple times, frustrating all parties; or the program personnel find that the resultant NEPA analysis is flawed and require that the DOPAA be revisited, often multiple times. The end result is often an expensive and overdue analysis, which still may not completely meet the program's real need.

To help proponents overcome such problems, this chapter of the guide describes a more structured and interactive process for preparing DOPAAs. An overview of the DOPAA development process presented here is depicted in Figure 4-1. What is unique is not the flow chart itself – it could apply to some variations of the traditional approach – but the structure and methodology used to implement this process. The structure is heavily based on the partnering between key program technical personnel and the environmental staff and/or contractors responsible for the NEPA analysis. It also relies on their close coordination and involvement with other Army personnel and, in some cases, non-Army representatives having some form of involvement or special interest in the proposed action.

4.2 STEPS IN DEVELOPING THE DOPAA

The flow chart shown in Figure 4-1 provides a visualization of the four key steps in DOPAA development that are described in this subsection. Each *square* on the chart represents a distinct step that must be taken in order to advance DOPAA development to a point where the NEPA analysis can proceed. *Diamonds* appear as decision points for determining advancement. In many cases, some of the steps and decision points in the process will be repeated during DOPAA development.

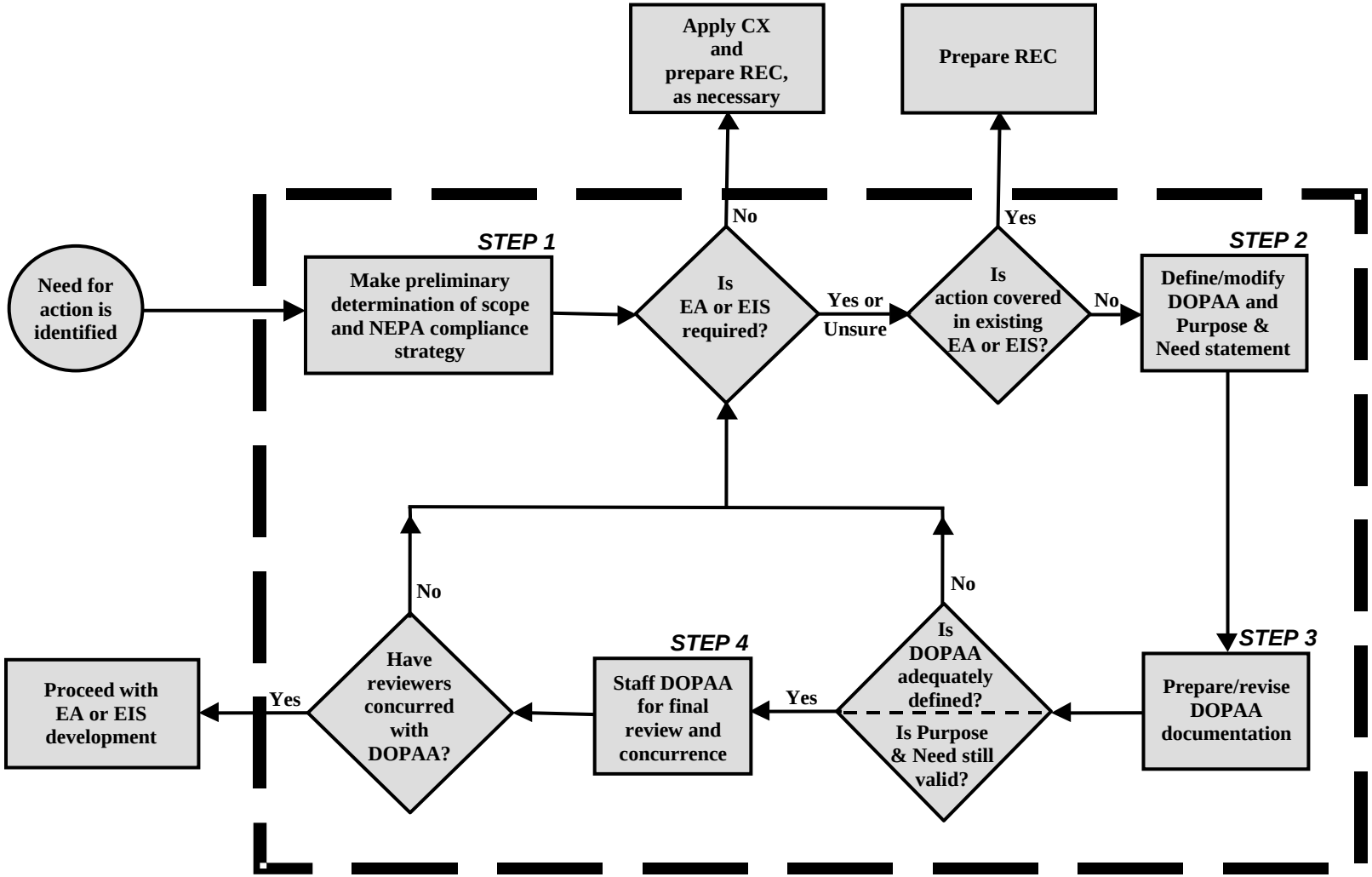

Figure 4-1. DOPAA Development Process

4.2.1 Step 1 – Make Preliminary Determination of the Scope and NEPA Compliance Strategy

Once it has been determined that an Army action is needed, program technical personnel and the NEPA support staff initially meet to make a preliminary determination of scope in order to form a basic definition of the proposed action. From this initial understanding of the action, a NEPA compliance strategy usually can be formed. Depending on the complexity of the action and the availability of information concerning it, the determination of a NEPA compliance strategy is sometimes supported by the application of an environmental issues checklist, such as the example shown in Appendix B. Such checklists often help in scoping out characteristics of the action, especially the identification of potential environmental impact drivers associated with the action. Completing these checklists may require input and assistance from installation and MACOM staff.

Unless a clear determination can be made that the action falls under an Army categorical exclusion (CX) and can be adequately addressed by a Record of Environmental Consideration (REC) in accordance with 32 CFR Part 651, the NEPA strategy must be to develop an EA or EIS. But before proceeding with the development of a new document, it is important first to check whether the proposed action is adequately covered in an existing EA or EIS, such as an installation-wide EIS. If the action does fit within the scope of an existing document (in terms of the extent and intensity of activities described, including the timeframe in which the activities are to occur), then the only NEPA requirement is to prepare a REC in accordance with 32 CFR Part 651. If the proposed action fits within the general scope of an existing EA or EIS, but requires additional information, then a *supplemental* document is usually required.[6] If the proposed action is not covered adequately in an existing EA or EIS, or is significantly larger in scope than that described in the existing document, then a new document must be prepared.

If it is determined that a new document is required, deciding on the appropriate level of NEPA analysis cannot always be accomplished until after a reasonably well-defined DOPAA has been prepared. In rare instances, development of the DOPAA may prove that application of a CX and/or REC will adequately satisfy the NEPA analysis requirements, thus eliminating the need for further development of an EA or EIS.

In proceeding with DOPAA development, both program technical personnel and the NEPA support staff commit to a series of technical interchanges or workshops designed to further scope out the DOPAA. This process is described in Step 2.

4.2.2 Step 2 – Define/Modify DOPAA and Purpose and Need Statement

The methodology used in this step is a blend of problem and decision analysis techniques. Using a workshop format with face-to-face interaction among all participants, a series of two or more technical interchange meetings are held for the purpose of defining (or modifying) the DOPAA and the Purpose and Need statement.

[6] In accordance with 32 CFR Part 651 and 40 CFR 1502.9(c)(4), procedures for preparation, circulation, and filing of a Supplemental EA or EIS are the same as those required for the original document, with the exception that scoping does not need to be repeated for a Supplemental EIS filed within one year of the filing of the original ROD.

The meetings or workshops are organized and usually facilitated by program personnel or, more often, by the NEPA support staff. In preparing for the workshops, both parties must also determine who else should participate. Potential participants might include legal advisors, public affairs personnel, and environmental resource specialists from the responsible MACOM and/or from the affected installation(s). Such individuals can provide insight on certain technical aspects of the proposed action, or on the environmental and legal concerns the action might present. It is essential that the correct participants be identified and involved in preparation of the DOPAA in order to minimize surprises later in the analysis. With each subsequent workshop, the list of participants may broaden and discussions will typically become more focused.

Establishing Bounds for Describing the Proposed Action

The initial workshop is essentially a brainstorming session to establish a series of bounds used in defining the proposed activity. Participants are challenged, for example, to ascertain which activities are included in the scope of the action, and to identify any potential activities that clearly fall outside the scope. A meeting facilitator uses the inputs to create a set of bounds for what ***is*** included in the proposed action as well as what ***is not*** included. Participants are encouraged to test the initial boundaries by proposing questions pertinent to the technical aspects of the proposed action (e.g., have any activities–however remote–been left out). By consensus, the initial boundaries may be expanded or contracted, or even redefined in different terms. In this way, all of the principal DOPAA parameters (*who*, *what*, *where*, *when*, and *how*) are bounded. A sample format of how this information might be presented to workshop participants is shown in Table 4-1. In this example for a proposed series of missile flight tests, only a few key parameters are addressed. As the activity becomes better defined, more specific parameters can be considered.

Table 4-1. Sample Format for Bounding Activities

DOPAA Parameters (*Who, What, Where, When, & How*)	**Is**	**Is Not**
Location(s) for missile flight tests X, Y, and Z	White Sands Missile Range, McGregor Range	Off range, over water, Dugway Proving Ground, Yuma Proving Ground
Timeframe for conducting tests	Currently 4Q FY03	Earlier than 4Q FY03 or later than 2Q FY04
Facility/equipment requirements	Portable launcher, portable 500-kW generator, camera stands, approx. 10 support vehicles and trailers	New facilities, roads, or utility extensions
Test support personnel needed on site	Minimum of 8 government and 30 contractor personnel	More than 50 personnel total

The initial workshop session provides a foundation for additional research by the DOPAA preparers and for preparation of a first draft of the DOPAA documentation (refer to Step 3 described later in this chapter). Review of the first draft DOPAA provides a starting point for subsequent workshops, which may be a combination of draft critiques and further brainstorming.

The success of the reviews depends on consistent involvement of key players and on free and open interactions during the workshops. In the course of the workshop sessions, the Purpose and Need statement (which answers *why* the action is needed) is also defined (and modified as necessary), and a set of reasonable alternatives are established. As the need arises, additional workshop participants may be included (e.g., resource specialists, regulatory agency representatives, property owners, and other stakeholders). For more complex programs, breakout sessions that focus on a particular topic or location might also be utilized. Throughout the review process, participants are encouraged to take a "long view" of the DOPAA to ensure the bounding parameters are adequately defined, but not overly restrictive. Doing so helps guarantee future relevance of the NEPA analysis, should activities or conditions change.

If, during the course of the initial workshop session, it becomes difficult to set reasonable bounds for describing the proposed action, then the question should be raised as to whether the action is ripe for decision. This problem can become more evident when it comes to writing and reviewing the first draft of the DOPAA document. A vague or poorly defined DOPAA can be a signal that the action is not yet ready for analysis or decision. In such cases, the proponent and/or decision maker should reevaluate the action and the issues that are driving its implementation.

Determining Alternatives

Once the proposed action is defined, determining a full range of reasonable alternatives can be a difficult challenge. Details of alternative selection already accomplished by the program may not be readily available, or, due to program constraints, all alternatives may not have been identified. Most programs are stressed to develop the proposed action to meet tight schedules, and have limited resources to devote to the detailed consideration of alternatives required for a major NEPA analysis. For a weapon system acquisition program, the assigned Program Manager should review the Analysis of Alternatives (AOA) study developed by the Combat Developer for help in identifying potential alternatives for analysis. A full determination of alternatives during DOPAA development can be a valuable asset to any program in this situation.

In subsequent workshop sessions, brainstorming is also done on alternative actions to ensure the DOPAA is thoroughly scoped. A series of questions are used to: (1) identify objectives for implementing the proposed action, (2) categorize objectives into *musts* and *wants*, (3) identify possible alternatives, and (4) compare the alternatives to the *musts* and *wants*. Each alternative to be examined in the NEPA analysis can then be defined with bounds in a similar manner as used for the proposed action.

In this phase of the process, a facilitator begins by querying workshop participants to scope out key objectives for the proposed action. In other words, what are the driving factors or conditions that influence proper implementation of the action, and which areas are of most concern? This goal can be accomplished by questioning participants to identify how the following categories might affect the decision to implement the proposed action. Depending on the type of action and concerns raised by participants, other categories might be added.

- Near-term
- Long-term
- Location
- Facilities
- Equipment
- Transportation
- Human Resources
- Management

- Cost
- Performance
- Research
- Policy
- Laws and Regulation
- Public Considerations

As participants identify areas of concern, short statements are written to specify project objectives. For example, in regards to the category Location, workshop participants might specify that a proposed storage facility requires *adequate space for buildings, parking, and future expansion*. Another example might be that a new Army unit needs *access to training lands close enough for daily use*. To avoid developing an unwieldy number of objectives, participants must stay focused on those concerns of greatest importance. Questions to consider are:

- Which concerns are the most serious?
- Which concerns should be addressed first?
- Which concerns are the hardest to resolve?
- Which concerns are expected to worsen?
- Which concerns are most uncertain or ill defined?
- Is there a deadline for starting? For finishing?

Once consensus has been reached that a reasonable list of objectives for the proposed action has been formulated, participants then categorize the objectives into *musts* and *wants*. *Musts* represent those objectives that are mandatory (required), measurable (have a set limit), and realistic (can be met). *Wants*, on the other hand, are those objectives that preferably should be met, but are not an absolute requirement. In order to make this determination, it is recommended that all the objectives be as specific as possible, using quantifiable measurements or qualitative descriptions. For instance, referring to the preceding "location" examples, participants could specify that the proposed storage facility requires a *minimum parcel size of 10 acres*, while it is preferable that the new Army unit be *based within 5 miles of training lands*.

After the *wants* have been identified, participants need to determine the relative importance of each *want*. This determination can be made by assigning relative values of importance or weighting factors to each objective, such as from 1 to 10, with the most important objective(s) receiving a 10. The other *wants* can then be compared to it (them) and assigned appropriate weights of lesser value.

At this point, if a well-developed set of alternatives has not yet been established for the project, workshop participants will need to look at formulating potential alternatives or possibly expanding on an existing set. In doing so, it is important to keep in mind that alternatives should not be stated just in terms of the proposed action. More correctly, they should be defined in terms of meeting the objectives and in fulfilling the underlying *need* for the action.

In reviewing their list of objectives, workshop participants can generate possible alternatives by focusing on satisfying all of the *musts* and those *wants* weighted the highest, without necessarily having to satisfy every single *want* objective. This approach enables the development of

alternative actions that may better satisfy some of the more important objectives. It is very important that participants then test each alternative to see whether it satisfies the Purpose and Need statement. If it does not satisfy it, then the alternative probably should not be considered. It is also possible, however, that the Purpose and Need statement may be too restrictive, or that it incorrectly reflects the proposed action. Workshop participants can expect that the Purpose and Need, and some of the objectives, will likely change at some point during the process because of a change in the definition of the mission, or for purposes of accommodating a wider or narrower range of alternatives. Again, using the earlier example of a new Army unit, the preferred objective for *basing within 5 miles of training lands* could be modified or overlooked to allow for an alternative that uses a training range located much further away from home base, but with sufficient housing and logistical support to regularly accommodate visiting soldiers. Although not meeting the original objective of providing close access to training lands, such an alternative may still satisfy the Purpose and Need statement and provide opportunities for higher-quality training.

Once a preliminary set of alternatives is identified, workshop participants then compare them against the *must* and *want* objectives. The *musts* are first applied to each of the alternatives to determine whether any do not meet the minimum requirements. If an alternative does not satisfy all of the *musts*, then it should be eliminated from further consideration. The next step is to determine which of the remaining alternatives are most desirable. For each *want* objective, alternatives are given a raw performance score from 1 to 10. The best performing alternative(s) is (are) first given a 10. A relative score of lower value is then assigned to each of the remaining alternatives for that same objective. Next, multiply the objective weights (identified earlier) by the respective raw score of each alternative. A summation of each alternative's weighted scores provides its overall total score. The alternatives can then be ranked from highest to lowest. Those alternatives receiving the highest scores represent the best performers. As a form of decision analysis[7], this methodological approach to ranking and selection provides the proponent with a view of the alternatives that is as close as possible to a consensus. A sample worksheet format for making alternative score comparisons is provided in Table 4-2.[8]

Applying decision analysis techniques is particularly useful when dealing with an overly large number of alternatives. Taking this step not only gives the proponent the most desirable alternatives to analyze in the EA/EIS, but it provides a legitimate means of narrowing the list to a more manageable number. This methodology is commonly used as part of siting analyses, when numerous locations must be considered. It is also useful to include the proposed action when conducting this comparison. In some cases, a particular alternative, or some of the features of the alternative, may prove to be more desirable than the proposed action. With this information, workshop participants can then take the opportunity to modify the proposed action or any of the alternatives to improve their overall performance.

[7] Decision analysis is a technique used to aid decision-making under conditions of uncertainty by systematically representing and examining all of the relevant information for a decision and the uncertainty around that information. Decisions are typically based on assigning probabilities to various factors and assigning numerical consequences to the outcome.

[8] The decision analysis techniques presented here are analogous to the application of *exclusionary* and *evaluative criteria* sometimes used by various agencies and organizations in their decision analysis techniques.

Table 4-2. Sample Worksheet for Alternative Comparisons

Objectives (*Wants*)	Objective Weight (1-10)	Alternative 1		Alternative 2		Alternative 3	
		Raw Score (1-10)	Weighted Score	Raw Score (1-10)	Weighted Score	Raw Score (1-10)	Weighted Score
Objective "a"….	7	6	42	10	70	7	49
Objective "b"….	10	10	100	9	90	2	20
Objective "c"….	2	5	10	4	8	10	20
Objective "d"….	5	3	15	10	50	8	40
Total Score			**167**		**218**		**129**

Following selection of the best performing alternatives, the establishment of bounding parameters for each is required, as was originally done for the proposed action. This way, all the alternatives are defined to an equivalent level of detail using similar parameters.

In the course of developing the alternatives, the No Action alternative must also be defined. This can be done using the guidance provided in Subsection 3.1.2.

As a final check to establishing a solid base for alternatives, workshop participants should be asked the following questions regarding each alternative, including the proposed action. Depending on the responses, some alternatives may require further modifications or reconsideration.

- Is any vague or uncertain information used in defining the alternatives?
- What could go wrong? Are there any fatal flaws?
- Which alternatives present the most risks? The fewest risks?
- Are the risks worth the benefits?
- To overcome the potential for major environmental impacts, should any mitigation measures be embedded as part of the DOPAA?[9] (Refer also to Subsection 3.1.2 on Mitigation Measures and Monitoring Procedures.)

Filling in Remaining Details

With the proposed action and alternatives well established, it is expected that certain details needed to complete their descriptions are still going to be missing. As noted in Chapter 3.0, obtaining outstanding data usually requires further meetings, phone calls, and other

[9] Incorporating mitigation measures into the DOPAA of an EA, for the purpose of eliminating the potential for significant impacts, results in what is sometimes referred to as a *mitigated EA/FNSI*. If the mitigation measures are eventually not funded or implemented for the selected action (preferred alternative), the EA is invalidated. The proponent must then publish a Notice of Intent and prepare an EIS.

correspondence with installation staff, facilities/engineering contractors, and other offices. Supplementing the data requirements sometimes requires making site visits to installations or facilities where the proposed activities are to occur. (For further discussions on data and other information requirements for the DOPAA, refer to Subsection 3.2.)

4.2.3 Step 3 – Prepare/Revise DOPAA Documentation

In most cases, the NEPA support staff is given the responsibility of writing and preparing the DOPAA documentation. Once the DOPAA has been reasonably scoped in the initial workshop session(s), the first task of the NEPA support staff in preparing the DOPAA is to develop an outline using the guidance provided in Chapter 3.0. Although not all sections are completed until later in the analysis, it is best at this point to outline as much of the DOPAA document as possible, including some sections as placeholders (e.g., the sections on Public Participation, the Comparison of Environmental Consequences, and the Mitigation Measures and Monitoring Procedures). Doing so can help head-off potential comments from reviewers of the DOPAA expecting to see these sections, and it gives notice to other reviewers concerning later DOPAA requirements.

It should be clearly understood that the initial DOPAA is almost certain to change. To minimize changes, it is highly recommended that the DOPAA outline be distributed to all or to select reviewers participating in the DOPAA development workshops. Obtaining their approval early on minimizes the potential for conflicting views raised in later workshop sessions.

In writing the DOPAA, it is important that each section be well focused. Writing style should be such that the document attains clarity and brevity. In addition to following the recommendations provided in Chapter 3.0, preparers should keep in mind the important guidelines listed below:

- Write clearly, concisely, and accurately.
- Provide only relevant information.
- Be consistent across all sections of the document, particularly those discussions covering the proposed action and each of the alternatives.

Because the ultimate audience (the public) is often not technically versed in all subject areas, preparers of EAs/EISs, including the DOPAA portions, should strive to write the documents using plain language. In addition, appropriate maps, figures, and other graphics that support the text should be provided, as long as the public can easily interpret them. Whenever possible, technical editors should review the DOPAA document to ensure accuracy, consistency, and readability.

If overly complex or lengthy descriptions, tables, or diagrams are identified for use in describing the proposed action and alternatives, preparers should first consider whether these inputs are absolutely necessary to support the NEPA analysis and resulting documentation. If truly important to the analysis and to ensure a diverse public understanding of the activity (particularly for “watchdog” or other special-interest groups), preparers may want to consider placing such materials in the appendices to the NEPA document and simply refer to them in the body of the document, as necessary.

When the use of classified information (e.g., performance characteristics of a new weapon system, the application of advanced technologies and materials, and unique training requirements for special forces) is necessary to support DOPAA development and the follow-on analyses, such information can also be discussed in a classified appendix or addendum, separate from the main body of the EA/EIS. This approach allows for disclosing the bulk of the document, which is unclassified, to other agencies and to the public, thus minimizing the classification issues. In rare cases, the entire document might require appropriate classification and dissemination restriction.

It is also important to note that preparers of the DOPAA and the ultimate NEPA document must maintain records of all the data, information, and analysis relied on to prepare the document. As part of the Administrative Record, this information could become the backup data used in court proceedings to validate the NEPA process and support the Army's decision.

Once the initial DOPAA document has been developed, it is usually sent to all or to select participants from the workshop session(s) for their review and comment. It should be expected that the first DOPAA will have a variety of data deficiencies and likely will not have addressed all of the possible alternatives. With each subsequent workshop, however, these deficiencies should be addressed and eliminated as the DOPAA grows and evolves.

In addition to reviewing the adequacy of the DOPAA information each time it is revised, the question of validity of the Purpose and Need statement should also be revisited. Although addressed during the actual workshop sessions, this particular decision point in the DOPAA development process is most easily done once the DOPAA is thoroughly laid out in written form, and reviewers are given the opportunity to see exactly how the information is to be formally presented.

As the DOPAA is more clearly defined, issues may also arise that require reevaluation of the NEPA compliance strategy. Examples of this can include a reduction or expansion in scope of the proposed action, and/or the identification or elimination of potentially significant impacts. Changes of this nature can force a proponent to go from developing an EA to requiring an EIS, or allow the option of conducting a reduced level of NEPA analysis. As discussed earlier in this chapter, deciding on the appropriate level of NEPA analysis cannot always be accomplished until after a reasonably well-defined DOPAA has been prepared. Including legal advisors, MACOM or installation Environmental Office staff, and/or appropriate regulators in the review of the DOPAA can often help in making this important decision.

4.2.4 Step 4 – Staff DOPAA for Final Review and Concurrence

Once the proponent and the NEPA support staff are satisfied that the DOPAA document is complete and appropriate for their NEPA compliance strategy (EA or EIS), and all substantive comments from workshop participants have been incorporated, then the last step to be taken in the DOPAA development process is the final review and concurrence. For this step, it is recommended that the DOPAA be distributed to appropriate decision maker(s), affected installation Environmental Offices, legal staff, and other key Army participants involved in the proposed action for their review and concurrence (preferably provided in writing). Some comments can be expected, particularly from first-time reviewers of the DOPAA. However, written concurrence might still be obtained, and should be requested, if made conditional that the reviewer's comments will be fully incorporated.

The potential exists for some reviewers to not concur with the DOPAA until substantial changes are made to the document. Although such circumstances may delay the analysis, it is much easier and less costly to address the problems at this point, as opposed to having to deal with them later after the entire EA/EIS has been developed. In such cases, the proponent must decide whether it is prudent to go back to workshop participants (in Step 2) to address these issues, or to work the changes with more limited support.

In the end, after all reviewers have concurred with the DOPAA, the proponent should feel confident that the remaining phases in the analysis will proceed with fewer obstacles towards development of a more effective and defensible NEPA document.

CHAPTER 5.0: BIBLIOGRAPHY

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APPENDIX A

TYPICAL DATA AND INFORMATION REQUIREMENTS FOR DESCRIBING US ARMY ACTIONS

Appendix A. Typical Data and Information Requirements for Describing US Army Actions

The following are lists of data requirements typically used in describing major types of US Army actions. Because the data lists are not necessarily all encompassing, nor do they address every proposed action considered by the Army, each alternative action must be evaluated for any unique requirements necessary to adequately define, analyze, and compare the action to other alternatives.

General Considerations: The following list of data requirements are generally associated with most types of Army actions.

1. Time of day and duration of activities
2. Schedule of activities and phases
3. Type (gas, diesel, other) and number of government-owned or -operated vehicles that add to the vehicle count used in normal operations
4. Type (gas, diesel, other) and number of contractor-owned or -operated vehicles that add to the vehicle count used in normal operations
5. Location of all electrical generators to be used
6. Type, rating in kW, and number of each respective generator
7. All noise emission sources over 85 dBA
8. Names and quantities of chemicals, paints, solvents, oils, etc. utilized, stored, and produced
9. Identify any use, production, disposal, or storage of hazardous and/or toxic material, or waste
10. List the air contaminants emitted, their totals (pounds), totals per day (pounds/day), and totals per hour (pounds/hr)
11. Latrine requirements (number and locations)
12. Non-construction water use requirements (gallons)
13. Sources and daily quantities (gallons/day) of drinking water and sanitary water
14. Energy demands and source(s), including power/heating
15. Land use changes and intentions
16. Quantities of solid waste transfer and disposal

17. Housing changes (permanent, temporary, and transient)

18. Numbers and types of personnel changes.

Construction, Facility Renovation, Maintenance, and/or Repair: Examples of typical construction programs include new buildings, utilities, roads, communication systems, parking areas, and earth mounds. Maintenance and repair is also included within this category. Maintenance and repair includes communications upgrades, renovating structures and associated utilities, painting, roofing, landscaping, ground maintenance, and building removal. Examples are as follows: sewage and water system upgrades, heating and cooling system upgrades, roofing repairs, landscaping, post beautification, curb repairs, grounds maintenance, erosion control measures, and general maintenance to keep facilities in proper working condition. For these types of actions, the following information should be considered.

1. Number of construction personnel involved

2. Types and numbers of specialized construction vehicles (low boys, bulldozers, cranes, etc.).

3. Locations of existing and new borrow pits to be used

4. Quantity of soil to be removed or added at each location (cubic yards)

5. Area of disturbance at each respective site (acres)

6. Types and quantities of construction debris (lead, asbestos, concrete, wood, etc.) to be disposed of, and location of disposal site

7. Basic building design, height, color scheme, and total square footage

8. Site footprint of buildings, roads, parking lots, fences, etc

9. Utility requirements and routes of trenching for all utilities.

Missiles and Flight Tests: Examples of target/missile testing includes Air to Air/Surface Missile programs, Surface to Air Missile programs, and Surface to Surface Missile programs.

1. Types and numbers of defensive missiles, target missiles, and sounding rockets to be tested

2. Types and locations of ground and flight tests to be conducted (e.g., static fire tests of motors, target intercepts, etc.)

3. Types and quantities of propellant requirements, including:
    - Fuel (e.g., unsymmetrical dimethyl hydrazine (UDMH) and kerosene)
    - Oxidizer (e.g., nitrogen tetroxide (NTO) and inhibited red fuming nitric acid (IRFNA))
    - Initiator (e.g., organic amine)

4. Propellant transportation and temporary storage requirements, including Explosive Safety Quantity Distances

5. Missile assembly/integration building requirements

6. Launch site requirements (fixed or mobile), including:
   - Launch control building or van requirements
   - Dimensions of vegetative clear zone
   - Fencing/security needs
   - Road access needs

7. Flight path (ground projection of) and width of flight safety corridor

8. Number, location, and dimensions of hazard zones, including:
   - Launch (ground) hazard area
   - Booster drop zones
   - Impact/debris areas

9. Use and location of restrictive easements

10. Special Use Airspace requirements

11. Radar tracking, telemetry, optics, and communication equipment requirements and locations.

Electromagnetic Radiation and Lasers: Information on radar and laser usage can include the following:

1. Height above ground, in meters, of the highest transmitting device

2. Permissible exposure limit (PEL) of the radar or laser

3. Ground hazard distance in meters (power density ~ PEL)

4. Operating frequency of the radar or laser

5. Beam volume of the radar/laser (power density > PEL)

6. Total scanned hazard volume (power density > PEL)

7. Probability of hazard while being in the hazard volume (beam volume/hazard volume)

8. Determination of whether the beam is electrically or mechanically steered

9. Determination of whether the beam is a continuous or a pulsed emission

10. Azimuth angle of the beam

11. Range of the beam (power density > PEL) in meters

12. Elevation range of the beam (0 = horizon, 90 = vertical)

13. Eye safe distance of laser (unaided)

14. Laser class

15. Nomenclature/description of the emitting equipment.

Aviation Systems: Examples include aircraft flights and airport operations to support the activities.

1. Types and numbers of fixed- and rotary-wing aircraft (combat, reconnaissance, transport)

2. Number of sorties flown (takeoffs, patterns) and number of operations per sortie

3. Flight patterns (flight tracks) and airspace requirements (Special Use Airspace)

4. Power settings, air speed, altitude Above Ground Level (AGL)

5. Time of day and duration of flights

6. Number and types of missiles and ordnance used (inert and live), including:
   - Air-to-air missiles
   - Air-to-surface missiles
   - Bombs
   - Cannon
   - Rockets
   - Trainable guns

7. Number and type of equipment/personnel drops

8. Number, type, and frequency of flare dispensers use

9. Fuel usage and storage requirements.

Military Field Training: Examples include maneuver and range training, involving mechanized forces and ground troops.

1. Identify training area and type of training to be conducted

2. Identify any ground disturbance, such as land clearing or damage to wetland areas

3. Identify use of explosives, munitions, or other hazardous training exercises to be conducted

4. Types and quantities of munitions/ordnance to be used in live fire exercises (tons of ordnance, numbers of rounds, net explosive weights)

5. Number of troops and individuals involved

6. Number and type of vehicles (combat, service/work-unit, transport)

7. Vehicle weight and track/tire width

APPENDIX B

SAMPLE ENVIRONMENTAL CHECKLIST

Appendix B. Sample Environmental Checklist

1. Project Title: _____.

2. Attach location map, drawings, and specifications, as appropriate.

3. Environmental Effects: Explanations of all "yes" and "maybe" responses are required, and should be provided as attachments. Consider all phases of the proposed action, for example building demolition, construction, and operating phases. Include beneficial as well as adverse effects.

ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION	YES	MAYBE	NO
a. Air Quality			
(1) Involve installation, modification or replacement of any heating system rated at 750,000 BTU/hr (input) or greater?			
(2) Involve disturbance of asbestos containing material of more than 50 linear ft or 32 ft^2?			
(3) Involve disturbance of more than 25 acres of soil and/or require more than 6 months to complete?			
(4) Involve the installation or construction of a paint spray booth(s), vapor degreaser, or incinerator?			
(5) Involve sandblasting or other particulate (dust) generating activity?			
(6) Involve the storage, disposal, or dispensing of volatile organic compounds, e.g., gasoline?			
(7) Result in other substantial air emissions or potential deterioration of ambient air quality?			
b. Wastewater			
(1) Result in discharges to the domestic wastewater treatment system?			
(2) Result in discharges to the industrial wastewater treatment facility?			
(3) Involve the installation, modification, or replacement of an individual sewage disposal system of less than 2,000 gallons per day of flow?			
(4) Involve the installation, modification or replacement of an individual sewage disposal system with daily flows of more than 2,000 gallons per day but less than 20,000 gallons per day?			
(5) Involve the installation, modification, or replacement of an individual sewage disposal system with daily flows more than 20,000 gallons per day?			
(6) Results in discharges into surface waters or ground water, which might impact water quality?			
c. Surface Water and Groundwater			
(1) Involve the dredging or placement of fill in any body of water or wetlands?			
(2) Alter the course or flow of a body of water?			

ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION	YES	MAYBE	NO
(3) Change absorption rates, drainage patterns, or the rate and amount of runoff?			
(4) Change the quantity, quality, or flow of ground water?			
(5) Require a public or drinking water supply?			
(6) Expose people or property to flooding?			
(7) Involve any cross–connection between potable and non-potable water systems that may require backflow prevention devices?			
(8) Involve the development of surface or ground water for drinking, irrigation, recreation, or agricultural purposes?			
d. Toxic/Hazardous Materials			
(1) Involve installation, removal, or modification of any underground storage tank?			
(2) Result in aboveground storage of toxic or hazardous material?			
(3) Involve the removal of electrical equipment such as transformers, switches, or capacitors, which may contain polychlorinated biphenyls (PCBs)?			
(4) Involve the use or application of a US Environmental Protection Agency regulated pesticide, herbicide, fungicide, etc.?			
(5) Involve the use or application of lead-based paint, paint thinner, solvent, or other hazardous material?			
(6) Involve the discharge of a toxic/hazardous material into a treatment facility, or ground or surface water system?			
e. Solid/Hazardous Waste			
(1) Result in the generation of recyclable material, such as cardboard, scrap metal, or paper products?			
(2) Involve the generation of solid waste that requires disposal such as trash, garbage, construction debris, sludge, etc.?			
(3) Result in the generation of a toxic or hazardous waste, which is intended to be discarded or disposed of?			
(4) Include the installation, removal or modification of an underground storage tank for storage of used oil or other liquid waste?			
(5) Result in the production of radiological or infectious waste?			
(6) Include the encapsulation, removal and/or disposal of asbestos-containing material?			
f. Noise			
(1) Involve short-term increases in actual or perceived noise levels such as construction blasting, heavy equipment operations, etc.?			
(2) Involve long-term changes or increases in the noise environment such as new equipment or changes in weapons firing, heavy maneuvers, aircraft operations or demolition?			

ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION	YES	MAYBE	NO
g. Vegetation			
(1) Involve disturbance of soil and vegetation in improved grounds within the cantonment area?			
(2) Involve disturbance of soil and vegetation in unimproved areas?			
(3) Involve disturbance of soil and vegetation in other improved, semi-improved, or unimproved areas?			
(4) Involve installation or maintenance of vegetative landscape, including planting, pruning, etc.?			
(5) Affect in any manner a federal or state endangered or threatened species?			
(6) Introduce a new or exotic plant species into an area?			
h. Wildlife			
(1) Introduce a new species of animal into the area?			
(2) Result in a barrier to the migration or movement of animals?			
(3) Affect in any manner a federal or state endangered or threatened species?			
(4) Be undertaken between March and July with the potential for affecting the reproductive capability of any species?			
(5) Deteriorate existing fish or wildlife habitat?			
i. Geology/Soils			
(1) Result in significant soil compaction?			
(2) Result in an increase in wind or water erosion of soils?			
(3) Involve gravel or mineral mining?			
(4) Change siltation, deposition, or erosion characteristics, which may modify the channel of a stream or bed of a pond or reservoir?			
(5) Result in a change to topography or ground surface features?			
(6) Expose people or property to geological hazards such as earthquakes, landslides, mudslides, etc.?			
j. Cultural Resources			
(1) Result in the alteration, modification, or destruction of significant historical architecture—e.g., buildings or structures eligible for or listed on the National Register of Historic Places?			
(2) Result in an effect on the integrity of location, design, materials, feeling, workmanship, etc., which might impact the National Register eligibility of a resource?			
(3) Have the potential to cause a physical change, which would affect unique ethnic cultural values?			
(4) Restrict existing or sacred uses within the potential impact area?			

ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION	YES	MAYBE	NO
k. Land Use			
(1) Result in a substantial alteration of the present or planned use of the area?			
(2) Adversely affect prime or unique agricultural lands, wetlands, aquifers, floodplains, wild and scenic rivers, or other areas of critical environmental concern?			
l. Energy			
(1) Use of substantial amounts of fuel or energy?			
(2) Substantial increase in demand upon existing sources of energy?			
(3) Use of alternative energy source(s)?			
(4) Replacement, renovation, or retrofit of structural building components that potentially impact energy efficiency and consumption?			
m. Socioeconomics			
(1) Alters the location, distribution, density, and growth rate of the population of an area?			
(2) Affects existing housing or creates a demand for additional housing?			
(3) Effects on economic activity?			
(4) Alters the need for fire protection?			
(5) Alters the need for security?			
(6) Alters the need for schools?			
(7) Alters need for hospitals, police departments, or emergency services?			
(8) Alters the need for parks or other recreational facilities?			
n. Transportation			
(1) Substantial additional vehicular movement?			
(2) Effects on existing parking facilities or demand for new parking?			
(3) Substantial impact on existing transportation systems?			
(4) Alteration to present patterns of circulation or movement of people/goods?			
(5) Changes in rail or air traffic patterns, equipment, frequency, etc.?			
(6) Transport of toxic or hazardous materials or wastes through or near sensitive land areas?			
o. Extraordinary Circumstances [per 32 CFR 651.29(b)]			
(1) Reasonable likelihood of significant effects on public health, safety, or the environment?			
(2) Reasonable likelihood of significant environmental effects (direct, indirect, and cumulative)?			
(3) Imposition of uncertain or unique environmental risks?			
(4) Greater scope or size than is normal for this category of action?			

ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION	YES	MAYBE	NO
(5) Reportable releases of hazardous or toxic substances as specified in 40 CFR Part 302 (Designation, Reportable Quantities, and Notification)?			
(6) Releases of Petroleum, Oils, and Lubricants (POL) except from a properly functioning engine or vehicle; application of pesticides and herbicides; or where the proposed action results in the requirement to develop or amend a Spill Prevention, Control, or Countermeasures Plan?			
(7) When a review of an action that might otherwise qualify for a Record of Non-Applicability (RONA) reveals that air emissions exceed *de minimis* levels or otherwise that a formal Clean Air Act conformity determination is required?			
(8) Reasonable likelihood of violating any federal, state, or local law or requirements imposed for the protection of the environment?			
(9) Unresolved effect on environmentally sensitive resources, as defined in 32 CFR 651.29(c)?			
(10) Involving effects on the quality of the environment that are likely to be highly controversial?			
(11) Involving effects on the environment that are highly uncertain, involve unique or unknown risks, or are scientifically controversial?			
(12) Establishes a precedent (or makes decisions in principle) for future or subsequent actions that are reasonably likely to have a future significant effect?			
(13) Potential for degradation of already existing poor environmental conditions? Also, initiation of a degrading influence, activity, or effect in areas not already significantly modified from their natural condition?			
(14) Introduction/employment of unproven technology?			

4. Determination of impacts *(select one of the following)*:

_____ The proposed action will not have a significant impact on the environment and is not controversial.

_____ The proposed action may have a significant environmental impact, but the mitigation measures described on the attached Record of Environmental Consideration will minimize the impacts to an acceptable level.

_____ The proposed action may have a significant effect on the environment, may be environmentally controversial, or environmental contamination is known or suspected; and an Environmental Assessment or Environmental Impact Statement is required.

_____ The proposed action is adequately addressed in an EA/EIS entitled _____ _____ and dated _____. The document may be reviewed at _____.