Guidance on Describing the Affected Environment in EAs and EISs

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ABSTRACT

This guidance provides a summary of how to plan and prepare the affected environment section of an Environmental Impact Statement (EIS) or Environmental Assessment (EA) which addresses direct, indirect, and cumulative effects resulting from marine fisheries actions. Information assemblage and analysis in an EIS or EA can be based on a process whereby "quick-look questions" (QLQs) are considered in the selection of pertinent Valued Ecosystem Components (VECs) and their associated indicators. Examples of five typical VECs used by the Northeast Region of the National Marine Fisheries Service (NMFS) in National Envrionmental Policy Act (NEPA) compliance documents include target species, non-target species, protected species, habitat (including Essential Fish Habitat (EFH)), and human communities. Information herein from two EAs and two EISs illustrate indicators for these five VECs. The Northeast Region has a robust suite of information sources such as fishery management plan (FMP)-related reports, EISs and EAs, as well as both Regional and Fishery Science Center research reports and published papers. Finally, a review of case law demonstrated that while the Council on Environmental Quality's (CEQ) NEPA regulations do not call for every EA to include an Affected Environment section, it is explicitly supported by Court decisions. Case law related to "incorporation by reference" strongly supports the concept of summarizing pertinent information from reference documents and its inclusion in subsequent documents. Finally, case law has also validated the four-step process of 40 CFR 1502.22 for addressing incomplete and unavailable information in Affected Environment descriptions.

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Purpose of this Guidance

A common problem that has characterized the preparation of National Environmental Policy Act (NEPA) compliance documents since 1970 is the inclusion of encyclopedic descriptions of the Affected Environment (originally called the Environmental Setting). Reasons basic to these lengthy descriptions are associated with the relative ease of information gathering, as well as early case law which emphasized informational thoroughness over selectivity and specificity of analysis. Accordingly, an early and continuing challenge in describing the Affected Environment is achieving a proper balance between informational detail and its relationship to subsequent impacts identification and evaluation. Questions such as, "How much detail should be included?" still occur relative to the content of Affected Environment sections. Such questions are often the result of document inadequacies as delineated by various Federal courts.

There are numerous other scientific and policy challenges related to describing the Affected Environment for actions and management measures associated with marine fisheries and fisheries management plans (FMPs). Examples of such information gathering and analytical challenges include FMPs which typically involve multiple actions affecting interacting resources, including target and non-target species, habitat, protected species, and human communities. In addition, target and non-target fish species, as well as protected species, which may be affected by multiple management actions, exhibit highly varied characteristics and are migratory over widely different geographic areas. Further, the habitat requirements of most species are multiple and complicated, as well as extending across large areas in association with different phases of their life cycles. Finally, delineating the social and economic characteristics of the fishing industry and supporting ports and human communities can also be challenging due to the large body of information which is readily available and the complexities of socioeconomic relationships.

The above challenges are related to developing baseline conditions which can be used in significance determinations for the direct and indirect effects of the proposed action and alternatives. In addition, the current emphasis on cumulative effects has introduced additional considerations for the Affected Environment sections (chapters) of Environmental Impact Statements (EIS) and Environmental Assessments (EA). Examples of such new or re-emphasized considerations include defining the spatial and temporal boundaries for selected Valued Ecosystem Components[1] (VECs); identifying other past, present, and future actions which could contribute to cumulative effects; characterizing VECs relative to their responses to changes and capacity to withstand stresses; and describing the documented and anticipated baseline conditions across time (from a designated prior reference condition to a future point in time) (Council on Environmental Quality, January, 1997).

The EIS shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration. The descriptions shall be no longer than is necessary to understand the effects of the alternatives.

The objective of this guidance is to describe a practical and cost-effective process for planning and preparing the Affected Environment section of an EIS or EA prepared under the auspices of the NEPA. This guidance is focused on fishery management applications in the Northeast Region of the National Marine Fisheries Service (NMFS).

Following this brief introductory section, the guidance includes a section on the Affected Environment requirements of NEPA regulations as promulgated by the Council on Environmental Quality (CEQ) and the National Oceanic and Atmospheric Administration (NOAA). Special regulatory topics related to the Affected Environment are also addressed in the second section and includes incorporation by reference, tiering, dealing with incomplete and unavailable information and use of "best scientific information available."

The third section addresses the content of the Affected Environment section in EISs and EAs. The

1 The term VEC denotes an element of a resource, ecosystem, or human community that could be affected by the proposed action or alternative. The use of VECs provides a means for organizing the Affected Environment section of an EIS or EA.

appropriate content can be established by the early identification of pertinent VECs, with the identification process aided by the use of a series of "quick look questions" (QLQs). The QLQs can be used to identify VECs which could be directly, indirectly, or cumulatively impacted by the proposed actions (e.g., management measures) and alternatives. The questions can also aid in the prioritization of the identified VECs and their potential effects, thus informing decisions related to how these topics should be addressed. Finally, the QLQs should facilitate the identification of VECs which can be excluded from a specific impact study. Appendix A includes some review questions for Affected Environment sections as prepared by the U.S. Environmental Protection Agency. This Appendix could also be used as a checklist for planning the contents of an Affected Environment section.

The second part of the third section relates the selected VECs and their indicators. Summary information from four Northeast Region case studies (two EAs and two EISs) is included in Appendix B to illustrate potential indicators for each VEC along with the extent of coverage for two impact scenarios – low/minor impact projects (the two EAs) and moderate/major impact projects (the two EISs). Further, examples of sources of information on various VECs are included in the final part of the third section.

The fourth section highlights some lessons from case law related to the Affected Environment section. The review addresses the inclusion of such sections in EAs, requirements for "incorporating by reference" information from other related documents, and a process to use when some of the desired Affected Environment information is incomplete or unavailable. Supporting information on case law is in Appendix C. Finally, a conclusions section is provided along with selected references.

Requirements of NEPA Regulations for Describing the Affected Environment

This section delineates the purposes and principles for describing the Affected Environment as contained in CEQ's NEPA regulations, as well as NOAA Administrative Order (NAO) 216-6, "Environmental Review Procedures for Implementing the National Environmental Policy Act," and highlights four special regulatory topics related to preparing such descriptions for inclusion in impact studies for marine fisheries.

Purposes and Principles from CEQ's NEPA Regulations

Several fundamental purposes can be identified in relation to describing the Affected Environment. Such purposes are inferred in CEQ's NEPA regulations and delineated in procedural writings (Canter, 1996, pp. 102-103). One purpose is to facilitate the EIS or EA preparation team's understanding of historical and current conditions of resources (VECs) which could be impacted and to provide a stronger scientific and policy basis for interpreting the significance of the anticipated impacts. A second purpose is to identify "important resources" (VECs) in the study area which could require special protection or mitigation measures. For example, it would be important to identify such special resources that could preclude or limit fishing in specific areas during particular time periods. Another purpose is to provide agency decision-makers and various stakeholder groups with information supportive of the decision process.

Although describing the Affected Environment was not specifically mentioned in NEPA, it was inferred in Section 102 (C) when describing the impact of the proposed action on the environment was specifically identified relative to required topics in an EIS. Conceptually, describing impacts of an action requires an understanding of the current conditions of affected resources; this is often referred to as the "baseline" conditions. Further, CEQ's NEPA-related guidelines in 1971 and 1973 specifically mentioned the need to "describe the environmental setting" where the anticipated impacts would occur. Additionally, the CEQ's NEPA regulations, which went into effect in 1979, included a section (or chapter) on the "Affected Environment" in the recommended topical outline for an EIS (40 CFR Section 1502.10 (f)). The specific requirements for an Affected Environment component are contained in Section 1502.15 (Council on Environmental Quality, 1986):

> The EIS shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration. The descriptions shall be no longer than is necessary to understand the effects of the alternatives. Data and analyses in an EIS shall be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced. Agencies shall avoid useless bulk in EISs and shall concentrate effort and attention on important issues. Verbose descriptions of the Affected

Environment are themselves no measure of the adequacy of an EIS.

Following are several inferred principles which can be derived from Section 1502.15:

- It is important to prepare succinct descriptions rather than verbose descriptions. This principle is supported in Section 1502.2(a) as follows, "EISs shall be analytic rather than encyclopedic."

- The components of the environment (the VECs) to be addressed should be selected from a "potentially longer list" based on the combined consideration of the importance of the resources as well as the direct, indirect, and contributed cumulative impacts on resources from the proposed action and alternatives, and other actions which have been or could contribute to such cumulative consequences.

- Information related to the Affected Environment could also be used in documenting the need(s) being addressed by the proposed action and alternatives (Canter, 1996, p. 102). For example, if overfishing a target species is occurring, this condition could be summarized in the section (or chapter) related to the need for, and purpose(s) of the proposed action; this would typically be in Section 1 (or Chapter 1) or another early chapter in the EA or EIS. More detailed information on overfishing could be included in the Affected Environment section.

- The included data for the components of the affected environment should be proportional to the perceived importance of the anticipated direct, indirect, and cumulative impacts. This principle is supported in Section 1502.2(b) as follows, "Impacts shall be discussed in proportion to their significance" (by inference this principle can be extended to the associated discussion of VECs in the Affected Environment section).

- Detailed information on the conditions of selected VECs should be included in one or more appendices (Section 1502.18). This approach is supported by the referral to baseline studies in the response to Question 25a in CEQ's 40 Questions (Council on Environmental Quality, 1981 and 1986). In this way, relevant information is made available, but the EA or EIS does not become "encyclopedic."

It should be noted that CEQ's NEPA regulations are primarily related to the preparation of EISs. Accordingly, they provide only minimal information on the contents of EAs. For example, Section 1508.9 indicates that an EA shall include brief discussions of the need for the proposal, of alternatives as required by NEPA, of the environmental impacts of the proposed action and alternatives (infers the need for a succinct description of selected study areas and VECs anticipated to be impacted), and a list of agencies and persons consulted (Council on Environmental Quality, 1986). As a result of this absence of specificity, as well as case law related to the adequacy of EAs and the need for agencies to take a "hard look" at potential impacts and interpret them in relation to baseline conditions, many agencies, including NMFS, now include Affected Environment information in separate EA sections. This approach parallels the typical contents of EISs. Specific information on case law related to EAs is included in the fourth section of this document.

Supporting Requirements from NOAA's NEPA Regulations

NOAA's NEPA regulations are compliant with the policies, requirements, and procedures as contained in CEQ's NEPA regulations at 40 CFR Parts 1500-1508 (Council on Environmental Quality, 1986; and National Oceanic and Atmospheric Administration, 1999). In addition, the NOAA regulations include several added features related to describing the Affected Environment. Examples of such features include (National Oceanic and Atmospheric Administration, 1999):

- Section 3.01b – NOAA's policy is to "fully consider the impacts of NOAA's proposed actions on the quality of the human environment" (this infers the need for a description of the existing quality of the human environment).

- Section 5.02 c.3 – As part of the scoping process, a special list of environmental features for consideration relative to potential impacts is provided; examples of these features include floodplains, historic sites, national marine sanctuaries or national estuarine research reserve areas, state coastal zone management plans, environmental justice issues, and non-indigenous species. Again, the current (baseline) conditions of pertinent features would need to be described in the Affected Environment section.

- Section 6.02 – This section provides specific guidance on determining the significance of fishery management actions; this is in addition to the CEQ's "significance" definition at 40 CFR Part 1508.27. The additional criteria include the sustainability of any target or non-target species, ocean and coastal habitats and/or essential fish habitat (EFH), endangered or threatened species and marine mammals, and biodiversity and ecosystem function (including benthic productivity, predator-prey relationships, etc.). The current conditions for these guidance items would need to be summarized, as appropriate, in EISs and EAs.

Special Regulatory Topics

The CEQ's NEPA regulations, as well as those of NOAA, each include, or contain by inference, three topics which are relevant to the Affected Environment. They are incorporation by reference, tiering, and dealing with incomplete or unavailable information (Council on Environmental Quality, 1986; and National Oceanic and Atmospheric Administration, 1999). Further, NAO 216-6 addresses two other topics which may be relevant -- marine protected areas and integrating other laws and Executive Orders (EOs) in NEPA documents (National Oceanic and Atmospheric Information, 1999). A final issue is the use of "best scientific information available" as included in National Standard No. 2 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended in January 2007 (National Marine Fisheries Service, January 2007). Awareness of these topics can aid the cost-effective preparation of Affected Environment sections.

Incorporation by reference is highlighted in Section 1502.21 of CEQ's regulations (Council on Environmental Quality, 1986):

> Agencies shall incorporate material into an EIS by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the EIS and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment. Material based on proprietary data which is itself not available for review and comment shall not be incorporated by reference. (Note: although EAs are not specifically mentioned, incorporation by reference can also be used in the Affected Environment sections for EAs).

Incorporation by Reference

The incorporated material shall be cited in the NEPA document and its content briefly summarized; one cannot just incorporate another document by reference without a summary explanation of what it says and how it fits into the analysis in the subject EIS (or EA).

The incorporated material must be reasonably available for review/inspection by interested persons.

Tiering is addressed in Section 1502.20 of CEQ's regulations (Council on Environmental Quality, 1986):

> Agencies are encouraged to tier their EISs to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review. Whenever a broad EIS has been prepared (such as a program or policy EIS) and a subsequent EIS or EA is then prepared on an action included within the entire program or policy (such as a site-specific action), the subsequent EIS or EA need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. The subsequent document shall state where the earlier document is available. Tiering may also be appropriate for different states of actions.

Both CEQ's and NOAA's regulations related to the above two topics indicate that the content of the referred-to documents needs to be "briefly described" and/or the "issues in the broader document should be summarized." These phrases suggest that mere citations to other reports or NEPA compliance

documents are not sufficient for either incorporating by reference or tiering. This point is supported later in this document by a subsequent review of pertinent case law.

The CEQ regulations acknowledge that the information which may be needed for describing the Affected Environment (implicit) and for determining impacts (explicit) may be incomplete or unavailable. Accordingly, the regulations include a four-step procedure which all agencies should follow. The procedure is focused on significant adverse effects; however, by inference this includes the baseline conditions (Affected Environment) serving as the reference for assessing the significance of the adverse effects. The procedure is in Section 1502.22 (Council on Environmental Quality, 1986):

> When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an EIS and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.
>
> (a) If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the EIS.
> (b) If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the EIS:
> (1) a statement that such information is incomplete or unavailable;
> (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment;
> (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and
> (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. For the purposes of this section, "reasonably foreseeable" includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.

The above four-step procedure, which was promulgated in 1986, has been found to be useful in addressing this topic. Further, as summarized in the subsequent review of case law, agency adherence to the procedure has been upheld in the Supreme Court, and Appellate and District Court levels of the Federal system.

As noted above from Section 5.02c (3) of NAO 216-6, it may be necessary to address marine sanctuary areas or estuarine research reserve areas in NEPA compliance documents. Accordingly, it may be necessary to describe such protected areas within the geographic boundaries of the impact study. These areas, often referred to as marine protected areas (MPAs), are typically designated by Federal and/or State agencies and/or special commissions. The designations are often associated with special protections to enhance the management of marine resources, including fisheries and protected species. Further, MPAs may include provisions prohibiting the removal or disturbance of resources in specific locations. These provisions may be reflected in closed or "no-take" areas. As a result, controversy may be associated with both designations of MPAs and their associated provisions. One approach for mitigating such controversy was in a recent National Research Council study on MPAs; the study suggested that the implementation of MPAs should be incremental and adaptive through the design of areas not only to conserve resources, but also to increase the scientific knowledge base managing marine species more effectively (Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States, 2001, p. 1). Accordingly, such special considerations may need to be addressed relative to the Affected Environment.

Due to the fact that the EISs and EAs that NMFS prepares are typically combined documents which meet the requirements of multiple laws and EOs, the Affected Environment section of a NEPA compliance document should include referrals to regulations, criteria, and plans that are relevant to the effects issues being considered. This could include mention of specific requirements of the MSA, Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), Migratory Birds Treaty Act (MBTA), Marine Resources Protection and

Sanctuaries Act (MRPSA), and Coastal Zone Management Act (CZMA). Further, appropriate Commissions could be noted along with specific state requirements, including coastal zone management plans and requirements. Other laws which could be noted include the Paperwork Reduction Act, the Regulatory Flexibility Act, and the Information Quality Act.

Section 7 of NAO 216-6 addresses the integration, as appropriate, of the requirements of four environmentally-related EOs into NMFS' environmental review procedures. Specifically, they include (National Oceanic and Atmospheric Administration, 1999, pp. 47-51): EO 12114 – Environmental Effects Abroad of Major Federal Actions; EO 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations; EO 13112 – Invasive Species; and EO 13089 – Coral Reef Protection. Additional EOs may be noted in specific EISs or EAs; for example, a 2007 EA on lobster management also mentioned EO 12630 – Governmental Actions and Interference with Constitutionally Protected Property Rights; EO 12866 – Regulatory Planning and Review; EO 13132 – Federalism; and EO 13211 – Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use (National Marine Fisheries Service, May 2007). An appropriate level of attention for each of these EOs in a given EIS or EA would require an understanding of their requirements, the determination of their relevance for the specific proposed actions and alternatives in the identified study area, and if needed, the development and assessment of impact-related information. To conclude, it is stressed that not all of the above-mentioned laws and EOs will require attention in every impact study. However, they do need to be considered regarding their potential relevance.

Best Scientific Infomation Available Should Consider:

(1) the relevance of the information for the fish stock being managed;

(2) the inclusiveness of the information regarding the full range of scientific thought and opinion on the topic;

(3) the objectivity of the data collection and analysis process;

(4) the transparency and openness of the processes of collecting data and selecting research for use in support of management decision-making;

(5) the timeliness of data acquisition such that sufficient time exists to analyze it adequately before it is used to make management decisions; and

(6) the use of peer review for enhancing the confidence of the interested community (including scientists, managers, and stakeholders) in the findings presented.

The Affected Environment section should be based upon historical and current data and information, and be compliant with the use of "best scientific information available." In addition to the MSA, this concept has also been incorporated in the MMPA and the ESA. Section 301 of the MSA, as amended, identifies the ten national standards for fishery conservation and management, with National Standard No. 2 stating that ". . . conservation and management measures shall be based upon the best scientific information available" (National Marine Fisheries Service, January 12, 2007, p. 58).

Due to the legal and policy importance of using the "best scientific information available" in EISs and EAs related to fisheries management, the National Research Council was commissioned by NMFS to examine this issue (Committee on Defining the Best Scientific Information Available for Fisheries Management, 2004, p. 2). Following the conduction of a national workshop, a review of NMFS policy statements and guidelines, an analysis of case law, and a review of requested information provided by the agency's regional fisheries science centers and fishery management councils, the following key recommendation was made (Committee on Defining the Best Scientific Information Available for Fisheries Management, 2004, p. 4): …Establishing procedural guidelines for the "best scientific information available" is the preferred alternative for creating accountability and enhancing the credibility of scientific information used in fisheries management, including relevant EISs and EAs. The follow-on recommendations regarding the procedural guidelines indicated that such guidelines should include the consideration of (Committee on Defining the Best Scientific Information Available for Fisheries Management, 2004,

pp. 5-7): (1) the relevance of the information for the fish stock being managed; (2) the inclusiveness of the information regarding the full range of scientific thought and opinion on the topic; (3) the objectivity of the data collection and analysis process; (4) the transparency and openness of the processes of collecting data and selecting research for use in support of management decision-making; (5) the timeliness of data acquisition such that sufficient time exists to analyze it adequately before it is used to make management decisions; and (6) the use of peer review for enhancing the confidence of the interested community (including scientists, managers, and stakeholders) in the findings presented.

Content of the Affected Environment Section

This section begins by delineating a process and identifying "quick-look questions" (QLQs) which could be used to select the pertinent VECs for describing the Affected Environment section of an EIS or EA. The second part is focused on describing the identified VECs via the use of selected indicators. Illustrations from four case studies (EAs on two low impact projects, and EISs on two moderate/high impact projects) are used in the second part. The third part identifies a non-comprehensive list of sources of information for the VECs and indicators appropriate for the Northeast Region of NMFS.

Selection of VECs to be Addressed

The impact study planning team (whether for an EIS or EA) has the responsibility for identifying the VECs to be addressed relative to the Affected Environment. If the study report (for example, an EA) is being assembled by a single person, then it might be desirable for that person to talk to agency staff with expertise in specific topical areas. In developing an initial list of VECs, the team or person could draw upon a combination of several approaches. One example includes professional knowledge regarding the conditions of fisheries, EFH in the study area, impacts of gear types on bottom habitat, the occurrence of threatened or endangered species in the study area and why they are so designated, and characteristics of the commercial fisheries operations and the communities in which they are located. Another example would be to review the Affected Environment contents of Northeast Region historical EAs or EISs for the FMP, or for related FMPs or types of actions. Also, it may be desirable to review such contents as contained in relevant EAs or EISs from other NMFS Regions.

From an initial list of VECs to be addressed, the study team or single study preparer needs to decide which should be selected and which should be eliminated from further consideration. Aids in this selection process could include information and inputs from both public scoping and internal agency scoping discussions (by the study team or by arranged meetings between the single person preparer and relevant subject matter, policy, and NEPA experts within the Northeast Region).

Utilization of a checklist of QLQs can also aid the VEC selection process. The implications of the QLQs are that the resultant identified VECs have an inherent importance and that they would be subject to potentially significant direct, indirect, or cumulative effects. The QLQs which could be used include, but are not limited, to the following:

- Will the VEC (or associated indicators of the VEC) be affected either beneficially or adversely, by the proposed action and any of the alternatives (including the no-action or status-quo alternative) identified for the study?

- Is there any evidence to suggest that a VEC is uniquely subject to the interests of various stakeholder groups? If the answer is yes, what are the sources of such evidence?

- Does the VEC (or associated indicators of the VEC) have importance relative to the decisions to be made? Such importance could be based on an economic, environmental, or institutional (laws, regulations, EOs, etc.) perspective. For example, is the VEC:

  -- protected by legislation or planning goals?
  -- ecologically important?
  -- culturally important?
  -- economically important?
  -- important to the well-being of a human community?

- Is the proposed action, or any of its alternatives, similar to past, present, or future actions which have or could impact the VEC?

- Are there other activities or actions within the study area that may affect the VEC in a manner similar to that of the proposed action, or any of its alternatives?

- Have any recent or ongoing NEPA compliance analyses of similar actions or nearby actions identified important adverse or beneficial cumulative effect issues associated with the VEC?

- Have impacts on the VEC been historically significant, such that the importance of the VEC is defined by past loss, past gain, or investments to restore the VEC?

- Has the sustainability of the VEC declined as a result of past actions?

- Is the VEC (or associated indicators of the VEC) especially vulnerable to the anticipated incremental impacts of the proposed action or any of its alternatives?

- Will the VEC (or associated indicators of the VEC) be subject to potentially significant impacts as a result of the alternatives being evaluated (including the alternative which will ultimately be identified as the preferred alternative)? Factors to consider in determining impact significance are included in Section 1508.27 of the CEQ's NEPA regulations, and Sections 6.01(b) and 6.02 of NAO 216-6 (Council on Environmental Quality, 1986; and National Oceanic and Atmospheric Administration, 1999).

- Was the VEC (or indicators of the VEC), and/or impacts to the VEC, identified as a concern during the public scoping process? If so, what was the stated basis (bases) for the concern?

The above QLQs can be used as an aid for the initial selection of VECs; further they can be used to focus attention on particular topics or issues and thus, reduce the length of written sections. For example, due to the nature of the potential action, perhaps greater attention should be given to one stage of EFH for a species. Further, perhaps the attention given to protected species can be limited to only those species known to be impacted by fishery actions. Finally, focusing attention on a prioritized list of ports and communities can reduce the overall length of this portion of an Affected Environment section.

Appendix A includes a checklist of additional review questions developed by the U.S. Environmental Protection Agency for their use in reviewing EISs related to fishery management plans (U.S. Environmental Protection Agency, 2005). The questions are specifically related to the information included in the Affected Environment sections of EISs; however, they could also be applied, as appropriate, to planning the Affected Environment sections of EAs (even though the EPA does not necessarily review all EAs prepared by NMFS). The included questions could be used during the development of a NEPA compliance document, as well as during its internal NMFS review process.

Description of Selected VECs and Indicators

As noted above, indicators (or indices) could be used for describing the Affected Environment relative to the selected VECs. Case studies can provide useful illustrations of indicators of VECs and the topical coverage and details of Affected Environment sections in EAs and EISs. Two region-specific EAs served as examples of the extent of coverage in low/minor impact projects; and two region-specific EISs provided illustrations of moderate/major impact projects. One of the EAs addressed the reconciliation of state commercial fishing programs and permit requirements with Federal limited access commercial fishing vessel permits and related privileges (National Marine Fisheries Service, January 2007), while the other addressed a revision of Federal American lobster regulations for Management Area 3 (National Marine Fisheries Service, May 2007). One of the EISs evaluated management alternatives to minimize impacts of the Atlantic herring fishery on EFH (National Marine Fisheries Service, 2005). The second EIS was a Final Supplemental EIS which addressed a suite of management measure alternatives for improving the sustainability of Atlantic mackerel, two species of squid, and butterfish (National Marine Fisheries Service, et al., 2008). These four documents can be found using an internet search engine (e.g. "Google") by specifying their titles as shown in the Selected References. Appendix A herein includes summarized information related to the indicators used and contents of the Affected Environment sections in each case study. If needed, these indicators, which are study-specific, could be displayed in an "information checklist" format. As experience is accrued from the use of VECs and indicators, existing information checklists could be revised via additions, deletions, or clarifications.

The key lessons from these four case studies were: (1) while there are similarities in the VECs addressed, the EISs typically included more detailed information; (2) the Affected Environment sections of each of the four NEPA compliance documents are specifically keyed to the species, locations, and management alternatives addressed in the documents; and (3) the most comprehensive description was associated with the FSEIS, with this being anticipated since the focus of this document was broad in that it addressed four target species, and comprehensive since it encompassed evaluation of direct, indirect, and cumulative effects. These lessons could be used in planning Affected Environment sections for future EAs and EISs.

Regarding the structure of the Affected Environment section, a VEC-by-VEC approach has been recommended for EISs and EAs (The Shipley Group, 2003). The same approach could be used for the structure of the Environmental Consequences section (chapter). This VEC approach could also be connected to public scoping issues which might have been identified in the introductory section (chapter).

Several types of information could be reflected by the identified indicators of VECs; examples of four types include (Council on Environmental Quality, January, 1997, p. 24): data on the status of important natural, cultural, social, or economic resources and systems; data that characterize important environmental or social stress factors; a description of pertinent regulations, administrative standards, and development plans; and data on environmental and socioeconomic trends. Trends information can apply to describing the VEC status, institutional requirements, and management plans. Trends data and information could possibly be used in three ways in an overall impact study (Council on Environmental Quality, January, 1997, p. 31): to more accurately establish the historical conditions for the VECs (i.e., by incorporating variation over time); to evaluate the significance of effects relative to historical degradation (i.e., by helping to estimate how close the VEC is to a threshold of degradation); and to predict the effects of the action (i.e., by using a model of cause and effects established by past actions).

Information communication is also an important issue in describing the Affected Environment. Accordingly, maps can be used to display the overall study area, EFH for the life-cycle phases of the target species (spawning, breeding, feeding, and growth to maturity), protected areas (e.g., marine sanctuaries), fishing intensity levels, and locations of affected human communities. Such maps should be readable, contain appropriate legends, and be supported by written text which explains the key features and observations. A variety of figures and tables should also be developed to summarize data, show correlations, and facilitate access to information. The utilized figures and tables should be developed to inform and not confuse the reader. In the text, the key data, information, and findings presented in the maps, figures, and tables should be described, with emphasis being given to what the reader should derive from the individual visual display materials (U.S. Department of Energy, 2004, p. 43).

Information Sources

The Northeast Region of NMFS has a robust suite of information sources that can be used for describing the Affected Environment in EISs or EAs. The following example list is primarily generic, although specific citations are listed for special documents. Further, the list is not intended to be comprehensive since numerous electronic and other systems contain such compiled information. The examples include:

- FMPs for managed species and related amendments to the FMPs – such documents include species-related biological and ecological information, as well as summaries of stock assessments, the sustainability of the fishery, and various management measures and programs;

- Recent EISs or EAs prepared on FMPs, amendments, total allowable catch, etc. – these documents should include time-referenced updates to fishing history and the sustainability of managed species;

- Biological assessments and biological opinions prepared by the Protected Resources office of the Northeast Region – contains information on protected species, why they were so designated, various fishing-related effects, and concerns regarding sustainability;

- Monitoring reports prepared under the auspices of the FMPs or their associated amendments – includes information on fishing effort, landings, bycatch, etc.; can be used for discussing sustainability;

- Stock assessment reports and stock assessment models for managed fish species – can be used to examine overfishing conditions and any trends related to sustainability; can also be used to identify and evaluate fishing and non-fishing stressors on managed species;

- Northeast Fisheries Science Center research reports and published papers on the life cycle of target species and protected species, EFH, and the social and socioeconomic impacts of commercial and recreational fisheries (National Marine Fisheries Service, 2001) – numerous reports and papers have been and continue to be used as information sources for NEPA compliance documents;

- Recent EISs, EAs, and special reports prepared by the Northeast Fishery Management Council and the Mid-Atlantic Fishery Management Council – these NEPA compliance documents and other reports can be used to support descriptions of historical and current Affected Environment conditions, including pertinent information on stressors;

- General guidance on planning and conducting cumulative effects assessments (Council on Environmental Quality, 1997) – this guidance could be used to plan the Affected Environment section for addressing cumulative effects;

- Topical web searching for pertinent papers, reports, and books – such searching could be done for VECs and indicators for specific studies; and

- A special technical report on EFH for the Northeast Region. To provide a context, in the early 2000s, NMFS commissioned the National Research Council (NRC) to study the effects of bottom trawling and dredging on seafloor habitats. This study was prompted by EFH requirements contained in the 1996 Sustainable Fisheries Act (MSA of 1996). Two of the resultant recommendations specifically related to the interpretation and use of existing data. The first was that fishery managers should evaluate the effects of trawling based on known responses of specific habitat types and species to disturbance by different fishing gears and levels of fishing effort, even when region-specific studies are not available. The second was that NMFS and its partner agencies should integrate existing data on seabed characteristics, fishing effort, and catch to provide geographic databases for major fishing grounds (Committee on Ecosystem Effects of Fishing, 2002, p. 3). For the Northeast Region, these two recommendations were addressed in a technical report on EFH and the effects of fishing and gear types on EFH (Stevenson, et al., 2004). This report includes descriptions of benthic habitats and species assemblages (fish and invertebrates) in four subregions of the Northeast U.S. Shelf Ecosystem, descriptions of 37 gear types used in state and federal waters in the region, and the extent and distribution of fishing activity for the major commercial fishing gears used in the region during 1995-2001. Selected information can be used for describing features of the Affected Environment in both EISs and EAs.

Case Law Dealing with the Affected Environment

This review of case law related to the Affected Environment is focused on three relevant topics – the implicit requirement for inclusion of Affected Environment sections in EAs; the key concepts to be used when "incorporating by reference"; and addressing incomplete and unavailable information in the Affected Environment sections of EISs or EAs.

Inclusion of an Affected Environment Section in Every EA

As noted above, CEQ's NEPA regulations did not explicitly require a section on the Affected Environment within the specified topical contents of an EA (40 CFR Part 1508.9). As a result, a frequently asked question is "should every EA include a section on the Affected Environment?"

The answer to this question can be found from a detailed examination of CEQ's regulations, as well as from case law (National Marine Fisheries Service, 2006). For example, CEQ's NEPA regulations (40 CFR Part 1502.15) specify that the Affected Environment section of an EIS "shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration." While these regulations are specific to EISs and do not explicitly identify an analogous section in an EA, NEPA case law indicates that Federal courts have consistently found the Affected Environment section to be a required component of an EA. The rationale for this finding is that a description of the affected human environment is necessary to gauge the environmental impacts of the proposed action and non-preferred alternatives to meet the requirements

of an EA and to support a Finding of No Significant Impact (FONSI). More specifically, the Affected Environment section establishes a baseline against which to measure the environmental impacts of the alternatives and to support a fully informed decision-making process.

In addition, Federal courts have interpreted CEQ's general description of an EA by defining the specific type of information and analyses that are needed to support a FONSI. For example, between 2001 and 2003, 35 NEPA judicial decisions were issued; with the Courts ruling against the Federal government in 19 cases. In six cases, the Court found that the action agency should have prepared an EIS rather than an EA/FONSI. While an agency's decision regarding a FONSI is entitled to deference, Courts typically look to the Administrative Record to determine if it adequately supports a FONSI decision. Typically, the Administrative Record supporting this decision is synthesized in an EA, which offers a rational connection between the facts found and the choices made by an agency. Certainly, if an EA has a section on the Affected Environment, then the Courts will be more likely to conclude that the agency took the "hard look" at the environmental consequences of a proposed action and the alternatives considered, since there is an identifiable baseline against which environmental impacts have been gauged. Without the context of an Affected Environment section in an EA, the agency cannot meet the criteria for preparing an EA instead of an EIS. These criteria are that the EA: (1) accurately identifies the environmental concerns involved; (2) takes a hard look at the problem [as in Kleppe v. Sierra Club 427 U.S. 390, 410 n.21 (1976)]; and (3) makes a convincing case for a FONSI [Sierra Club v. DOT]. As a result, the Courts have been more disposed to uphold an agency's decision not to prepare an EIS when their EA clearly demonstrates that the environmental consequences of the proposed action will not have a significant impact on the human environment when compared to the baseline conditions established by the Affected Environment section (Kurkul, 2005).

If an adequate baseline is not established, the Courts have typically found that an EA is deficient; thus, the environmental impacts of various alternatives cannot be effectively assessed. For example, in Idaho Sporting Congress v. Thomas [137 f.3d 1146, 1151-52 (9th Cir. 1998)], the Court found the Forest Service's EA on a timber sale deficient because it did not list trout as part of the Affected Environment. The EA concluded that the timber sale would have no significant impact on fisheries. However, the EA lacked reference to, or description of, trout, and the EA did not provide sufficient information and analysis to support the conclusion.

A case representing a judicial view of what need not be included in an Affected Environment section of an EA is Rosebud Sioux Tribe v. Gover, [104 F.Supp.2d 1194, 1209 (D. S.D. 2000)]. The case involved a lease approved by the Bureau of Indian Affairs (BIA) for a hog farm on the Tribe's land. BIA had prepared an EA with a FONSI. Under pressure of a lawsuit from concerned citizens, BIA voided the lease claiming unspecified violations of NEPA. The Tribe and the lessee sued saying that the EA was adequate. The EA had detailed sections regarding impacts on the soil and water resources of the area, and on fish and wildlife resources, economic and social conditions, and other issues of environmental concern. The defendants claimed that the EA did not consider disease transmission, odor, and economic impacts on the local economy, particularly the agricultural economy. The court held that even though these factors were arguably relevant, the record disclosed that they were not sufficiently significant to merit discussion. Therefore, the court concluded that the EA was adequate. This case is important because it suggested that the Affected Environment section of an EA need not include information on less significant features and resources (Kurkul, 2005).

The principal components of an EA and an EIS are equivalent even though an EIS typically contains a greater level of detail: for example, both consider alternative ways of achieving a stated purpose and need and give these alternatives a "hard look" with respect to their environmental impacts. However, for an EA to conclude in a FONSI, it must go one step further than an EIS. The EA not only must disclose the environmental impacts of a proposed action but has to find that these impacts are non-significant. The EA must provide sufficient support for this finding. The support for such a finding will be viewed against the same judicial standard of review to which an EIS is subject, which is the arbitrary and capricious standard. Critical to the support for this finding is the Affected Environment section, which, as in an EIS, must provide an adequate baseline against which to evaluate environmental impacts (Kurkul, 2005).

Incorporation by Reference

While the Affected Environment section of an EA or an EIS can be more efficiently prepared via "incorporation by reference," numerous questions related to the practical aspects of such have been articulated. The most fundamental question is, "does citing reference sources represent a sufficient approach for incorporating by reference Affected Environment information from other Regional EAs or EISs, or related scientific and technical reports prepared to satisfy the requirements of other laws such as the MSA, ESA, MMPA, and MBTA?"

With respect to "incorporation by reference," the Courts have concluded that more than a simple reference to another document is necessary. As described by 40 CFR Part 1502.21, a summary of the relevant sections of the referenced document is required to enable reviewers and the public to make an informed decision regarding the information and analysis in the EA; and by inference, in an EIS. In fact, some Courts have questioned whether incorporation by reference is appropriate for an EA since it has been presumed to be a brief document supporting the conclusion that the action will have no significant environmental impact. For example, one Court noted that " . . . [T]he document itself (and any attachments or appendices included with it) must facilitate or enable public comment concerning the agency's determination that the project does not significantly affect the environment" [See Sierra Club v. Babbitt 69 F. Supp 2nd 1202]. In this quoted case, the Court held that certain documents were not appropriately incorporated by reference into the subject EA because the incorporation did not meet the applicable standards, to wit: (1) the summarized material is reasonably available; (2) the NEPA compliance document is understandable without undue cross-referencing; and (3) the incorporation by reference meets the general standard of reasonableness. In this situation, reasonableness infers that an appropriate summary is included. The EA was deemed deficient by the Court because it was not understandable without a cross-reference to the documents it attempted to incorporate by reference. Finally, Appendix C to this document includes additional supporting information and excerpts related to this topic from four Court decisions (the Sierra Club case and three others).

Addressing Incomplete or Unavailable Information

As noted above, preparing an adequate description of the Affected Environment can be problematic due to lack of appropriate information. Examples of topics with potentially limited information include, but are not confined to, predatory-prey relationships for managed species, geographical specificity for EFH, migratory patterns for protected species, and the sustainability of the target species populations in relation to overfishing conditions. A specific question which could arise for an EA/FONSI is … Would it be appropriate to conclude a FONSI when the information for describing the Affected Environment for certain VECs is incomplete or unavailable?

Case law can be used to address the above question as well as the more general issue. As noted above, 40 CFR Section 1502.22 describes a four-step process which could be used regarding incomplete or unavailable information (Council on Environmental Quality, 1986). While the process emphasis relates to significant adverse effects associated with EISs, by inference it can also be extended to EAs, and also to descriptions of the Affected Environment in either EISs or EAs. In fact, case law has noted that a conclusion of no significant impact for an EA may not be appropriate when key baseline information is incomplete or unavailable (Atkinson, et al., 2006). A recent review of case law involved an analysis of decisions in 34 cases (two were from the Supreme Court, 12 from Appellate Courts, and 20 from District Courts). The Supreme Court cases upheld the process as specified in Section 1502.22. In fact, adherence to the process led to decisions in favor of the agencies in 9 of the 12 Appellate-level cases, and in 12 of the 20 District-level cases over the time period from 1989 to 2005 (Atkinson, et al., 2006, p. 465).

Summary and Conclusions

This guidance report provides information on how to plan and prepare the Affected Environment section of an EIS or EA which addresses direct, indirect, and cumulative effects considerations related to marine fisheries actions. The key conclusions derived from the contents herein include:

- The Affected Environment section (chapter) is an integral component of a NEPA compliance document. Its inclusion can facilitate understanding of historical and current conditions of VECs which could be impacted and can provide a stronger scientific and policy basis for interpreting the significance of the anticipated effects. Further, "significant VECs" in the study area, which could require special protection or mitigation measures, could be identified. Finally, it can provide agency decision makers and various stakeholder groups with information supportive of the decision process.

- There are many scientific and analytical challenges in describing the Affected Environment in EISs or EAs prepared for various fisheries-related actions. Such challenges are related to: large study areas; the dynamic nature of species populations and movement patterns over their specific life cycle; and numerous scientific uncertainties associated with effects on multiple VECs, predator-prey relationships, and food-web interrelationships.

- Three topics from the CEQ's NEPA regulations, and from NAO 216-6, have particular relevance to describing the Affected Environment. They include "incorporation by reference" (Section 1502.21); "tiering" from broader NEPA compliance documents to more narrow issues in subsequent documents (Section 1502.20); and the recognition of, and response to, incomplete and unavailable information (Section 1502.22). Adherence to the procedural requirements of these three sections can enhance the description of the Affected Environment section in an EIS or EA. Further, throughout the NEPA compliance process, along with meeting the requirements of the MSA, ESA, and MMPA, attention should be given to the selection and use of the "best scientific information available."

- Information assemblage and analysis associated within the Affected Environment section in an EIS or EA can be based on a process whereby QLQs are considered in the selection of pertinent VECs and their related indicators. Such QLQs can include, but are not limited to, consideration of the direct, indirect, and cumulative effects from the proposed action and alternatives; the current sustainability conditions for key VECs; and compliance or non-compliance of the potential VECs relative to pertinent laws, regulations, guidance, or EOs. Examples of indicators for five typical VECs (target species, non-target species, protected species, habitat, and human communities) are included herein.

- The Northeast Region of NMFS has a robust suite of information sources for describing the Affected Environment. Examples of Region-specific sources include: a comprehensive technical report on EFH for Northeast Region fisheries and species, and the effects of gear types on EFH; numerous FMPs for managed species, and related amendments to the FMPs; recent EISs or EAs which were prepared on FMPs, amendments, total allowable catch, etc.; biological assessments and biological opinions for protected species under both the ESA and MMPA; numerous monitoring reports related to FMPs or their associated amendments; stock assessment reports, and models; and Northeast Fisheries Science Center research reports and published papers.

- The review of case law demonstrated that while the CEQ's NEPA regulations do not call for every EA to include an Affected Environment section, it is explicitly supported by Court decisions. Two primary arguments are that the baseline environment needs to be described so that it can provide a basis for impact significance determinations and also provide evidence that a "hard look" was taken. Case law related to "incorporation by reference" strongly supports the concept of summarizing pertinent information from reference documents and its inclusion in subsequent documents. Finally, case law has validated the four-step process of 40 CFR 1502.22 for addressing incomplete and unavailable information in Affected Environment descriptions.

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APPENDIX A

US EPA Review Questions for Affected Environment Sections

Regarding an evaluation of the Affected Environment chapter or section in an EIS, the U.S. Environmental Protection Agency has published a report on reviewing EISs for Fishery Management Plans (FMPs) (U.S. Environmental Protection Agency, 2005). The report was prepared for use by USEPA reviewers of EISs on FMPs; however, the included information could also be used to plan and prepare all fisheries-related EISs and even EAs. To illustrate, the review guidance indicates that this chapter (section) should provide a general description of the area and resources that may be affected by the FMP-related proposal. For cumulative effects, historic changes and trends affecting a resource or feature, up to and including present conditions, should be described to set the stage for the projection of future cumulative changes and trends concerning that resource or feature. Further, it was noted that emphasis should be given to those indicators of the study area and resources that would be impacted by the proposal. Other non-affected indicators could be noted and set-aside relative to further analyses. In addition, the report included the following series of review questions, and as noted above, these questions could be used during the development of the EIS or during an intra-agency review of a preliminary version of a draft EIS (U.S. Environmental Protection Agency, 2005, pp. 76-77):

- Is the existing environment described in sufficient detail to form a basis for evaluating the potential for direct, indirect and cumulative impacts?
- Is the physical environment of the study area, including the associated ecosystem (if appropriate), identified and described? Important ecosystem characteristics may include ocean regime conditions, food web, predator-prey relationships, and habitat (water column and benthic), including EFH.
- Are descriptions of the target and potentially affected non-target species (e.g., fish, mammals, birds) and protected species included?
- Is the existing relationship between the target species and other components of the target species' environment addressed? Were all life stages of the target fish discussed and related to appropriate species in the food chain?
- Are unique characteristics of the affected geographical area described, such as proximity to historic or cultural resources, MPAs (marine protected areas), national estuaries, park lands, or ecologically critical areas?
- Are cultural and human features of the affected environment described, such as cultural, recreational, unique or significant marine life/areas, socioeconomic, low-income and minority populations, tribal, subsistence and indigenous fishing, fishing communities, etc?
- Have important resources been identified and described in detail commensurate with the potential for impact? (This question is based on Section 1502.2(b) of the CEQ's NEPA regulations.)
- Is the affected environment section (or chapter) proportionately balanced by the environmental impact section or chapter? (Lengthy descriptions of existing study areas or resources that are unaffected by the proposed action or alternatives are of little value to the EIS contents, the decision maker, and stakeholder groups.)
- If environmentally sensitive resources are present which require an environmental review under another law, regulation, or EO, has that review requirement been met or integrated into the EIS? Integration could include summarization of the findings supported by pertinent appendices. If the review is still in progress, has this been so noted in the EIS?
- If consultation has been completed confirming environmentally sensitive resources are not present in the affected area, are the consultation letters included in an appendix?

APPENDIX B

Case Studies Illustrating the Contents of Affected Environment Sections

Case studies can provide useful examples related to Affected Environment sections in EAs and EISs. To illustrate, two recent Region-specific EAs will be highlighted as examples of low/minor impact projects; while two EISs will be similarly used for moderate/major impact projects. To begin, one EA addressed the reconciliation of state commercial fishing programs and permit requirements with Federal limited access commercial fishing vessel permits and related privileges (National Marine Fisheries Service, January, 2007). It included an analysis of three limited access permit management alternatives in relation to four identified VECs – the physical and biological environment, endangered or other protected species, habitat, and human communities. The likely direct and indirect effects of the three alternatives were determined to be minimal. Section 5.0 (Affected Environment) was only about six pages in length, and the information presented encompassed a large geographical area which was reflective of programmatic analyses. The first subsection included selected features of the physical and biological environment in relation to four regional systems within the Northeast U.S. Shelf Ecosystem and the status of managed fish stocks in the Region. The second subsection included lists of protected and/or endangered species and referred to the latest amendments to the fishery of interest (and their NEPA compliance documentation) for specific details. The third subsection addressed EFH for species managed through the Region's FMPs. The final sub-section addressed human communities by summarizing the numbers of involved permits, vessels, and replacement vessels under the current permit programs.

The second 2007 EA related to a revision of Federal American lobster regulations for Management Area 3 in response to recommendations by the Atlantic States Marine Fisheries Commission. The analysis evaluated three regulatory scenarios concerning the following management measures: a schedule of minimum carapace length (gauge) increases through 2008; an escape vent size increase in 2010; and a suite of annual trap reductions through 2010 (National Marine Fisheries Service, May, 2007, p. 5). Three alternatives were evaluated – no action (maintain current carapace length and escape vent sizes), implement the Commission recommendations (as contained in the above management measures), and implement modified Commission recommendations.

Section 3.0 of the lobster management EA addressed the Affected Environment. Four VECs were identified, including the three separate stocks of the American lobster in the Region, the physical environment and habitats, the socioeconomic environment, and protected species. To provide a spatial context, the section began with locational and descriptive information on Area 3, including the delineation of the three stocks (Gulf of Maine stock, Georges Bank stock, and Southern New England stock), their range, stock status, life history and reproductive success, factors affecting survival, and interactions with non-target species. The habitat VEC included summarized information related to offshore lobster habitats and their characteristics; and the densities of lobster occurrences in deep sea canyons. The socioeconomic environment VEC addressed landings and the commercial value of the American lobster fishery, as well as the number of Area 3 lobster permits by states. The protected resources VEC included a list of relevant endangered or protected species in Area 3, including potential entanglements of seven species of whales or turtles by lobster trap gear. Following the analysis of potential direct, indirect, and cumulative effects on the VECs, it was determined that only minimal effects would occur from the three alternatives. Finally, this case study illustrates that the Affected Environment section should be tailored to the decision to be made and the alternatives being evaluated. In addition, the level of detail included for the topics should be commensurate with the geographic scale and temporal boundaries of the specific impact study.

A 2005 EIS evaluated management alternatives to minimize impacts of the Atlantic herring fishery on EFH. This non-traditional EIS did not include an analysis of a proposed Federal action. Rather, it evaluated whether future Federal action would be needed to minimize, to the extent practicable, the possible adverse effects of fishing on the Atlantic herring EFH and of Atlantic herring fishing on the EFH of other managed species (National Marine Fisheries Service, January, 2005). Four key VECs were addressed – the biology/ecology of the herring, protected species, EFH, and pertinent socioeconomic information related to the herring fishing.

The Affected Environment description was provided in Section 4.0. To provide a spatial context, the first

subsection addressed features of the relevant physical environment as represented by the Gulf of Maine, Georges Bank, Mid-Atlantic Bight, and coastal habitats. Spatially-referenced figures were used to depict the locations, water mass circulation patterns, and substrate types of these four features of the Northeast U.S. Shelf Ecosystem. A description of the biology/ecology of Atlantic herring included information related to herring distribution, reproduction and early life history, age and growth, feeding, role as a prey species, stock structure, migrations, and stock status. A key information source was the original FMP for Atlantic herring, as well as subsequent amendments over time. The third subsection addressed protected species by first providing a list of seven protected whales, eight dolphins, four seals, and four sea turtles in the study area. For each listed species, designations and pertinent laws were noted (ESA, MMPA, and MBTA). The list was then divided into two groups – protected species not likely to be affected, and protected species potentially affected. For the latter group, summary information on the species and their potential relationships to the alternatives considered was specifically explored. Summary information on EFH for the life stages of Atlantic herring was then provided in relation to eggs, larvae, juveniles, adults, and spawning adults. Referrals to EFH for other federal FMPs in the study area were also mentioned, although the details were in other FMPs or NEPA-related documents. Finally, the socioeconomic environment subsection included information on the herring fishery -- catch by area and gear type, fishing gears and practices, fleets, markets, and port/community information.

To summarize, over 130 pages of this Atlantic herring EIS was devoted to the Affected Environment (National Marine Fisheries Service, January 7, 2005). While this might seem excessive, it should be noted that each of the topics were relevant to the analyses. Further, the information was primarily extracted from Stevenson, et al., 2004; the herring FMP and amendments; and related EISs and EAs. Thus, this EIS was largely based on considerable summary information and the usage of the "incorporation by reference" concept.

A 2008 Final Supplemental EIS (FSEIS) addressed a suite of management measure alternatives which could be used to improve the sustainability of four managed resources (Atlantic mackerel, two species of squid, and butterfish) (Mid Atlantic Fishery Management Council, et al., 2008). Section 6.0 was entitled "Description of the Affected Environment." This 177-page section focused on five VECs and provided the basis for the assessment of the direct, indirect, and cumulative effects of the management measures examined in the study. The first portion of Section 6.0 included the rationale for the selection of the five VECs – managed resources, non-target species, habitat including EFH for the managed resources and non-target species, endangered and other protected resources, and human communities.

The historical temporal boundaries for the five VECs were established to coincide with the 1978-79 implementation of individual FMPs for the managed species, while a five-year future period was utilized due to the dynamic nature of the fisheries and resources management, and lack of specific information on more distant future fisheries management actions as well as actions by others (U.S. Environmental Protection Agency, 1999). The geographic boundaries were designated as including the range of these VECs in the Western Atlantic Ocean. However, due to the study's focus on actions related to the harvest of the managed resources, a more limited geographic area was used to define a core area within which the majority of the harvest efforts occurs. The total geographic scope for the human communities VEC was considered to be the entire United States; however, a core area was also defined from Maine to North Carolina, and included the eight top cities regarding landings and revenues from the four managed resources (U.S. Environmental Protection Agency, 1999).

The stock status and fishery activities that directly affect the status were described for the four managed resources in Section 6.1. Basic stock status information, including the life histories and ecological relationships for each managed resource, was described in four Appendices. Information on the past, present, and anticipated future stock status was presented via summary tables and time-referenced figures. Fishery activities that directly affect the stock status were then highlighted, including the importance of commercial discarding. Section 6.2 addressed the non-target species VEC (this VEC included the major species incidentally captured and discarded as a result of directed fishing for the managed resources). Section 6.3 was focused on EFH information for the four managed resources (target species), fishing activities that may adversely affect EFH, evaluation of fishing gear-related impacts of the four target fisheries, and an analysis of overlapping fishing effort and EFH. Numerous figures (maps) and tables were used in the data presentations and analyses in Sections 6.1

through 6.3.

Section 6.4 addressed the endangered and protected species VEC. The approach used involved three features. First, a list of protected species which may be found in the areas encompassed by the four managed resources was assembled. The list was based upon requirements of the ESA, the MMPA, and the MBTA. A total of 24 species of cetaceans, sea turtles, fish, and birds was identified. Based upon identified interactions with the four managed resources, five species from the initial list were identified for further analysis. The five species included three protected cetaceans (common dolphin, white-sided dolphin, and pilot whale), one endangered sea turtle (Leatherback sea turtle), and one threatened sea turtle (Loggerhead sea turtle); and summary scientific information was included on each. This type of information was available from numerous sources, including NMFS databases and other recent EISs or EAs.

The human communities VEC was addressed in Section 6.5. One subsection contained information on the "top eight" ports or communities prosecuting the four managed fisheries. These example locations were selected based on 2000 to 2003 data associated with the total value of all fisheries-related landings, and the value for the four managed resources. The eight locations included Point Judith, Rhode Island; North Kingstown, Rhode Island; Cape May, New Jersey; Hampton Bays, New York; Montauk, New York; Newport, Rhode Island; New Bedford Massachusetts; and Elizabeth, New Jersey. The second subsection described selected indicators such as fishermen participation, fishing fleet characteristics, and economic trends. As appropriate, additional topics related to commercial gear and recreational fishing were included. The four managed species were further addressed by summary information on the economic environment for each fishery, including access to the commercial fishery via permitting, the market for the fishery, the number and characteristics of the commercial fleet, trends in annual revenues from 1982 to 2004, fishery revenues based upon gear types utilized, and specific economic features of the recreational fishery. Numerous tables and figures were used to summarize the data, and the resultant key findings were described.

APPENDIX C

Case Law Related to Incorporation by Reference

Below are references and supporting excerpts from the decisions of four Courts dealing with "incorporation by reference" under NEPA. The CEQ Regulations (40 CFR Part 1502.21) and these cases are clear on their face; one cannot just incorporate another document by reference without a summary explanation of what it says and how it fits into the analysis in the subject EIS (or EA). It is noteworthy that the Supreme Court decision noted below (Case 1) is applicable to all judicial circuits, whereas some of the district court cases may be persuasive to courts in other circuits. Even though not all these cases are specific to Affected Environment sections, their application to any part of an EIS or EA can be assumed and would likely be held reasonable by any judge.

Case 1*: *Page 9 of the Baltimore Gas and Electric, Petitioners et al. v. NRDC, US Nuclear Regulatory Commission et al., Petitioners v. NRDC et al., Commonwealth Edison Co.,et al., Petitioners v. NRDC et al. Nos. 82-524, 82-545 and 82-551. Supreme Court Decision (Argued April 19, 1983. Decided June 6, 1983).

> This decision states: "There is some concern with an EIS that relies too heavily on separate documents rather than addressing the concerns directly. Although we do not decide whether they have binding effect on an independent agency such as the Commission, it is worth noting that the guidelines from the Council on Environmental Quality in effect during these proceedings required that "care should be taken to ensure that the statement remains an essentially self-contained instrument, capable of being understood by the reader without the need for undue cross reference." 38 Fed.Reg. 20550, 20554 (1973). The present regulations state that incorporation by reference is permissible if it will not "imped [e] agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described." 40 CFR § 1502.21 (1982). The Court of Appeals noted that EPA "requires an agency to do more than to scatter its evaluation of environmental damage among various public documents,"(685 F.2d, at 484) but declined to find that the incorporation of other documents by reference would invalidate an EIS that used Table S-3 to describe the environmental impact of the fuel cycle. The parties here do not treat this insufficient disclosure argument as a separate argument and, like the Court of Appeals; we decline to strike down the Rule on this ground. We do not deny the value of an EIS that can be understood without extensive cross-reference. The staff documents referred to in Table S-3 are public documents, however, and we note that the Commission has proposed an explanatory narrative to accompany Table S-3, which would be included in an individual EIS, that may alleviate some of the concerns of incorporation."

Case 2: Page 9 of Associated Concern About Tomorrow, Inc. et al. v. Elizabeth Dole, US DOT et al., US District Court, Dallas, June 4, 1985.

> Although the EIS may make reference to detailed studies done elsewhere [Randolph Civic Ass'n'. WMATA, 469 F.Supp. 968. 970 (D.D.C.1979 ; Inman Park Restoration v. Urban Mass Transit Administration, _ 414 F.Supp. 99. 120 (W.D.Ga.1976) aff'd, 576 F.2d 573 (5th Cir.1978)] and generally available upon request, the cursory reference noted above falls far short of the regulations governing incorporation by reference. See 40 C.F.R. Part 1502.21, Markewich v. Adikes _ 422 F.Supp. 1144. 1147 (E.D.N.Y.1976). No proper adoption or other incorporation by reference of the Route Study Report by the federal agency, charged with primary NEPA responsibility, appears in the record. No explanation or hint is given as to what one could find by reading the Route Study Report.

Case 3: Page 12 of Sierra Club v. Bruce Babbitt, as Sec of the Interior, et al. US District Court, California, July 12, 1999.

> As previously explained, under certain circumstances the law permits incorporation of materials by reference into an EIS. The propriety of such incorporation is dependent upon meeting three standards: (1) the material is reasonably available; (2) the statement is understandable without undue cross reference; and (3) the incorporation by reference meets a general standard of reasonableness. See California v. Bergland. 483 F.Supp. at 485 (incorporation of material into a DEIS), aff'd. in relevant part, California v. Block. 690 F.2d al 765. Application of the three criteria noted above suggests that the Court must find that the 1981 DEIS and the 1983 EA were not incorporated into the 1987 EA.

Case 4: Pages 18-19 of Rosebud Sioux Tribe v. Kevin Gover, as Assist. Sec. Bureau of Indian Affairs, et al., US District Court, South Dakota, February 3, 2000.

> BlA NEPA Handbook 4.3E provides: "The 'Affected Environment' (section § 1502.15) should succinctly describe the area in which the proposed action would occur. Page-sized maps of the general area and the project site help avoid superfluous description. Incorporation of sections of earlier environmental documents by reference may also be appropriate along with a summary of the key facts included in these references.

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Marine Fisheries Service