

In the Matter of:

Entergy Nuclear Operations, Inc.

(Indian Point Nuclear Generating Units 2 and 3)



ASLB#; 07-858-03-LR-BD01
 Docket #: 05000247 | 05000286
 Exhibit #: ENT000264-00-BD01
 Admitted: 10/15/2012
 Rejected:
 Other:

Identified: 10/15/2012
 Withdrawn:
 Stricken:

ENT000264
 Submitted: March 29, 2012

U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
NRR OFFICE INSTRUCTION

Change Notice

Office Instruction No.:	LIC-203, Revision 2
Office Instruction Title:	Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues
Effective Date:	February 17, 2009
Approved By:	Ben Ficks
Date Approved:	February 11, 2009
Primary Contact:	Briana Balsam 301-415-1042 briana.balsam@nrc.gov
Responsible Organization:	NRR/DLR/RERB

Summary of Changes: This document is the second revision of NRR Office Instruction LIC-203. This revision incorporates the final Commission policy on environmental justice; incorporates NRR responsibilities under the Magnuson-Stevens Fishery Conservation and Management Act; the Clean Air Act, and the Clean Water Act; clarifies NRR responsibilities under the Coastal Zone Management Act and the Fish and Wildlife Coordination Act; revises figures and tables; removes the environmental assessment templates to enable the templates to be kept by RERB as a living document; and amends the roles and responsibilities to reflect the current NRR office organization.

Training:	E-mail announcement with recommended self-study
ADAMS Accession No.:	ML080840323



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OFFICE	PM:DLR:REBA	LA:DLR	BC:DLR:REBA	OGC nlo	DD:DORL	D:DLR
NAME	BBalsam	IKing	BPham	EWilliamson	TMcGinty	BHolian
DATE	03/26/08	03/25/08	02/11/09	05/28/08	06/09/08	02/11/09
OFFICE	NRR:PMDA					
NAME	MGivvines BFicks /f/					
DATE	02/11/09					

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**NRR OFFICE INSTRUCTION
LIC-203, Revision 2**

Procedural Guidance for Preparing Environmental Assessments and Considering
Environmental Issues

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Acronyms Used

- ACHP Advisory Council on Historic Preservation
- ADAMS Agencywide Document Access and Management System
- BA Biological Assessment
- BO Biological Opinion
- CAA Clean Air Act
- CEQ Council on Environmental Quality
- CMP Coastal management plan
- COL Combined License
- CWA Clean Water Act
- CZMA Coastal Zone Management Act
- DLR Division of License Renewal
- DORL Division of Operating Reactor Licensing
- EA Environmental Assessment
- EDO Executive Director for Operations
- EFH Essential Fish Habitat

EIS	Environmental Impact Statement
EJ	Environmental Justice
EPA	Environmental Protection Agency
EPP	Environmental Protection Plan
EPU	Extended power uprate
ESA	Endangered Species Act
ESP	Early Site Permit
FES	Final Environmental Statement
FONSI	Finding of no significant impact
FR	Federal Register
FRN	Federal Register notice
FWCA	Fish and Wildlife Coordination Act
FWS	U.S. Fish and Wildlife Service
GEIS	Generic Environmental Impact Statement for License Renewal of Nuclear Plants
ITS	Incidental Take Statement
MOA	Memorandum of Agreement
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NRO	Office of New Reactors
NRR	Office of Nuclear Reactor Regulation
OCRM	NOAA's Office of Ocean and Coastal Resource Management
OGC	Office of General Counsel
PDR	Public Document Room
PM	Project manager
REMP	Radiological environmental monitoring program
RERB	Environmental Review Branch, Division of License Renewal
ROD	Record of Decision

RPB1	Projects Branch 1, Division of License Renewal
RPB2	Projects Branch 2, Division of License Renewal
SER	Safety Evaluation Report
SHPO	State Historic Preservation Officer
TAC	Technical assignment control
THPO	Tribal Historic Preservation Officer

**NRR OFFICE INSTRUCTION
LIC-203, Revision 2**

**Procedural Guidance for Preparing Environmental Assessments and
Considering Environmental Issues**

1. POLICY

It is the policy of the NRC's Office of Nuclear Reactor Regulation (NRR) to establish procedures and guidance for its staff to meet the requirements established by legislation and regulation. The purpose of 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," is to ensure that NRC meets its statutory obligations under the National Environmental Policy Act of 1969 (NEPA).

2. OBJECTIVE

This office instruction, along with the enclosed guidance documents, provides the NRR staff with a basic framework for meeting NRC's responsibility to comply with 10 CFR Part 51. This office instruction is intended to:

- Define the responsibilities of the Environmental Review Branch (RERB), Division of License Renewal (DLR) to ensure that NRR is consistent in its implementation of NRC regulations and other Federal environmental requirements;
- Define NRR staff responsibilities; and,
- Provide guidance to NRR staff on the procedural requirements for demonstrating compliance with environmental statutes and regulations covering environmental issues for regulated facilities.

This office instruction contains guidance for preparing environmental assessments (EAs), in accordance with NEPA and 10 CFR Part 51, and for considering environmental issues associated with:

- Executive Order 12898;
- Commission's Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (69 Federal Register [FR] 52040, August 24, 2004);
- Coastal Zone Management Act of 1972 (CZMA);
- Endangered Species Act of 1973 (ESA);
- National Historic Preservation Act of 1966 (NHPA);
- Fish and Wildlife Coordination Act of 1934 (FWCA); and
- Magnuson-Stevens Fishery Conservation and Management Act of 1996, as amended through January 12, 2007 (MSA).

This office instruction describes, in part, how the staff should determine whether a proposed action would have adverse or disproportionate impacts on minority populations or low-income populations, protected coastal zones, threatened or endangered species, archaeological or historical sites, or essential fish habitat. Though this office instruction addresses some aspects of environmental impact statements (EIS) preparation, it should not serve as primary guidance when preparing an EIS. 10 CFR Part 51 provides specific requirements for preparing EISs, and further guidance can also be found in NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants."

3. BACKGROUND

On June 21, 2001, Office Instruction LIC-203 was initially issued as a revision to Office Letter 906, Revision 2, which included guidance on environmental justice and improvements to the format and content of the EA template. Office Letter 906, Revision 2, was issued on September 21, 1999, and was entitled, "Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues."

On May 24, 2004, Revision 1 of LIC-203 was published. The revision clarified NRR responsibilities under the FWCA provided a policy change in fulfilling NRR responsibilities under the NHPA, and contained preliminary guidance on consideration of environmental justice matters consistent with a draft Policy Statement issued by the Commission on November 5, 2003 (69 FR 52040).

On August 24, 2004, the Commission issued a final letter entitled *Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions*, which clarified the guidance on environmental justice discussed in Revision 1 of LIC-203. This revision incorporates the Commission's updated guidance on environmental justice.

Additionally, this revision incorporates the responsibilities of the NRC under the MSA, as amended through January 12, 2007, which requires that Federal agencies consult with the Secretary of Commerce regarding essential fish habitat (EFH) for any action undertaken by the agency that may adversely affect EFH. EFH regulatory guidance is codified at 50 CFR Part 600.

This revision also clarifies NRR responsibilities under the CZMA and FWCA, amends figures and flow charts, and revises the roles and responsibilities to reflect the current NRR office organization.

4. BASIC REQUIREMENTS

4.1. RERB Staff

RERB is responsible for providing technical support and implementation guidance to the NRR staff for the resolution of environmental issues at regulated facilities. RERB is also responsible for coordinating environmental issues with other NRC offices to ensure that NRR meets its obligations under Federal environmental requirements and properly implement the requirements of 10 CFR Part 51.

4.2. All NRR Staff

In addition to its regulatory responsibilities embodied in the health and safety requirements of the Atomic Energy Act of 1954, as amended, NRC has responsibilities that are derived from NEPA and from other environmental laws, which include the CZMA, the ESA, the NHPA, the FWCA, and the MSA.

The NRR staff must consider environmental issues when performing license amendment activities including, but not limited to:

- Increasing the authorized power level of commercial power reactors (power uprate) beyond the power rating stated in the facility's Final Environmental Statement (FES) or supplement to the Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants (GEIS) regarding the facility being reviewed;
- Changing the license expiration date to recapture time between the construction permit and actual operation (construction recapture);
- Engaging in amendments and exemptions from regulations which are not covered by a categorical exclusion;
- Performing decommissioning activities under 10 CFR Part 50; and,
- Revising Appendix B (environmental protection plan) of a licensee's operating license.

Additionally, the NRR staff must consider environmental issues when processing license renewal applications under 10 CFR Part 54, when conducting rulemaking, and under any other circumstance which may lead to environmental impacts.

The staff need not perform an environmental review when performing licensing and regulatory activities eligible for categorical exclusions under 10 CFR 51.22(c). The Division of Operating Reactor Licensing (DORL) and Office of General Counsel (OGC), with support of RERB, will determine whether an action qualifies as a categorical exclusion and, if so, include the criterion in the licensing documents. The NRR staff is encouraged to seek early assistance from RERB in addressing environmental issues that are unique, complex, or unfamiliar. The NRR staff may request formal guidance in developing EAs from RERB. Because environmental reviews are fee recoverable under 10 CFR Part 170, the NRR staff should provide a Technical Assignment Control (TAC) number for tracking and billing purposes when seeking concurrence, assistance, or input on environmental reviews.

5. **RESPONSIBILITIES AND AUTHORITIES**

5.1. RERB Staff

RERB will:

- Review and concur on plant-specific and generic EAs prepared by the NRR staff for the activities listed above;
- Prepare input for and/or originate EAs when appropriate;
- Review and provide guidance and support to the NRR staff participating in the preparation of all EISs (draft, final, and supplements);
- Participate in environmental rulemaking activities;
- Review new and emerging environmental issues;
- Ensure that NRR is current with appropriate environmental legislation, statutes, regulations, and guidance;
- Review environmental documents submitted by other Federal and State agencies, as appropriate;
- Coordinate ESA Section 7 consultations with Fish and Wildlife Services (FWS) and National Marine Fisheries Service (NMFS) and prepare or direct the preparation of biological assessments (BAs), as appropriate;
- Consult with NMFS regarding potential impacts to EFH, as appropriate;
- Consult with Advisory Council on Historic Preservation (AHP) and the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) on matters related to historic and archaeological resources and coordinate NHPA Section 106 consultations, as appropriate;
- Coordinate environmental matters with other NRC Headquarters and Regional offices and Federal, State, and Tribal agencies; and
- Maintain and update this office instruction.

5.2. All NRR Staff

Individual NRR staff members are responsible for implementing the procedural requirements of this office instruction. NRR staff should consult with RERB when reviewing environmental issues or safety issues that require an EA.

5.2.1. **NRR Responsibilities under NEPA: EISs and EAs**

Section 102 of NEPA, passed by Congress in 1969, necessitates the use of a systematic approach to integrate the social and natural sciences when making decisions that may have environmental impacts. NEPA

requires that Federal agencies prepare EISs for “major Federal actions” that may significantly affect the quality of the human environment as documentation of the analysis process. EISs must include a thorough analysis of the environmental effects of the proposed action, as well as appropriate alternatives to the proposed action. The findings of EISs must then be considered in the decision-making process.

In order to implement the requirements of NEPA, NRR prepares EISs and EAs. NRC regulatory requirements regarding these documents can be found at 10 CFR Part 51.

Environmental Impact Statements:

An EIS is prepared for any action determined to be a “major Federal action significantly affecting the quality of the human environment.” In general, an EIS contains detailed analyses of the environmental impacts of the proposed action, analysis of the environmental impacts of the alternatives to the proposed action, and involves extensive public participation and coordination with local, State, and other Federal agencies. 10 CFR 51.20(b) provides a specific list of NRC actions that require preparation of an EIS.

Environmental Assessments:

An EA documents the evaluation of whether an action constitutes a “major Federal action” significantly affecting the human environment. If the review documented in the EA demonstrates that the proposed action will not have a significant impact on the environment, a finding of no significant impact (FONSI) is stated in the conclusion of the EA and no EIS need be prepared. If, on the other hand, the environmental review documented in the EA reveals that the proposed action will, or has the potential to, significantly affect the human environment, then the EA must conclude that a more extensive review of the environmental impacts (i.e., an EIS) should be prepared. In general, an EIS contains more detailed analysis and involves more extensive public participation than an EA. Refer to Fig. 1 in Appendix B for a flow chart of the process by which a reviewer should determine whether an action requires an EA, EIS, or meets the criteria for a categorical exclusion, as defined in 10 CFR 51.22(c)(9). For an extended power uprate (EPU), the Commission has directed the NRC staff to prepare an EA that goes into greater depth and provides more opportunity for public involvement than a typical EA for licensing actions. The RERB staff will prepare EAs for all EPU requests.

Environmental Review Process:

Licensing Action

Upon receipt of a proposed action, the DORL Project Manager (PM) should determine whether an environmental review is needed and, if so, the type of document that should be prepared as a result of the review. If the proposed action is unique or involves unusual circumstances, then the DORL PM should consult with RERB staff before initiating the

environmental review. Additionally, as mentioned previously in this office instruction, 10 CFR 51.22(c) identifies categories of actions that are excluded from environmental reviews because the NRC has determined that these actions do not individually or cumulatively have a significant effect on the human environment. If the DORL PM, in consultation with OGC and RERB staff, determines that the proposed action is not within one of the excluded categories, then an EA should be prepared in accordance with the requirements of 10 CFR 51.30 and this office instruction. If the EA concludes that the proposed action will result in significant environmental impacts, then the DORL PM should contact the Environmental Review Branch (RERB), Division of License Renewal to coordinate the preparation of an EIS. 10 CFR 51.30 requires that an EA:

1. *Identify the proposed action;*
2. *Briefly discuss the need for the proposed action;*
3. *Discuss the alternatives to the proposed action;*
4. *Describe the environmental impacts of the proposed action and alternatives; and*
5. *List agencies and persons consulted and identify sources used.*

An EA should not duplicate the safety details of the review; only the environmental impacts of the proposed action should be considered. Appendix B of this office instruction provides detailed guidance for each step in the preparation of an EA. An EA should include a FONSI if the EA supports a conclusion that the proposed action will not have a significant effect on the quality of the human environment. If such a finding cannot be made, then an EIS must be prepared.

Should an EIS need to be prepared, RERB will be responsible for coordinating the preparation of the EIS with the DORL PM for the facility in question. An EA does not need to be prepared before an EIS for those specific actions listed under 10 CFR 20(b) as requiring an EIS.

Rulemaking Activities

When an EA is written in support of rulemaking activities that affect NRR, the initiating office, if other than NRR, may coordinate with RERB in the preparation of an EA. Procedurally, EAs for rulemaking actions and licensing actions are similar. Detailed guidance on incorporation of the NEPA process within rulemaking activities is provided in the NRC Regulations Handbook, NUREG/BR-0053, Revision 5.

5.2.2. NRR Responsibilities Regarding Environmental Justice

Executive Order 12898 was issued by the President on February 11, 1994, mandating that Federal agencies make "environmental justice" part of each agency's mission by addressing disproportionately high and adverse human health or environmental effects of Federal programs,

policies, and activities on minority populations and low-income populations. Subsequently, the Council on Environmental Quality (CEQ) developed guidelines on how to integrate environmental justice into the NEPA process entitled *Environmental Justice Guidance Under the National Environmental Policy Act*, December 1997. The guidance is available at: <http://www.nepa.gov/nepa/regs/ej/justice.pdf>.

On August 24, 2004, the Commission published a policy statement on the treatment of environmental justice matters in NRC regulatory and licensing actions (69 FR 52040). NRR developed a corresponding procedure (Appendix C), which incorporates the Commission's policy statement on environmental justice into the licensing process.

Environmental justice reviews will be performed for all actions requiring preparation of an EIS (or a supplement thereto). An environmental justice review is not usually required for an EA in which a FONSI is made; however, special circumstances may warrant an environmental justice review in the case of a FONSI, which may include regulatory actions that involve significant site modification with an identifiable impact on the environment or that have substantial public interest. In such circumstances, the staff will inform NRR senior management, and a decision will be made on a case-by-case basis as to whether the circumstances warrant an environmental justice review for an EA. If there is a clear potential for significant offsite impacts from the proposed action to minority and low-income communities, an environmental justice review may be appropriate in order to provide a basis for concluding that there are no unique or significant impacts. If significant impacts are identified, then a FONSI may not be possible and an EIS should be considered. NRR will generally conduct an environmental justice review for an EPU, the finding of which will be documented in an EA. Appendix C provides a more detailed explanation of environmental justice and a flow chart (Fig. 2) characterizing the steps in an environmental justice review.

5.2.3. NRR Responsibilities under the Coastal Zone Management Act

The CZMA of 1972 was promulgated to encourage and assist States and territories in developing management programs that preserve, protect, develop, and, where possible, restore the resources of the coastal zone. A "coastal zone" is generally described as the coastal waters and the adjacent shore lands strongly influenced by one another, which may include islands, transitional and intertidal areas, salt marshes, wetlands, beaches, and Great Lakes waters. Appendix D of this office instruction lists those States and territories with Federally approved Coastal Management Plans (CMPs) and describes each State or territory's coastal zone. Activities of Federal agencies that are reasonably likely to affect coastal zones are required to be consistent with the approved CMP of the State or territory to the maximum extent practical. Federal consistency is documented in a Federal consistency certification, which must be submitted to the State or Federal licensing agency by applicants for Federal licenses that are likely to affect a State's coastal zone. Appendix D contains a flow chart that describes the typical CZMA

consistency certification process; however, some States may require use of a specific state-prescribed process.

If a Federal agency receives an application for a permitting/licensing activity that has been pre-listed in a State's CMP, that agency has an obligation to withhold the permit/license approval until the State has concurred on the consistency determination. In the case where the State objects to the consistency determination, the Federal agency will withhold the permit/license approval until the Secretary of Commerce presides over such objection. If an applicant seeks a license or license amendment potentially affecting the coastal zone for an activity that is not listed in the State's CMP, the CZMA provides States with the right to request a Federal consistency certification. Potentially affected States have 30 days from the *Federal Register* notice (FRN) of the proposed action to notify the NRC and applicant of the need for a Federal consistency review for unlisted activities; otherwise, the State waives its right to review the unlisted activity. In general, the only NRR licensing actions requiring a Federal consistency certification are license renewal applications and EPU license amendments. Additional licensing actions that may require a Federal consistency certification are carried out by the Office of New Reactors (NRO) and include early site permits (ESPs) and combined licenses (COLs).

Regulations implementing the Federal consistency provisions of the CZMA have been promulgated by the National Oceanic and Atmospheric Administration (NOAA) at 15 CFR Part 930. NOAA regulations specifically require Federal consistency certification for license renewal and major amendments that will affect any coastal use or resource. Amendments to NOAA's Federal consistency certification (65 FR 77124) define "major amendments" as activities involving a change that affects any coastal use or resource in a way that is substantially different than the description or understanding of the effects at the time of the original activity.

When reviewing a licensing action, the DORL PM should determine whether the State or territory has an approved CMP and whether the licensee's plant is within the boundary of the CMP. The DORL PM should consult with RERB if the plant is located within the CMP boundary or if the licensing action may affect a state or territory's CMP. If it is determined that a proposed licensing activity may affect coastal uses or resources, the NRC should consult with the licensee to determine if they have begun or are planning to begin the CZMA consistency process.

The following guidance is provided regarding NRC staff's responsibilities under the CZMA Federal consistency certification requirements. The CZMA Flow Chart (Fig. 3) in Appendix D characterizes the steps involved in obtaining a Federal consistency certification in more detail.

6. *The DORL PM should determine whether their assigned facility is located in a State's coastal zone or is located such that changes in the facility could reasonably be expected to affect any coastal use or*

resource of any coastal zone (e.g., a coastal zone is within a reasonable downstream distance from a facility located on a river).

7. *For plants located in a coastal zone, identify listed activities requiring a consistency certification (typically, license renewals are the only listed activities).*
8. *Upon receipt of an application for a listed activity (e.g. license renewal), ensure that the licensee has provided a Federal consistency certification. Approval of the requested action should be withheld until the State has concurred with the licensee's Federal consistency determination, or the Secretary of Commerce has overridden any State objection.*

Note: For license renewals, RERB will be responsible for review of the action and will ensure that a Federal consistency certification has been provided, as required.

9. *Upon receipt of an application for an unlisted activity (such as an EPU license amendment), the PM will make a determination as to whether coastal effects are reasonably foreseeable due to the requested action (e.g., significant change in effluents, construction of shoreline structures, etc.), and consult with RERB as needed.*
10. *For routine licensing actions where coastal effects may be reasonably foreseeable, the State may notify the NRC of the necessity of a consistency review up to 30 days after the date of issuance of the FRN. If the State has not notified the NRC within 30 days that review is necessary, the State waives its right to conduct a review and the action may be approved.*
 - For actions in which coastal effects may be reasonably foreseeable, such as an EPU license amendment, the PM should consult with RERB and, if determined to be necessary, should contact the applicable State agency early in the review process to ensure timely State determination of the need for Federal consistency review.
 - In either of the above cases, upon notification by the State that Federal consistency review is required for the proposed action, approval of the proposed action (e.g., license renewal, license amendment, or applicable rulemaking action) by the NRC cannot occur before the State has concurred with the licensee's consistency determination, or the Secretary of Commerce has overridden any State objection.

5.2.4. NRR Responsibilities under the Endangered Species Act

The Endangered Species Act (ESA) of 1973 ensures the protection of endangered or threatened species and their critical habitats. The designation of these species and habitats is made by FWS and NMFS.

Section 7 of the ESA requires each Federal agency to ensure that any action authorized, funded, or carried out by an agency is not likely to jeopardize the continued existence of any endangered or threatened species (jeopardy), or destroy or adversely modify any critical habitat for such species (adverse modification). "Action" may include licensing, rulemaking, and/or other regulatory activities. Federal agencies should act, if possible (where it has the legal authority), to prevent endangered species and their habitats from being threatened or destroyed. If an action has the potential to affect any endangered or threatened species or critical habitat, the Federal agency (here, the NRC) shall consult with the Secretary of the Interior (for freshwater and terrestrial species through FWS) or the Secretary of Commerce (for oceanic and anadromous species through NMFS). For activities requiring preparation of an EIS, RERB will initiate consultation with FWS or NMFS, as appropriate, early in the review process.

Under Section 7 of the ESA, consultation can proceed informally or formally with either FWS or NMFS.

INFORMAL CONSULTATION

Informal consultation is a less structured approach to meeting Section 7 requirements than formal consultation. The NRC staff will correspond with FWS or NMFS via phone, letters, and meetings in order to:

- Determine whether and what listed and candidate species or designated or proposed critical habitat may be in the vicinity of the site of the proposed action;
- Determine any effects the proposed action may have on listed species or critical habitat; and
- Discuss modifications to the action or mitigative options to reduce or remove any identified adverse effects to listed species or critical habitat.

Generally, the informal consultation process begins when the NRC requests a list from FWS or NMFS, via letter, of endangered or threatened species and critical habitats which may be affected by the proposed action.

Alternately, the NRC may send FWS or NMFS a list of species and critical habitats which it believes may be affected by the action. Within 30 days of the request, FWS or NMFS will provide an initial response, either providing a list of species and critical habitats, or concurring with the list that the NRC has prepared. If FWS or NMFS determines that no species or critical habitat would be affected, no further action is required.

If listed species or critical habitats are involved that may be affected by the proposed action, the NRC must assess the impacts to the identified species in a Biological Assessment (BA), which is described below under "Formal Consultation." If the BA concludes that the action is not likely to jeopardize the listed species or critical habitat, and FWS or NMFS concurs, then no further consultation is required. If the BA concludes that the action affects listed species or critical habitat, then the NRC may initially request an

informal consultation to determine whether the action can be modified so that the species or critical habitats are not adversely affected; otherwise, formal consultation is required. Appendix E of this instruction contains a flow chart (Fig. 4) illustrating the informal ESA consultation process. The NRC may elect to proceed directly to formal consultation at any point before or during the informal consultation process.

FORMAL CONSULTATION

The formal consultation process is a more structured approach to meeting Section 7 requirements. If the NRC staff determines that a proposed action “may affect” listed species or designated critical habitat, formal consultation is required. As with informal consultation, formal consultation determines which listed and candidate species or designated or proposed critical habitat may be in the vicinity of the site of the proposed action, and also:

- Identifies the nature and extent of the impacts of the proposed action on listed species and critical habitat;
- Identifies reasonable and prudent alternatives when an action is likely to result in jeopardy or adverse modification;
- May provide an exception for specified levels of incidental take of a species in an Incidental Take Statement (ITS), which would otherwise be prohibited under Section 9 of the ESA;
- Provides mandatory reasonable and prudent measures to minimize the impacts of incidental take to listed species;
- Identifies ways the action agency can help conserve listed species or critical habitat; and
- Provides an administrative record of effects on species that can help establish the species’ environmental baseline in future biological opinions (BOs).

To initiate formal consultation, the NRC sends a written request to FWS or NMFS when the NRC staff believes that one or more listed species has the potential to be adversely affected by the proposed action, or FWS or NMFS, during previous informal consultation correspondence with the NRC, determines that potential adverse impacts on listed species exist. The written consultation request from the NRC must be accompanied by a BA containing a description of the action, a description of the area, a description of the listed species, effects of the action on the listed species, and a review of relevant reports and other information. If formal consultation is initiated as a result of a determination, from FWS or NMFS, that potential adverse impacts to listed species exist, the NRC must begin the BA within 90 days of the initial FWS or NMFS response and submit the BA within 180 days of the initial response. Within 90 days of the request for formal consultation and receipt of the BA, FWS or NMFS is expected to issue a BO. The BO contains a summary of the action, the effects of the action, an opinion as to whether the species is in jeopardy as a result of the

action, alternatives to the action, an ITS (if applicable), and any proposed conservation measures. Appendix E of this instruction contains a flow chart (Fig. 5) illustrating the formal ESA consultation process. The BO, including any ITS and conservation measures, if applicable, shall be provided to the licensee for implementation. In addition, DORL PMs should be notified by licensees should unusual events occur during normal operation that may have adverse impacts on listed species or critical habitats (e.g., incidental takes of listed species). Consultation (informal or formal) should be initiated for such unusual events if the facility does not have an ITS or if the take reaches or exceeds the limit specified in a facility's ITS. The DORL PM should coordinate such consultation with RERB at the earliest opportunity.

For more information on Section 7 consultations, refer to the *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act*, March 1998, published by FWS and NMFS. The handbook is available at: <http://www.fws.gov/endangered/consultations/s7hndbk/s7hndbk.htm>.

5.2.5. NRR Responsibilities under the National Historic Preservation Act

BACKGROUND

The National Historic Preservation Act (NHPA) was promulgated in 1966 and amended in 1992 and 2000 to coordinate and support public and private efforts to identify, evaluate, and protect significant historic and archaeological resources. The historic preservation review process is mandated by Section 106 of the NHPA and is outlined in regulations issued by the ACHP at 36 CFR Part 800. Section 106 of the NHPA directs Federal agencies to consider the effects of their undertakings on historic properties. The Act allows the ACHP an opportunity to review and comment on any Federal agency action that might harm historic property. "Undertakings" denotes a broad range of Federal activities, including the issuance of NRC licenses and permits. "Historic property" is any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places (National Register). Refer to Fig. 6 in Appendix F for a flow chart illustrating the Section 106 process. When performing an EA or EIS, the PM must determine if effects exist which may harm any historic property or historic and archaeological resources. The standard Section 106 process is comprised of the following steps:

- *Initiate the Section 106 process (36 CFR 800.3).* Establish the undertaking and identify the appropriate SHPO and/or THPO, as well as concerned members of the public.
- *Identify Historic Properties (36 CFR 800.4).* Determine the scope of effort, identify historic properties and resources, and evaluate the historic significance.

- *Assess Effects* (36 CFR 800.5). Determine whether or not the proposed action will adversely affect the historic property by applying the criteria set forth in the act.
- *Resolve Adverse Effects* (36 CFR 800.6). Adverse effects are resolved through mitigation and/or consultation.

PROCEDURE FOR LICENSING ACTIONS

The following guidance should be used when performing a Section 106 review (refer to Fig. 6, Appendix F). Because this procedure may not address all situations that may occur, NRR PMs should consult with RERB whenever a Section 106 review is undertaken.

1. *Identify the proposed action.*
2. *Determine if the action requires an EIS/EA.* Determine whether the regulatory action will be supported by an EIS or EA. When the regulatory action requires the preparation of an EIS, a Section 106 review must be conducted and may be coordinated with the NEPA process. (Note: Coordination with NEPA is discussed below).

Under most circumstances, Section 106 review is not required when an EA is prepared. However, in special cases, the staff will conduct a Section 106 review in preparing an EA. Such a determination will be made on a case-by-case basis and only when the potential exists for historic and archaeological resources to be affected by the proposed action.

3. *Determine if the proposed action has the potential to affect historic properties.* If a potential to affect historic properties exists, then begin the Section 106 review. If no historic properties have been identified that would be affected by the proposed action, report this determination in the FONSI/ROD (Record of Decision).
4. *Initiate the Section 106 Process.* The Section 106 process is initiated by identifying the appropriate SHPO/THPO, Federally-recognized tribes, involved and/or concerned members of the public, and identify other consulting parties.
5. *Determine Area of Potential Effects.* Determine the scope of the review (the area affected by the proposed action). Identify historic properties and evaluate the historical significance.
6. *Consultation.* NRR staff, in consultation with the SHPO/THPO, affected Federally-recognized tribes, and other consulting parties, assess the adverse effects of the proposed action on historic and archaeological resources.
7. *Determine if adverse effects exist.* If any adverse effects to historic and archaeological resources exist, then proceed to the next step. If

no adverse effects exist, then document this determination in a FONSI/ROD.

8. *Resolve Adverse Effects.* Resolve adverse effects via consultation with the SHPO/THPO, affected Tribes, local government, members of the public, the licensee (or applicant), and other affected parties. Mitigation actions may be discussed in the EA or EIS or through a formal Memorandum of Agreement (MOA).
9. *Issue EA or EIS for public comment.*
10. *Resolve Comments.*
11. *Issue FONSI/ROD.*
12. *Proceed with action.*

COORDINATING SECTION 106 CONSULTATIONS WITH NEPA

The NHPA statute also provides provisions for the review of historic properties in conjunction with the NEPA review (36 CFR 800.8(c)). In 36 CFR 800.8, “Coordination with the National Environmental Policy Act”, the NHPA consultation can be achieved in conjunction with the NEPA process to demonstrate Section 106 compliance. NRR staff use the NEPA process to fulfill the requirements of the NHPA when preparing both EAs and EISs. In addition, under 36 CFR 800.8(c), an agency can use the NEPA process to comply with Section 106 as an alternative to the procedures set forth in 36 CFR 800.3 through 36 CFR 800.6. This allows NRC to “streamline” its environmental and Section 106 review processes. The key to using the NEPA process to comply with Section 106 of the NHPA is early coordination.

When using the NEPA process to comply with Section 106 of the NHPA, the NRR staff must perform the substantive steps that the Section 106 regulations call for, but the staff does not have to follow precisely the same procedures it would if it were following the standard Section 106 review. The staff has the flexibility to accomplish its assessment in “phases,” and the level of effort the staff puts forth will be similar to that for other kinds of environmental resources in the NEPA review. NRR staff must do the following:

1. *Early coordination.* Coordinate Section 106 compliance through NEPA. NRR PMs should plan their section 106 responsibilities as early as possible in the NEPA process, and plan public participation, analysis, and review requirements of both statutes.
2. *Identify consulting parties.* Identify the appropriate SHPO or THPO, Indian tribes, Native Hawaiian organizations, local governments, preservation organizations, and individuals who may be concerned with the possible effects of the proposed undertaking on historic properties in a manner consistent with Section 800.3(f).

3. *Identify historic properties.* Identify historic properties and assess effects on them in a manner consistent with Section 800.4 through 800.5. The scope and timing of identification and effect determination may be “phased to reflect the Agency Official’s consideration of project alternatives in the NEPA process” and the effort of the Agency shall be “commensurate with the assessment of other environmental factors.”
4. *Consultation.* Consult with the SHPO/THPO, Indian tribes, Native Hawaiian organizations, and other parties during NEPA scoping, analysis, and documentation. As commensurate with the Agency’s NEPA process, the public must be invited to participate.
5. *Develop EIS (special-case EAs).* Develop alternatives and mitigation measures in consultation with other stakeholders, and describe these measures in the EIS. *Section 800.8(c)(2) requires that an EA or EIS be reviewed by the SHPO/THPO and other consulting parties. NRR must notify the ACHP by letter of the proposed undertaking and submit the EA or EIS (both draft and final) to the ACHP. If any of these parties objects within the comment period, NRR staff will refer the matter to the ACHP, which has 30 days to review the objection. If comments are not received within the 30 day period, then NRR can complete its NEPA review and proceed with its licensing decision without further Section 106 consultation. Section 800.4(c)(4) also requires the NRR to specify within its FONSI/ROD the measures that it will take to mitigate adverse effects on historic properties.*

Note: If a project, activity, or program is categorically excluded under NEPA, the PM should determine if it still qualifies as an undertaking requiring a review under Section 106 pursuant to 36 CFR 800.3(a).

For further guidance on Section 106 consultations, refer to *Section 106 Consultation Involving National Historic Landmarks*, April 2002, provided by the ACHP. The consultation guidance is available at:
<http://www.achp.gov/regs-nhl.html>.

5.2.6. NRR Responsibilities under the Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) was enacted in 1934 to ensure that water resource development projects do not conflict with the conservation of fish and wildlife resources. Projects that trigger consultation under the FWCA require that Federal agencies first consult with FWS, and NMFS in some instances, as well as the State agency exercising administration over wildlife resources when any body of water is proposed or authorized to be modified by any public or private agency under Federal permit or license. Projects that may trigger FWCA consultation include:

- Impoundment;
- Damming;

- Diversion;
- Channel deepening; and
- Dredging.

Note that the NRC does not have to undertake a licensing action for the requirements of the FWCA to apply. Rather, Section 662 of the FWCA requires the NRC to enter into consultation whenever an NRC licensee takes action to modify a water body, even if such actions are not within the purview of an NRC licensing action (e.g., dredging intake canals). The FWS, NMFS (if applicable), and the State wildlife agency will provide the NRC with recommendations on how best to minimize loss of fish and wildlife resources through project modification or mitigation.

NRR PMs should be cognizant of whether a licensee may be planning modifications, such as those listed above, to any water body, even if such modifications do not require licensing action requests to the NRC. If modification will occur, the NRR PM should coordinate with RERB to conduct consultation with FWS or NMFS and the State wildlife agency. The consultation will provide ways to reduce impacts and improve resource allocation. Reasonable measures to improve water resources or reduce impacts on those resources should be discussed in the EA or EIS. In addition, any reports, conservation recommendations, or letters provided by the FWS, NMFS, or the State during the consultation should be included in an appendix to the EA or EIS.

For further guidance on consultation under the FWCA, refer to *Water Resources Development Under the Fish and Wildlife Coordination Act*, November 2004. This guidance is available at:
<http://www.fws.gov/habitatconservation/fwca.pdf>.

5.2.7. NRR Responsibilities under the Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act of 1996 (MSA), as amended through January 12, 2007, ensures that renewable fishery resources are not exhausted by over harvesting or other environmental damage. Section 305 of the MSA requires Federal agencies to consult with the Secretary of Commerce through NMFS before authorizing any action which may adversely affect EFH identified under the Act. The Fishery Management Councils, in conjunction with NMFS, designate EFH, which can consist of both the water column and the seafloor of an aquatic area needed to support one or more life stages of a managed fish species.

When reviewing an action, the PM should make a determination and notify RERB as to whether impacts to EFH are reasonably foreseeable due to the requested action. If no change to any aspect of aquatic resources is anticipated, then an evaluation of EFH should not be necessary.

However, if a change to any aspect of aquatic resources is anticipated, then the NRC staff should determine if the requested action will result in any adverse effects to designated EFH, and if so, contact NMFS to initiate EFH consultation. The consultation process for an environmental review requiring an EA is outlined below.

1. *Notification.* Include a transmittal letter to NMFS clearly stating that the NRC is initiating an EFH consultation to accompany the draft EA for comment.
2. *EFH Assessment.* Address the effects on EFH in the EA as a separate section or attachment clearly titled “EFH.” The information must include all the information required in an EFH Assessment as outlined at 50 CFR 600.920(e).
3. *EFH Conservation Recommendations.* NMFS provides EFH conservation recommendations directly to the NRC as part of its comments on the EA.
4. *Agency Response.* Within 30 days of receiving EFH conservation recommendations, the NRC sends a preliminary response stating that it has received the EFH conservation recommendations and will consider them and respond fully once a decision regarding the proposed action has been reached. The NRC will then send a detailed final response letter, which must be provided to NMFS at least 10 days before the NRC signs a FONSI. If the NRC makes a decision within 30 days of receipt of the EFH conservation recommendations, a preliminary letter is not necessary and only the final response letter need be provided to NMFS.

Note that the process for EFH consultations for actions that require an EIS differs from the process described below. For further guidance on EFH consultations, refer to the *Essential Fish Habitat Consultation Guidance*, Version 1.1, published by NMFS. The guidance is available at: <http://www.nmfs.noaa.gov/habitat/habitatprotection/pdf/efh/EFH%20Consultation%20Guidance%20v1-1.pdf>.

5.2.8. NRR Responsibilities under the Clean Air Act

BACKGROUND

The Clean Air Act (CAA), which was last amended in 1990, regulates air hazardous air emissions from stationary and mobile sources in the U.S. The CAA authorizes the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) (40 CFR 50) for six principal pollutants that are considered harmful to human health and the environment: carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide. In order to meet the NAAQS set forth by the EPA, states are directed to create state implementation plans. The CAA also includes provisions for the EPA to implement the Acid Rain Program, which entails a market-based nationwide cap and trade program to reduce sulfur dioxide emitted by electric power plants.

Additionally, the CAA includes programs and provisions for reducing toxic air pollutants and ground-level ozone. Larger industrial and commercial sources of air emissions are required to obtain an operating permit from the State, which may consolidate the information requirements of the programs described above into one permit.

The 1990 amendments to the Clean Air Act include a provision that no Federal agency may support any activity that does not conform to a state implementation plan designed to achieve the NAAQS. A final rule published by the EPA in 1993 (58 FR 63214) requires Federal agencies to prepare a written conformity analysis if a proposed action occurs in a NAAQS nonattainment or maintenance area for which the total of the action's direct and indirect emissions of criteria pollutants and their precursors would exceed threshold emissions levels (40 CFR 51.853(b)). For most NRR licensing actions resulting in an EA, an assessment of air impacts is generally not necessary unless the proposed action changes air emissions such that potentially significant impacts exist that might preclude a FONSI determination. If the proposed action would change air emissions, the PM should consult with RERB to determine if a conformity analysis should be performed.

5.2.9. NRR Responsibilities under the Clean Water Act

The Clean Water Act (CWA) of 1972 ensures the protection of surface water quality. The CWA aims to preserve and restore the nation's chemical, physical, and biological surface water integrity in order to conserve aquatic wildlife and recreation. The CWA does not directly address ground water or water availability.

Section 401 of the CWA requires that for Federal agencies to issue operating permits that would increase pollutant load to a water body, certification from a variety of state, local, and affected Indian tribes must first be obtained.

The National Pollution Discharge Elimination System (NPDES) program, which controls direct discharges into navigable waters, is promulgated in Section 402 of the CWA. NPDES permits are issued by the EPA or an authorized state to discharging facilities. The permits contain water quality standards specific to the water body to which the facility is discharging and establish pollutant monitoring and reporting requirements. Water quality standards vary by state and by site, but most states follow guidelines set forth by the EPA that propose water quality criteria sufficient for aquatic life and human health.

In order to comply with the CWA when reviewing a licensing action, if the licensing action would change any discharge or effluent to a water body, the PM should consult with RERB staff to determine if the change in discharges or effluents would remain within the limits of the facility's NPDES permit. In order to adequately assess environmental impacts, the state's 303(d) list of impaired waters, which classifies the quality of each state's water bodies, may also need to be reviewed to determine any

preexisting and/or potential sources of environmental impacts on the affected water bodies.

6. PERFORMANCE MEASURES

Not applicable

7. PRIMARY CONTACT

Briana A. Balsam
NRR/DLR/RERB
301-415-1042
briana.balsam@nrc.gov

8. RESPONSIBLE ORGANIZATION

NRR/DLR/RERB

9. EFFECTIVE DATE

February 17, 2009

10. REFERENCES

10 CFR Part 50. *Code of Federal Regulations*, Title 10, Energy, Part 50, "Domestic Licensing and Production and Utilization Facilities."

10 CFR Part 51. *Code of Federal Regulations*, Title 10, Energy, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

10 CFR 51.20. *Code of Federal Regulations*, Title 10, Energy, Part 51.20, "Criteria for and Identification of Licensing and Regulatory Actions Requiring Environmental Impact Statements."

10 CFR 51.22. *Code of Federal Regulations*, Title 10, Energy, Part 51.22, "Criterion for Categorical Exclusion; Identification of Licensing and Regulatory Actions Eligible for Categorical Exclusion or Otherwise Not Requiring Environmental Review."

10 CFR 51.30, *Code of Federal Regulations*, Title 10, Energy, Part 51.30, "Environmental Assessment."

10 CFR Part 54. *Code of Federal Regulations*, Title 10, Energy, Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants."

10 CFR Part 170. *Code of Federal Regulations*, Title 10, Energy, Part 170, "Fees for Facilities, Materials, Import and Export Licenses, and Other Regulatory Services Under the Atomic Energy Act of 1954, as Amended."

15 CFR Part 930. *Code of Federal Regulations*, Title 15, Commerce and Foreign Trade, Part 930, "Federal Consistency with Approved Coastal Management Programs."

36 CFR Part 800. *Code of Federal Regulations*, Title 36, Parks, Forests, and Public Property, Part 800, "Protection of Historic Properties."

50 CFR Part 402. *Code of Federal Regulations*, Title 50, *Wildlife and Fisheries*, Part 402, "Interagency Cooperation – Endangered Species Act of 1973, as Amended."

50 CFR Part 600. *Code of Federal Regulations*, Title 50, *Wildlife and Fisheries*, Part 600, "Magnuson-Stevens Act Provisions."

65 FR 77124, National Oceanic and Atmospheric Administration. Coastal Zone Management Act Federal Consistency Regulations. December 8, 2000.

69 FR 52040, U.S. Nuclear Regulatory Commission. Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions. August 24, 2004.

Atomic Energy Act of 1954 (AEA). 42 USC 2011, et seq.

Clean Air Act of 1990 (CAA). 42 USC 7401-7671q.

Clean Water Act of 1977 (CWA). Federal Water Pollution Control Act of 1977, 33 USC 1251, et seq.

Coastal Zone Management Act of 1972 (CZMA). 16 USC 1456(c)(3)(A).

Council on Environmental Quality. 1997. "*Environmental Justice: Guidance Under the National Environmental Policy Act.*" Washington, D.C. Available URL: <http://ceq.eh.doe.gov/nepa/regs/ej/ej.pdf> (accessed March 12, 2008).

Endangered Species Act of 1973 (ESA). 16 USC 1531, et seq.

Executive Order 12898. 1994. "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations." *Federal Register*, Vol. 59, No. 32.

Fish and Wildlife Coordination Act (FWCA). 16 USC 661, et seq.

Magnuson-Stevens Fishery Conservation and Management Act (MSA). PL 94-265, as amended by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, PL 109-479.

National Environmental Policy Act of 1969 (NEPA). 42 USC 4321, et seq.

National Historic Preservation Act of 1966 (NHPA). 16 USC 470, et seq.

National Oceanic and Atmospheric Administration. 2008. "Ocean and Coastal Resource Management" website. National Ocean Service, National Oceanic and Atmospheric Administration, Department of Commerce. Available URL: <http://coastalmanagement.noaa.gov/welcome.html> (accessed March 13, 2008).

National Marine Fisheries Service. 2004. *Essential Fish Habitat Consultation Guidance*. Version 1.1. Silver Spring, MD. Available URL: <http://www.nmfs.noaa.gov/habitat/habitatprotection/pdf/efh/EFH%20Consultation%20Guidance%20v1-1.pdf> (accessed January 14, 2008).

U.S. Fish and Wildlife Service. 1992. *Digest of Federal Resource Laws*. Available URL: <http://www.fws.gov/laws/lawsdigest.htm> (accessed March 2, 2008).

- U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act.* Washington, D.C. Available URL: <http://www.fws.gov/endangered/consultations/s7hndbk/s7hndbk.htm> (accessed March 12, 2008).
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- U.S. Nuclear Regulatory Commission. 1996. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants. NUREG-1437, Volumes 1 and 2.* Washington, D.C.
- U.S. Nuclear Regulatory Commission. 1999. *Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Operating License Renewal. NUREG-1555, Supplement 1.* Washington, D.C.
- U.S. Nuclear Regulatory Commission. 2001. *NRC Regulations Handbook. NUREG/BR-0053, Revision 5.* Washington, D.C.
- U.S. Nuclear Regulatory Commission. 2003. *Delegation of Signature Authority. Office Instruction ADM-200.* Washington, D.C.
- U.S. Nuclear Regulatory Commission. 2005. *U.S. NRC Regulations Handbook. NUREG/BR-0053, Revision 6.* Washington, D.C.
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Appendix A - Change History**Office Instruction LIC-203****Table 1.** LIC-203 Change History

Date	Description of Changes	Method Used to Announce & Distribute	Training
06/21/2001	This OI is a conversion of OL-906. Changes to the guidance include minor clarifications offered by the NRR staff. No significant policy or procedural changes have been made to the guidance document	(1) E-mail to all staff (2) Copies to SES and licensing assistants	E-mail announcement with recommended self-study
05/24/2004	This is a revision of NRR Office Instruction LIC-203. Changes to the guidance include the clarification of NRR Responsibilities under the Fish and Wildlife Coordination Act. There is a policy change in fulfilling NRR responsibilities under the National Historic Preservation Act. The Commission is presently formulating its policy statement on Environmental Justice matters. When finalized, appropriate modifications to this OI will be considered. Other than these, no significant policy or procedural changes have been made to the guidance document.	E-mail to all staff	E-mail announcement with recommended self-study
02/11/2009	This document is the second revision of NRR Office Instruction LIC-203. This revision incorporates the final Commission policy on environmental justice; incorporates NRR responsibilities under the Magnuson-Stevens Fishery Conservation and Management Act; the Clean Air Act, and the Clean Water Act; clarifies NRR responsibilities under the Coastal Zone Management Act and the Fish and Wildlife Coordination Act; revises figures and tables; removes the environmental assessment templates to enable the templates to be kept by RERB as a living document; and amends the roles and responsibilities to reflect the current NRR office organization.	E-mail to all staff	E-mail announcement with recommended self-study

Appendix B

Content of NRR Environmental Assessments

This guidance is intended to provide assistance in developing an environmental assessment (EA). The reviewer may use the Environmental Assessment Procedural Flow Chart (Fig. 1) to aid in determining if the proposed action requires an EA, EIS, or meets the criteria for a categorical exclusion. EA sections are outlined below with a summary of the information that should be included in each section. The sections are as follows:

- identification of the proposed action;
- the need for the proposed action;
- the environmental impacts of the proposed action;
- the environmental impacts of alternatives to the proposed action;
- the alternative use of resources; and
- agencies and persons consulted.

The specific sections of the EA are differentiated below by the underscore.

Identification of the Proposed Action

This section briefly describes the proposed action, references the pertinent licensee application, and includes the date of the application.

The Need for the Proposed Action

A discussion of the need for the proposed action is required by 10 CFR 51.30(a)(1)(i). When writing this portion of the EA, the preparer should discuss the applicant's motivation for submitting the application to the NRC. For example, does the requested exemption or amendment provide some benefit to the applicant if granted? How would the applicant be affected if the application was not approved?

Environmental Impacts of the Proposed Action

The environmental impacts of the proposed action must be evaluated in accordance with 10 CFR 51.30(a)(1)(iii). This section should include an evaluation of both radiological and non-radiological impacts. Impacts can be direct, indirect, cumulative, long-term, and short-term.

The preparer should evaluate the following environmental resource areas below. It is important to understand that all environmental resources areas are not required to be discussed in detail in each EA. The preparer should focus the analysis and discussion on resources areas expected to be impacted.

- Radiological and Human Health: the preparer should briefly discuss the radiological impacts to members of the public and plant workers from any changes to routine and

accident radioactive sources (liquid and gaseous discharges, and direct radiation). The reviewer should ensure that any changes to the radiation doses comply with the NRC's radiation protection limits.

- Land Use: the preparer should evaluate any changes in land use including temporary or permanent construction and conversion of undisturbed or previously disturbed land. Note that this resource area may overlap with ecology, archaeological, and other resource areas, but may warrant a separate discussion depending on the type of modification that would occur as a result of the proposed action.
- Water Use: the preparer should evaluate any changes in water use including altered intake or discharge volume, altered temperature of discharged water, or any other change in use of surface or ground water that would result from the proposed action. The preparer should ensure that any changes to water use are within the limits set forth by the applicant's National Pollutant Discharge Elimination System (NPDES) permit, if applicable.
- Air Resources: the preparer should evaluate any changes to non-radiological air emissions, specifically carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide, which are regulated under the Clean Air Act (CAA). Refer to section 5.2.8 for a description of NRR's responsibilities under this Federal act.
- Ecology: the preparer should evaluate any changes to both the aquatic and terrestrial environment(s) including alterations in natural communities, changes in species composition, population dynamics, and other impacts that may result from the proposed action.
- Threatened, Endangered, and Protected Species and Essential Fish Habitat: the preparer should evaluate any impacts to threatened, endangered, and protected species under the Endangered Species Act and impacts to essential fish habitat under the Magnuson-Stevens Act. Refer to sections 5.2.4 and 5.2.7 for a description of NRR's responsibilities under these Federal acts.
- Historical and Cultural Resources: the preparer should evaluate any changes to historical and cultural resources under the National Historic Preservation Act (NHPA). Refer to section 5.2.5 for a description of NRR's responsibilities under this Federal act.
- Socioeconomics and Environmental Justice: the preparer should evaluate any impact to socioeconomic conditions of minority or low-income populations. Refer to section 5.2.2 for a description of NRR's responsibilities under the Executive Order for environmental justice and Appendix C for procedures for an environmental justice impact analysis.

The preparer should describe each resource that would be affected by the proposed licensing or rulemaking action and the significance of the relationship between the environmental resource and the change. For example, air (the environmental resource) would be affected by a release of particulate matter (the plant component) and the significance of the release would depend on the types and amounts of the emissions. In this case, the preparer would address the question, would the emission for the contaminant be above the regulatory limits or would it be a small fraction of the regulatory limits? This section should clearly state which resources are affected

by the proposed action. Likewise, it should clearly state no environmental resources are affected, if that is the case.

Although impacts may exist, they may not be significant, and impacts can be beneficial as well as adverse. However, an impact that is not significant does not equate to "no impact." Typical impacts may include, but are not limited to:

- Increased radiation dose to workers and/or members of the public
- Habitat destruction
- Degradation of water quality or water supply
- Increased air emissions
- Increased noise
- Degradation of wetlands, bogs, or other unique habitats
- Damage or reduced access to cultural resources
- Changes to local or regional socioeconomic conditions or population demographics
- Increased traffic or other transportation effect

If a FONSI is to be made, the impacts section should certify that the proposed action will not significantly increase the probability of accidents, will not increase any radioactive effluents or the resultant doses above regulatory limits, adversely affect any endangered or threatened species, or entail an NRC undertaking involving historic sites. Additionally, if the proposed action (typically a change in a plant component or a change in plant operation) does not affect any environmental resources, explain this in the section.

Environmental Impacts of the Alternatives to the Proposed Action

Alternatives to the proposed action must be evaluated in accordance with 10 CFR 51.30(a)(1)(ii) and (iii) and Section 102(2)(E) of NEPA. NEPA requires NRC to consider alternatives in the preparation of all EAs whenever the following two conditions are present: (1) An identifiable environmental impact from the proposed action exists and (2) an unresolved conflict of available resources exists. FONSI in an EA does not automatically exempt the preparer of the EA from considering alternatives. At a minimum, all EAs must include the no-action alternative. For those actions where impacts are not significant, it is reasonable to consider only a limited range of alternatives.

A non-significant impact does not equate to no impact; therefore, the NRC staff should consider all feasible alternatives. However, a finding of no environmental impact implies that there would be no use of natural resources associated with the proposed action. In those cases involving no environmental impact, the reviewer may reasonably limit the discussion of alternatives to consideration of the no-action alternative. If the "no-action" alternative is the only alternative examined, the alternatives section may contain the following, if applicable:

"As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no-action alternative"). Denial of the proposed action

would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar."

Alternative Use of Resources

Agencies must consider alternative courses of action if the proposed action involves an unresolved resource conflict in accordance with Section 102(2)(E) of NEPA. This section should include a description of how available resources, such as water, land, or other physical materials, will be used under the proposed action. This consideration will take place when the objective of the proposed action can be achieved in two or more ways that will have differing impacts on one or more natural resources even if a FONSI had been made.

Mitigation Measures (if applicable)

EAs should incorporate mitigation measures in the proposed action and alternatives, when appropriate. These mitigation measures may assist in a FONSI. The analysis should address the anticipated effectiveness of these mitigation measures in reducing impacts or enhancing beneficial impacts. Impacts need not be significant for mitigation measures to be considered. Any mitigation measures used to justify FONSIs should be tangible and specific. For example, mitigation measures that avoid, minimize, rectify, reduce over time, or compensate are tangible as opposed to measures that include activities such as further consultation, coordination, and study. Measures should include such things as design alternatives that would reduce emissions, construction impacts, land disturbances, aesthetic intrusion, etc. All relevant, reasonable mitigation measures that could improve the project should be identified, even if they are outside the jurisdiction of the NRC.

Agencies and Persons Consulted

A list of Federal and State agencies and persons consulted must be included in accordance with 10 CFR 51.30(a)(2). The preparer of the EA must consult with the affected State before the EA is issued to request comments on the environmental impact of the proposed action and any other comments the State may have. Although consultation with the State is not required under 10 CFR 50.91, it is required by NEPA. This requirement may be met by sending a copy of the incoming licensing action request to the State. If the State has comments, the preparer should resolve and document the comments in the EA. In general, if the action is a rulemaking activity, the draft EA should be sent with a cover letter and a copy of the Federal Register notice (FRN) for the proposed rule to the State in order to request comments. The State should receive the EA with attachments after the FRN for the proposed rule is signed by the Secretary to the Commission or the Executive Director for Operations (EDO) and before the FRN is published. In addition to contacting the State, the person preparing the EA is responsible for ensuring that other appropriate agencies are contacted if an action may involve some impact on the natural or physical environment for both licensing actions and rulemaking activities. The consultation must be documented in a brief summary in the EA and should contain (1) the name of the agency or person contacted (consulted with), (2) the date and purpose of the consultation, (3) a brief summary of the views or comments expressed and the staff's resolution, and (4) references to publicly available documents containing additional information, as applicable.

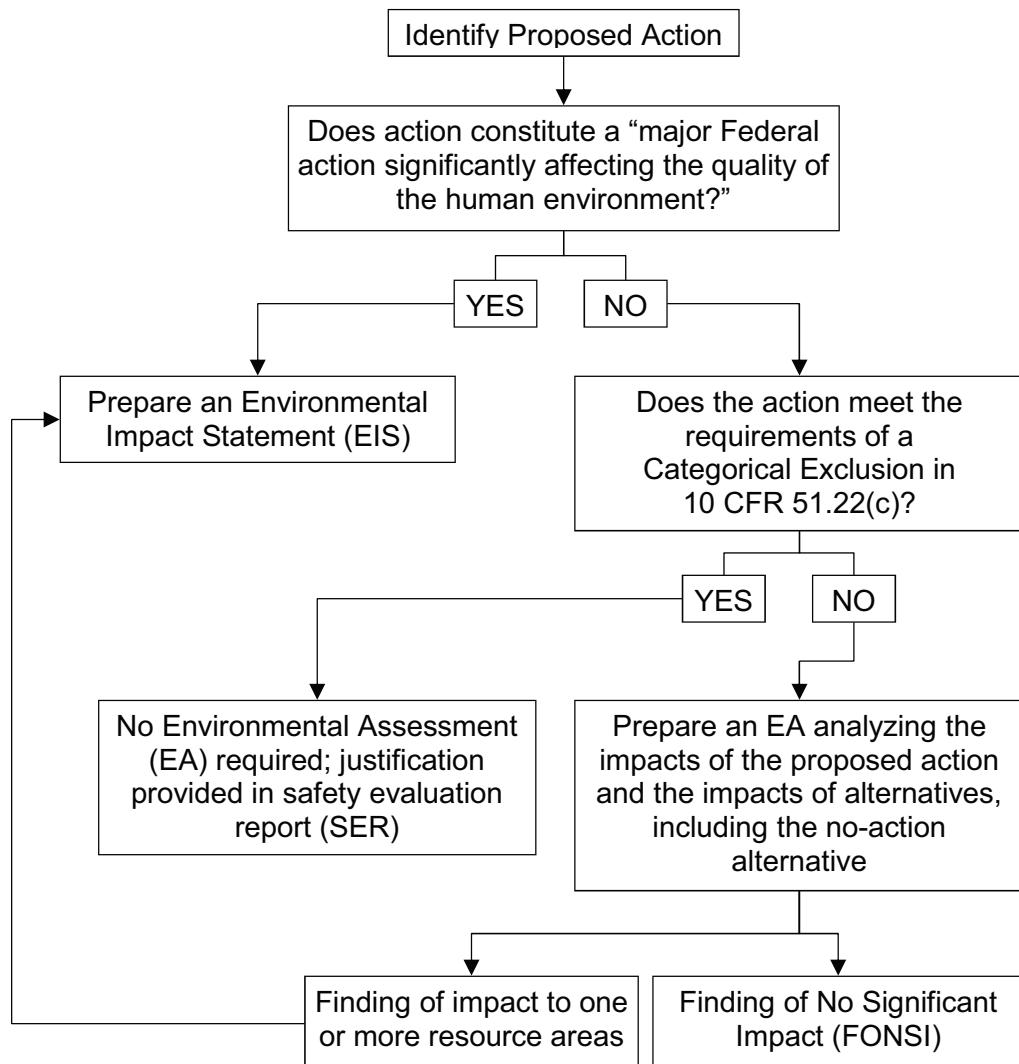
The person preparing the EA should briefly describe why the consultation was initiated. For example, if the National Marine Fisheries Service was contacted to discuss a specific issue involving short-nosed sturgeon, the summary could be worded as follows:

"The National Marine Fisheries Service was contacted on [insert date], to discuss and evaluate the ability of the short-nosed sturgeon to avoid capture after the proposed modification of river water intake."

If the consultation was made to meet strictly a programmatic requirement and not a specific issue, the consultation with the State could be summarized as follows:

"In accordance with its stated policy, on [insert date], the staff consulted with the [insert name of State] State official, [insert name of official] of the [insert name of agency], regarding the environmental impact of the proposed action. The State official had [the following comments/no comments]."

If comments are received from the State or agency, the comments should be summarized in the EA. If extensive comments are received, the person preparing the EA should summarize the details of the issues and the resolution of the comments in the EA or place them in a separate document and reference them in the EA. Resolution of the comments should be placed in the NRC Document Room (PDR) and the Agencywide Document Access and Management System (ADAMS) Public Electronic Reading Room to ensure public access.

Figure 1. Flow Chart for Determining Scope of an Environmental Review

Appendix C

Environmental Justice in NRR NEPA Documents

BACKGROUND

On February 11, 1994, the President signed Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," which directs all Federal agencies to develop strategies for considering environmental justice in their programs, policies, and activities. Environmental justice is described in the Executive Order as "identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." On December 10, 1997, the Council on Environmental Quality (CEQ) issued, "Environmental Justice Guidance Under the National Environmental Policy Act." The Council developed this guidance to, "further assist Federal agencies with their National Environmental Policy Act (NEPA) procedures." As an independent agency, CEQ's guidance is not binding on the NRC; however, the NRC considered CEQ's guidance on environmental justice in this procedure.

CEQ provides the following information in *Environmental Justice: Guidance Under the National Environmental Policy Act* (1997):

Disproportionately High and Adverse Human Health Effects. Adverse health effects are measured in risks and rates that could result in latent cancer fatalities, as well as other fatal or nonfatal adverse impacts on human health. Adverse health effects may include bodily impairment, infirmity, illness, or death. Disproportionately high and adverse human health effects occur when the risk or rate of exposure to an environmental hazard for a minority or low-income population is significant (as defined by NEPA) and appreciably exceeds the risk or exposure rate for the general population or for another appropriate comparison group (CEQ 1997).

Disproportionately High and Adverse Environmental Effects. A disproportionately high environmental impact that is significant (as defined by NEPA) refers to an impact or risk of an impact on the natural or physical environment in a low-income or minority community that appreciably exceeds the environmental impact on the larger community. Such effects may include ecological, cultural, human health, economic, or social impacts. An adverse environmental impact is an impact that is determined to be both harmful and significant (as defined by NEPA). In assessing cultural and aesthetic environmental impacts, impacts that uniquely affect geographically dislocated or dispersed minority or low-income populations or American Indian tribes are considered (CEQ 1997).

On August 24, 2004, the Commission issued a *Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions* (69 FR 52040), which states, "the Commission is committed to the general goals set forth in E.O. 12898, and strives to meet those goals as part of its NEPA review process." The following guidance is consistent with this policy statement.

SCOPE OF ENVIRONMENTAL JUSTICE FOR NRR REVIEWS

This procedure provides guidance to the Office of Nuclear Reactor Regulation (NRR) staff on conducting environmental justice reviews for proposed actions requiring an environmental impact statement (EIS), and in special cases an environmental assessment (EA), as part of NRC's compliance with NEPA. This guidance does not create any new substantive or

procedural NEPA-related requirements, as consideration of environmental justice is consistent with the purposes and policies of NEPA. This guidance is intended to ensure that NRR is fully discharging its existing NEPA responsibilities.

Environmental justice reviews will be performed for all regulatory actions requiring the preparation of an EIS, which may include licensing actions and rulemaking activities. An EIS is required for licensing and regulatory actions that are “major Federal actions significantly affecting the quality of the human environment” or actions that involve a matter which the Commission has determined should be evaluated in an EIS. A list of the types of actions requiring an EIS is found in 10 CFR 51.20(b).

Environmental justice impacts should be considered when preparing EAs to ensure that minority and low-income populations would not be disproportionately affected by the proposed action. If disproportionately high and adverse human health and environmental impacts are identified, then a Finding of No Significant Impact (FONSI) determination cannot be made. However, disproportionately high and adverse human health and environmental effects on minority and low-income populations are not expected to occur for most licensing actions requiring an EA.

If it is determined that a particular action will have no significant environmental impact, then there is no need to consider whether the action will have disproportionately high and adverse impacts on minority and low-income populations. Similarly, the staff should not request public comments on environmental justice issues when a FONSI is concluded.

Environmental justice reviews could identify environmental impacts on minority and low-income populations that would otherwise not be identified. Environmental justice issues and potential impacts on minority and low-income populations may be identified through public interest in the proposed action, knowledge learned about minority and low-income groups that may be affected, or in determining the nature of the impacts. In these instances, the Environmental Review Branch (RERB), Division of License Renewal (DLR), which is responsible for environmental reviews, should be notified for assistance. RERB concurs on all EAs issued by NRR and will notify management if it appears that an environmental justice review is warranted. NRR management will then make a decision on a case-by-case basis whether the circumstances are such that minority and low-income populations may be affected and an environmental justice review should be performed for the action.

The level of discussion on environmental justice will vary based on the circumstances of each action. The actual determination of impacts will not change, but the evaluation and analysis may be expanded. Each EIS and EA should contain a section that fully describes the environmental justice review process. An environmental justice review is not required for those actions listed in 10 CFR 51.22 as being categorically excluded from environmental review.

GENERAL PRINCIPLES OF ENVIRONMENTAL JUSTICE

Environmental justice issues encompass a broad range of impacts normally covered by NEPA. The staff should be sensitive to the fact that environmental justice issues may arise at any time during the NEPA process.

The staff should consider the demographic composition of the affected area to determine the location of minority and low-income populations and whether they may be affected by the proposed action. The staff then needs to determine if human health or environmental impacts would have a disproportionately high and adverse effect on minority or low-income populations.

The staff should develop an effective public participation strategy to include minority and low-income communities in the NEPA process. The staff should acknowledge and seek to overcome linguistic, cultural, institutional, geographic, and other barriers to meaningful participation and should incorporate active outreach to affected minority and low-income communities.

The staff should strive for meaningful minority and low-income community representation in the NEPA process. The staff should be aware of the diverse constituencies within any community and should endeavor to have complete representation of the community as a whole. The staff should be aware that community participation must occur as early as possible if it is to be meaningful.

The staff should also seek Tribal representation in the NEPA process in a manner that is consistent with government-to-government relations.

The staff should consider relevant public health data and industry data concerning the potential for multiple or cumulative exposure to human health or environmental hazards in the affected minority and low-income populations and historical patterns of exposure to environmental hazards, to the extent such information is reasonably available.

The staff should recognize the interrelated cultural, social, occupational, historical, or economic factors that could amplify the natural and physical environmental effects of the proposed action on minority and low-income populations. These factors should include the sensitivity of the minority and low-income community or population to particular impacts; the effect of any disruption on the community structure associated with the proposed action; and the nature and degree of impact on the physical and social structure of the community.

The review is forward looking and should focus on the agency action being taken. For example, if the action is a license amendment, only the activities covered by the amendment and not the overall impact from the issuance of the original license should be reviewed even if an environmental justice review was not performed for the original action.

Under NEPA, the identification of a disproportionately high and adverse human health or environmental effect on a minority or low-income population does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory. Rather, the identification of such an effect should heighten agency attention to alternatives (including alternative sites), mitigation strategies, monitoring needs, and preferences expressed by the affected community or population.

PROCEDURES FOR LICENSING ACTIONS

The following guidance should be used when performing an environmental justice review. This procedure may not address all situations that may occur. Project managers should consult with RERB whenever an environmental justice review is undertaken. See Fig. 2 on page C-11 for an environmental justice process flow chart.

1. Determine if the action requires an environmental justice review.

Determine whether the regulatory action will be supported by an EIS or EA. When the regulatory action requires the preparation of an EIS, an environmental justice review must be conducted, as discussed below.

Under most circumstances, no environmental justice review is required when an EA is prepared. However, in special cases, the staff will conduct an environmental justice analysis in preparing an EA. As discussed in the scope section above, such a determination will be made on a case-by-case basis and only when there is a clear potential that the consideration of specific demographic information may identify minority and low-income populations that could be significantly affected by the proposed action that would not otherwise be considered. In the event that an environmental justice analysis is performed for an EA, the process outlined in steps 2 through 5, below, should be used as guidance.

2. Locating and identifying minority and low-income populations and integrating environmental justice into the scoping process.

Early on in the NEPA process (before or at the beginning of scoping), the staff should attempt to identify the location of minority and low-income populations in the potentially affected area, usually within a 50-mile (80-kilometer) radius. The staff should also develop a strategy for involving potentially affected minority and low-income populations and communities in NRC's scoping process.

The following steps can be utilized to assist with locating and identifying minority and low-income populations at the beginning of the NEPA review (before or at the beginning of scoping). These steps can be used to help determine whether there would be any disproportionately high and adverse human health or environmental effect on minority and low-income populations.

A. Determine geographic area for comparison.

In determining the location of minority or low-income populations, the geographic area within a 50-mile radius is typically large enough to encompass the entire area of potential impact or all of the environmental impact areas where the staff can perform its comparative analysis. This 50-mile radius (centered on the nuclear plant) is consistent with the impact analysis done for human health impacts.

If the impact area overlaps more than one government jurisdiction (State, county, etc.), then the staff should define the geographic area to encompass parts of each government jurisdiction; such a defined geographic area does not have to stop at established boundaries such as county or State lines.

B. Determine the composition of minority and low-income populations in the geographic area.

Determine the percentage of the total population within the geographic area (50-mile radius) for the aggregate minority and low-income populations. Geographic distribution by race, ethnicity, and poverty, as well as delineation of tribal lands and resources, should be examined.

The first step in evaluating environmental justice potential is to obtain the most recent 10-year demographic data (census data) for the 50-mile radius and surrounding communities. In the case of license renewal, the applicant's environmental report usually lists the affected counties in the 50-mile radius. The demographic data should consist of information on race and ethnicity and poverty information.

In calculating the aggregate minority population, individual(s) who are members of the following population groups listed in the 2000 Census are considered minority individuals.

Race: (Not Hispanic or Latino):

- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian and Other Pacific Islander
- Some other race (not mentioned above)
- Two or more races (i.e., multiracial)

Ethnicity

- Hispanic or Latino (of any race)

(for race, Not Hispanic or Latino, and Hispanic or Latino ethnicity data see Census Summary File 1 (SF-1) Table P4)

The 2000 Census allowed individuals the option of identifying themselves in one or more race categories thereby creating the multiracial census category of "two or more races." They are generally counted as part of the minority group they identified with in the census.

Low-income population is defined as individuals or families living below the poverty level as defined by the U.S. Census Bureau (e.g., the U.S. Census Bureau's Current Population Reports, Series P-60 on Income and Poverty). For individual and family poverty data see Census Summary File 3 (SF-3) P87 tables for individuals and SF-3 P90 tables for families.

The geographic scale should be commensurate with the potential impact area, and should include a sample of the surrounding population, e.g., at least several block groups. The goal is to evaluate the "communities," neighborhoods, or areas that may be disproportionately impacted. One source of the census data is the LandView computer software offered by the U.S. Census Bureau, U.S. Department of Commerce Economics and Statistics Administration. This software is updated after each 10-year census. Other sources of demographic information include the applicant, local governments, State agencies, or local universities. It is recommended that 10-year census data (i.e., 1990, 2000, etc.) on minority and poverty should be used. Subsequent year census data are based on estimated projections and small sample sizes. The reviewer should use the best available State information. Minority and low-income population demographic data can be presented for counties or States in tables in the EIS or EA.

C. Determine the location of minority and low-income population in the impact area.

The next step is to compare the total percent of minority and low-income populations in the geographic area to the percent of minority and low-income populations in "census block groups" to determine the location of these populations.

The recommended geographic area for determining the location of minority and low-income populations is the "census block group," which is the smallest geographical unit for which the U.S. Census Bureau publishes sample data. The census block group was chosen because it contains information on income and poverty that is not collected for

the smaller “census block,” but at the same time, it is not as large as the “census tract,” which are too large for an adequate location and identification of minority or low income communities. A minority or low-income community may be considered as either a population of individuals living in geographic proximity to one another or a dispersed/transient population of individuals (e.g., migrant workers) where either type of group experiences common conditions of environmental exposure.

“Minority and low-income populations” are identified when (1) the minority population of an impacted area exceeds 50 percent or (2) the minority population percentage of the impacted area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (e.g., 50-mile radius geographic area or county). All block groups with minority and low-income percentages higher than the geographic area should be identified on 50-mile radius maps.

It is possible that the geographic area could cross county and State lines and this should be considered when making comparisons. If it is determined that the percentage in the block groups significantly exceeds the geographic area percentage for either minority or low-income population, then the environmental justice impacts should be considered in greater detail. In general (and where appropriate), the staff may consider differences greater than 20 percentage points to be significant. Additionally, if either the minority or low-income population percentage exceeds 50 percent, the environmental justice impacts should be considered in greater detail.

The criteria listed above should only serve as a guideline for determining the presence of a minority or low-income populations because demographic data may overlook low-income and minority populations if they constitute a relatively small percentage of the total population in the block group. Therefore, the staff should seek to supplement the environmental justice analysis with any relevant additional information during the environmental scoping process to identify such low-income or minority populations. If it is apparent through interviews, public comment/interest, by investigation, or by other scoping activities, that there is a distinct minority or low-income population or community that may be adversely affected by the proposed action, then the staff reviewer should proceed with the environmental justice review even if that population was not identified through the use of demographic data.

If no minorities or low-income populations are identified in the geographic area or environmental impact area, then such conclusion should be documented and the environmental justice review is complete.

Consistent with scoping activities conducted under NEPA, the staff may consider measures for increasing participation of minority and low-income groups such as outreach through minority business and trade organizations, schools, colleges, labor organizations, or other appropriate organizations. Meetings open to the public should be advertised through locally-targeted media, mailings, and the internet. Other means of advertising include posting of flyers in local shopping, community, government and other public places. If representatives of the affected group(s) are identified, these individuals should be included on the mailing list for the review. When communicating with the public, the staff should consider innovative approaches to overcoming linguistic, institutional, cultural, economic, historical, or other potential barriers to effective participation in the decision-making process. During the scoping process the staff should supplement the census data with inquiries of the local planning departments, social

service agencies, and other local offices to identify minority or low-income groups that may not be identified through the census data.

If no minority or low-income groups are found during scoping or later on in the review, then the results should be documented and the environmental justice review is complete.

3. *Determine whether there are human health and environmental impacts or environmental justice concerns on minority or low-income populations.*

Potential human health and environmental impacts are determined through the normal NEPA process during the development of the EIS or EA, including indirect and cumulative impacts, where appropriate. The impacts should be evaluated to determine which impacts may affect (or cause concern to) minority and low-income populations. Once it is determined that an action could affect and/or cause environmental justice concerns for minority and low-income populations located near the plant site, it is then necessary to determine whether the impact(s) could have a "disproportionately high and adverse" effect on these populations.

Impacts that could potentially affect or cause concern to minority and low-income populations should be summarized in the environmental justice section of the EIS (or EA if analyzed). The discussion should address the potential effect(s) on these populations. It is not necessary to discuss the technical aspects of the impact(s) at the same level of detail as other environmental consequences sections. It is acceptable to briefly describe the human health or environmental impact, its potential effect on minority and low-income populations, and reference the appropriate section for a more detailed technical discussion of the impact.

In considering human health and environmental impacts to minority and low-income populations, different patterns of consumption of natural resources should also be considered (i.e., differences in rates and/or pattern of fish, vegetable, water, and/or wildlife consumption among groups defined by demographic factors such as socioeconomic status, race, ethnicity, and/or cultural attributes). Section 4-4 of Executive Order 12898 (Environmental Justice) directs Federal agencies, whenever practical and appropriate, to collect and analyze information on the consumption patterns of populations who rely principally on fish and/or wildlife for subsistence and to communicate the risks of these consumption patterns to the public. NRR staff should consider whether there are any means for minority or low-income populations to be disproportionately affected by examining potential impacts to American Indian, Hispanic, and other traditional lifestyle special pathway receptors. Special pathways that take into account the levels of contaminants in native vegetation, crops, soils and sediments, surface water, fish, and game animals on or near nuclear plant sites should be considered.

Each nuclear plant has a comprehensive Radiological Environmental Monitoring Program (REMP) that assesses the radiological impact of site operations on the environment. Radiological monitoring indicator and control samples are collected from the aquatic and terrestrial pathways applicable to each plant site. The aquatic pathways include fish, surface waters, and sediment. The terrestrial pathways include airborne particulates and radioiodine, milk, leafy vegetation, food products, soil, and direct radiation. It is recommended that NRR staff review the most recent *Annual Radiological Environmental Operating Report* from the plant for sampling information used to measure the direct radiation and the airborne and waterborne pathway activity in the vicinity of the nuclear plant site. Many State agencies and a few independent organizations conduct their own radiological monitoring programs separate from or in conjunction with the REMP at nuclear plants. Reports and studies conducted by these agencies and organizations should also be considered.

NRR staff should also focus the environmental justice review on human health or environmental impacts that are known to be significant or perceived as significant by minority and low-income groups and/or individuals. The severity of environmental impacts or concerns usually varies inversely with the distance from the nuclear plant; therefore, the review should be focused on areas closer to the plant site.

4. *Determine whether there are disproportionately high and adverse human health or environmental effects on minority and low-income populations.*

NRR staff first needs to assess if impact(s) would disproportionately affect minority or low-income populations. In other words:

- Would the impact(s) be greater for minority and low-income populations than the general population?
- Are there any unique effects experienced by minority and low-income populations that would not be experienced by the general population?

As discussed in the previous section, NRR staff should recognize that the impacts to minority or low-income populations may be different from impacts on the general population due to a community's distinct cultural practices. In addition, staff should take into account different patterns of living and consumption of natural resources, such as subsistence consumption.

To effectively visualize potential disproportionate impacts, it may be helpful to display the location of minority and low-income populations on 50-mile radius maps. In cases where minority and low-income populations are located next to or in close proximity to the plant site, the impact(s) could disproportionately affect these populations more than the general population. For instance, potential exposure to effluents and emissions may have a greater effect on minority and low-income populations living closest to the nuclear plant. Noise and traffic may disrupt these populations to a greater extent than the general population and those living far from the plant site. In addition, the potential risks associated with accidents may have a disproportionate affect on minority and low-income populations living closest to the plant.

If there are no disproportionate impacts, no further analysis is needed. The reviewer should document the finding in the environmental justice section.

After identifying human health and environmental impacts that could disproportionately affect minority and low-income populations, it is necessary to determine if the effect(s) would be high and adverse. Another way of stating this: Would the effect(s) on minority and low-income populations be significant, unacceptable or above generally accepted norms such as regulatory limits or State and local statutes and ordinances? Each human health and environmental impact, and where appropriate, the cumulative and multiple effects of the impact(s), should be reviewed for significance.

If the determination can be made that human health and environmental impact(s) and/or combination of impacts would not be high and adverse, then there would be no disproportionately high and adverse human health and environmental impact(s) on the minority or low-income populations. The reviewer needs to document this conclusion in the environmental justice section.

If there are disproportionately high and adverse impacts on minority and low-income populations, it is then necessary to consider mitigation measures that could be taken to reduce the impact(s). To the extent practicable, mitigation measures should reflect the needs and

preferences of the affected minority and low-income populations and communities. The conclusion may remain that there are disproportionately high and adverse impacts to minority and low-income populations; however, factors such as mitigation measures may outweigh the disproportionate impacts. In any case, the facts should be presented so that the ultimate decision-maker can weigh all aspects in making the agency decision. The Executive Order does not prohibit taking an action where there are disproportionate high and adverse impacts to minority or low-income populations.

5. *Make a determination regarding impacts to minority and low-income populations and document the conclusion.*

The results of an environmental justice review should be documented in the EIS (or in special cases, EA). An EA will only have an environmental justice section in the rare situation where a review was performed as a result of an NRR management decision. NRR staff should clearly state the conclusion regarding whether or not the proposed action and any alternatives would have disproportionately high and adverse environmental impacts on minority and low-income populations. This statement should be supported by sufficient information to allow the public to understand the rationale for the conclusion, and should be written in concise non-technical plain language that minimizes the use of acronyms or jargon.

The document should contain a section titled "Environmental Justice" even if the demographics do not indicate a potential for an environmental justice concern. If a plant site has already received an environmental justice evaluation, it is acceptable to reference the previous evaluation and provide a summary of the findings and then add any new information that results from the proposed action. For instance, if environmental justice is included in a license renewal, it would not need to be completely readdressed for a license amendment. If a reference to another document is used, a summary of the review and its conclusions should be included in the environmental justice section.

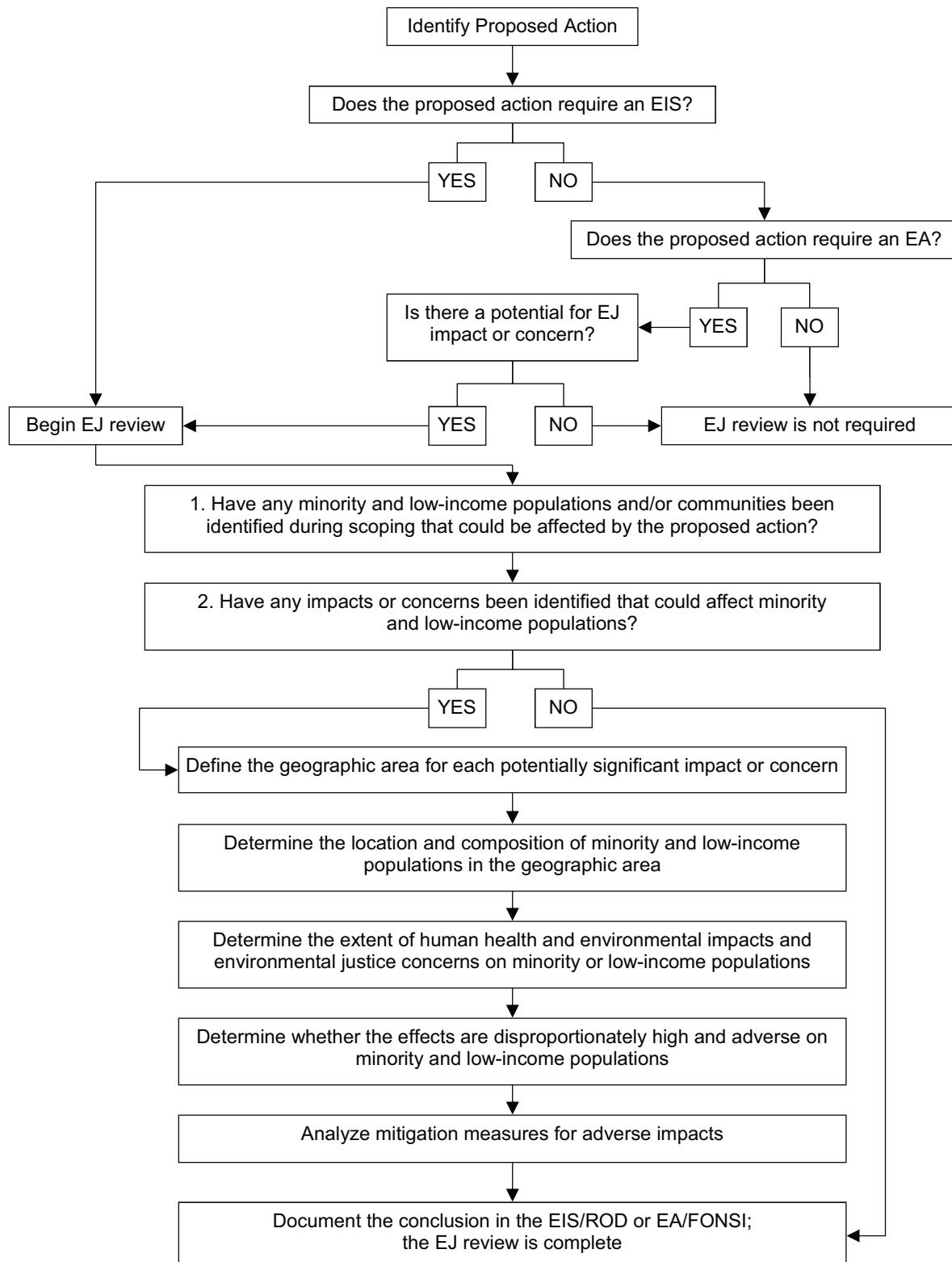
Following an EIS or EA, the NRC announces its decision in a Record of Decision (ROD) or a FONSI. (For NRC, the ROD is the issuance of the license or license amendment.) For an EIS or special case or circumstance EA, the ROD or FONSI should document the conclusion of the findings on environmental justice, including any mitigation measures that would be taken to reduce the impact.

PROCEDURES FOR RULEMAKING ACTIVITIES

1. The staff responsible for rulemaking should address environmental justice in the preamble to any proposed and final rules that require an EIS, a supplement to an EIS, or generic EIS.
2. If it is known in advance that a particular rulemaking might disproportionately affect a specific minority and low-income population or community, the NRC staff should ensure that the population and/or community knows about the rulemaking and are given the opportunity to participate. Such actions may include translating the Federal Register Notice (FRN) into a language other than English for publication in a local newspaper and holding public outreach meetings in the potentially affected community.
3. As noted in the "Scope" section, there may be special circumstances under which a rulemaking that has an EA/FONSI prepared may identify special environmental effects on minority and low-income populations that would not otherwise have been identified. In these cases, the staff will inform NRR senior management and a decision will be

made on a case-by-case basis whether the circumstances warrant an environmental justice review.

4. If an environmental justice analysis is performed for a rulemaking activity, then the staff should include language contained in the NRC Regulations Handbook, NUREG/BR-0053, Revision 6, Section 5.15 and Section 7.15 in the FRN to seek and welcome public comments on environmental justice. The staff should follow the "Procedures for Licensing Actions," steps 2-5 above, to perform the environmental justice review.
5. Public comments on environmental justice issues should be addressed in the preamble to the final rule when published in the Federal Register. Environmental justice comments should be addressed at the same level of detail and in the same location as comments received on other parts of the rule.

Figure 2. Environmental Justice Review Flow Chart

Appendix D

State Coastal Zone Descriptions and CZMA Consistency Certification Process Flow Chart

Table 2. Description of coastal zones for States and territories with Federally approved coastal management programs^a

State	Description of State's Coastal Zone
Alabama	Extends inland to the continuous 10-foot elevation contour in Baldwin and Mobile Counties.
Alaska	Based on three zones with biophysical relationships: (1) zone of direct interaction (the area where physical and biological processes are a direct function of contact between land and sea); (2) the zone of direct influence the area closely affected and influenced by the close proximity of land and sea; and (3) the zone of indirect influence (the area beyond the zone of indirect influence to the limit of identifiable land/sea interaction). Local coastal programs may establish more specific boundaries.
American Samoa	Consists of the entire Territory.
California and BCDC	Extends 1,000 yards inland from the mean high tide line. In significant coastal estuarine habitat and recreational areas, it extends inland to the first major ridgeline or 5 miles from the mean high tide line, whichever is less. In developed urban areas, the boundary is generally less than 1,000 yards. The coastal zone for the San Francisco Bay Conservation and Development Commission (BCDC) includes the open water, marshes and mudflats of greater San Francisco Bay, and areas 100 feet inland from the line of highest tidal action. The boundary also includes: the Suisun marsh and buffer zone: managed wetlands diked off from the Bay; and open waters diked off from the Bay and used in salt production.
Connecticut	has two tiers incorporated within the 36 coastal townships. The first tier is bounded by a continuous line delineated by a 1,000 foot linear setback measured from the mean high water mark in coastal waters; or a 1,000 foot linear setback measured from the inland boundary of State regulated tidal wetlands; or the continuous interior contour elevation of the one hundred year frequency coastal flood zone; whichever is farthest inland. The second tier is the area between the inland boundary of the 36 coastal communities and the inland boundary of the first tier.
Delaware	Consists of the entire State.
Florida	Consists of the entire State, but has two tiers. Local governments eligible to receive coastal management funds are limited to those Gulf and Atlantic coastal cities and counties which include or are contiguous to State water bodies where marine species of vegetation constitute the dominant plant community. Florida's seaward boundary in the Gulf of

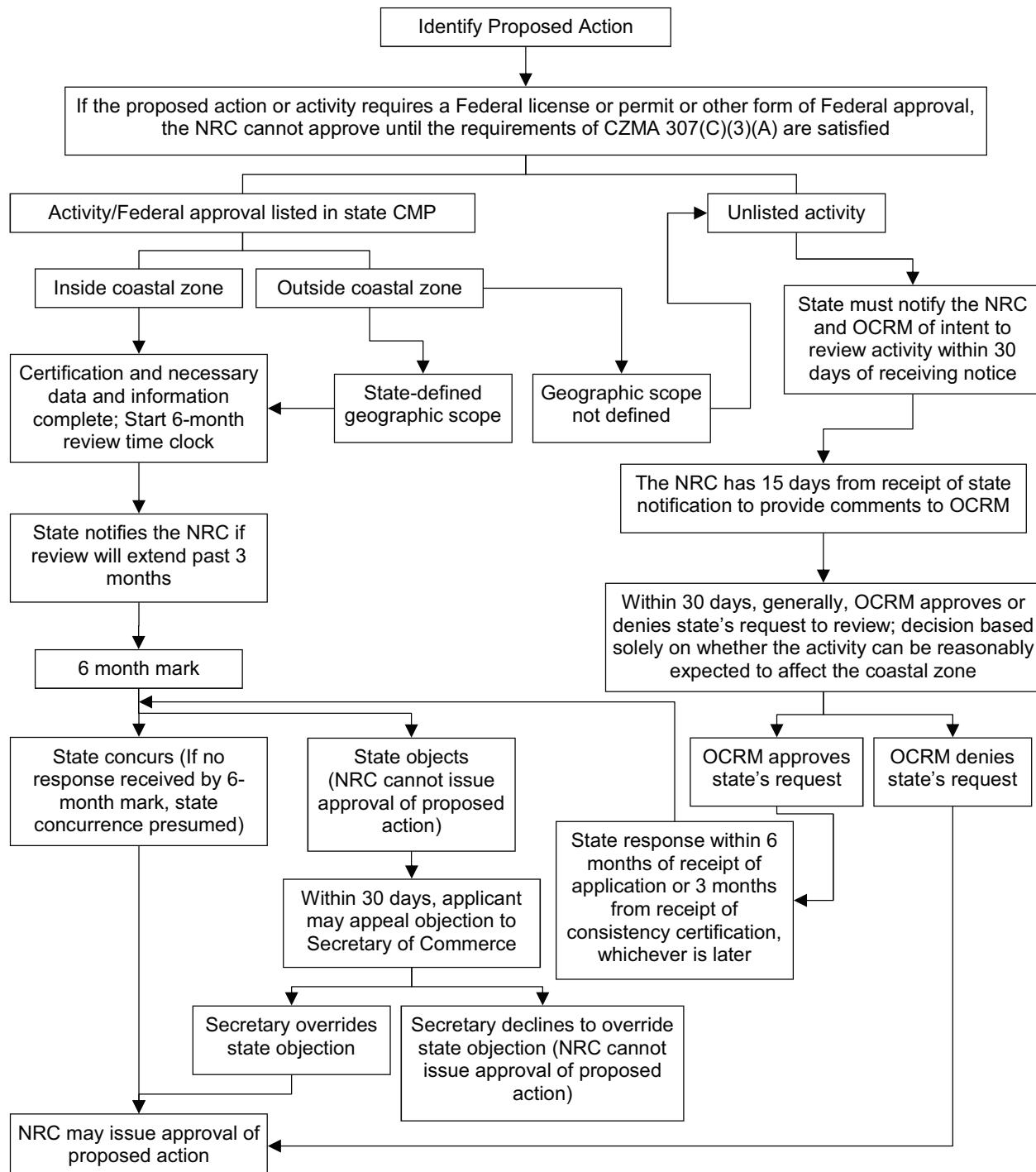
	Mexico is 3 marine leagues (9 nautical miles) and is 3 nautical miles in the Atlantic.
Georgia	Includes the 11 counties that border tidally-influenced waters or have economies that are closely tied to coastal resources.
Guam	Consists of the entire Territory.
Hawaii	Consists of the entire State.
Indiana	Based on watershed boundaries within coastal townships and the counties of Lake, Porter and LaPorte. To create an inland boundary that is identifiable in practical landmarks, the coastal zone boundary is described based on the U.S. Geological Survey Quadrangle maps and major roads for each county. The coastal zone boundary is located in the northern portions of Lake, Porter, and LaPorte Counties. At its widest extent, the boundary extends away from the shoreline 17 miles to the Crown Point area and at its narrowest point, less than 2 miles, just north of Hudson Lake in LaPorte County.
Louisiana	Varies from 16 to 32 miles inland from the Gulf coast and generally follows the Intracoastal Waterway running from the Texas-Louisiana State line then follows highways through Vermilion, Iberia, and St. Mary parishes, then dipping southward following the natural ridges below Houma, then turning northward to take in Lake Pontchartrain and ending at the Mississippi-Louisiana border.
Maine	Includes the inland line of coastal towns on tidewaters and all islands.
Maryland	Extends to the inland boundary of the 16 counties bordering the Atlantic Ocean, the Chesapeake Bay, and the Potomac River (as far as the municipal limits of Washington, D.C), and includes Baltimore City and all local jurisdictions within the counties.
Massachusetts	Extends 100 feet inland of specified major roads, RR tracks, or other visible right of ways which are located within a half mile of coastal waters or salt marshes. The coastal zone includes all islands, transitional and intertidal areas, and coastal wetlands and beaches. In instances where the road boundary excludes significant resource areas, the boundary line may depart from the road to encompass.
Michigan	Extends a minimum of 1,000 feet from the ordinary high water mark. The boundary extends further inland in some locations to encompass coastal lakes, rivermouths, and bays; floodplains; wetlands; dune areas; urban areas; and public park, recreation , and natural areas.
Minnesota	Divided into three areas. The first includes the area of the St. Louis River in Carlton County, south of Duluth. The second is the city of Duluth and surrounding areas of urban growth and expansion to the north and west. The third is the region between the Duluth city limits north to the Canadian border, also known as the "North Shore," which includes

	portions of St. Louis, Lake, and Cook Counties.
Mississippi	Includes the 3 counties adjacent to the coast. The coastal zone includes these counties, as well as all adjacent coastal waters. Included in this definition are the barrier islands of the coast.
New Hampshire	Consists of the 17 coastal municipalities.
New Jersey	Consists of four distinct regions of the State, which are treated separately. From the New York border to the Raritan Bay, the boundary extends landward from mean high water to the first road or property line. From the Raritan Bay south along the Atlantic shoreline and up to the Delaware Memorial Bridge, the boundary extends from half a mile to 24 miles inland (1,376 square miles of land area). From the Delaware Memorial Bridge northward up the Delaware River to Trenton, the boundary extends landward to the first road inclusive of all wetlands. The fourth boundary serves a 31-mile square area in the northeast corner of the State bordering the Hudson river (New Jersey Meadowlands Commission).
New York	Varies from region to region while incorporating the following conditions: The inland boundary is approximately 1,000 feet from the shoreline of the mainland. In urbanized and developed coastal locations the landward boundary is approximately 500 feet from the mainland's shoreline, or less than 500 feet where a roadway or railroad line runs parallel to the shoreline at a distance of under 500 feet and defines the boundary. In locations where major State-owned lands and facilities or electric power generating facilities abut the shoreline, the boundary extends inland to include them. In some areas, such as Long Island Sound and the Hudson River Valley, the boundary may extend inland up to 10,000 feet to encompass significant coastal resources, such as areas of exceptional scenic value, agricultural or recreational lands, and major tributaries and headlands.
North Carolina	Includes the 20 counties that in whole or in part are adjacent to, adjoining, intersected by or bounded by the Atlantic Ocean or any coastal sound(s). Within this boundary, there are two tiers. The first tier is comprised of Areas of Environmental Concern (AEC) and is subject to more thorough regulatory controls. AECs include: coastal wetlands, estuarine waters, public trust areas, estuarine shorelines, ocean beaches, frontal dunes, ocean erosion areas, inlet lands, small surface water supply watersheds, public water supply wellfields, and fragile natural resource areas. The second tier includes land uses which have potential to affect coastal waters even though they are not located in AECs.
Northern Mariana Islands	Consists of the entire Commonwealth.
Ohio	Includes portions of 9 counties bordering Lake Erie and its

	tributaries and varies depending on biophysical characteristics of various coastal regions - in the western part of the coast the boundary extends inland up to 15 miles along certain low lying wetland and floodplain areas; in most of the eastern part of the State, areas with high bluffs, the boundary extends inland for only about an eighth of a mile, with the exception of the Mentor Marsh area.
Oregon	Extends inland to the crest of the coastal range, except for the following: along the Umpqua River, where it extends upstream to Scottsburg; along the Rogue River, where it extends upstream to Agness; and except in the Columbia River Basin, where it extends upstream to the downstream end of Puget Island.
Pennsylvania	Varies along Lake Erie from 900 feet in urban areas to over 3 miles in more rural areas, and encompasses the floodplains of Lake Erie and tributary streams, bluff hazards recession areas, and coastal wetlands. The coastal zone along the Delaware River Estuary extends inland to 660 feet in urbanized areas, to 3.5 miles in rural areas, and includes floodplains of the Delaware and Schuykill Rivers and their tributaries to the upper limit of tidal influence, and tidal and freshwater wetlands.
Puerto Rico	Extends 1,000 meters inland; however, it extends further inland in certain areas to include important coastal resources. Puerto Rico's seaward boundary is 3 marine leagues (9 nautical miles).
Rhode Island	Consists of the entire State. However, the inland extent of the regulatory authority of the State's CZMA agency is 200 feet inland from any coastal feature, to watersheds, and to certain activities that occur anywhere within the State that include: power-generating plants; petroleum storage facilities; chemical or petroleum processing; minerals extraction; sewage treatment and disposal plants; solid waste disposal facilities; and, desalination plants.
South Carolina	Includes all lands and waters in the counties which contain any one or more of the critical areas (coastal waters, tidelands, beaches, and primary oceanfront sand dunes).
Texas	Consists of the area seaward of the Texas coastal facility designation line which roughly follows roads that are parallel to coastal waters and wetlands generally within one mile of tidal rivers. The boundary encompasses all or portions of 18 coastal counties. Texas= seaward boundary is 3 marine leagues (9 nautical miles).
Virginia	Includes the 29 counties, 17 cities, and 42 incorporated towns of Tidewater Virginia, including the Atlantic Coast watershed and portions of the Chesapeake Bay and Albemarle-Pamlico Sound watersheds.
Virgin Islands	Consists of the entire Territory.
Washington	Consists of the 15 coastal counties that front saltwater.

Wisconsin	Consists of the 15 counties that front Lake Superior, Lake Michigan, or Green Bay.
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^aTable adapted from “State Coastal Zone Boundaries” published by NOAA, dated April 22, 2004, available at: <http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf>.

Figure 3. CZMA Consistency Certification Process Flow Chart

Appendix E

Endangered Species Act Section 7 Consultation Process Flow Charts

Figure 4. Endangered Species Act Section 7 Informal Consultation Process Flow Chart

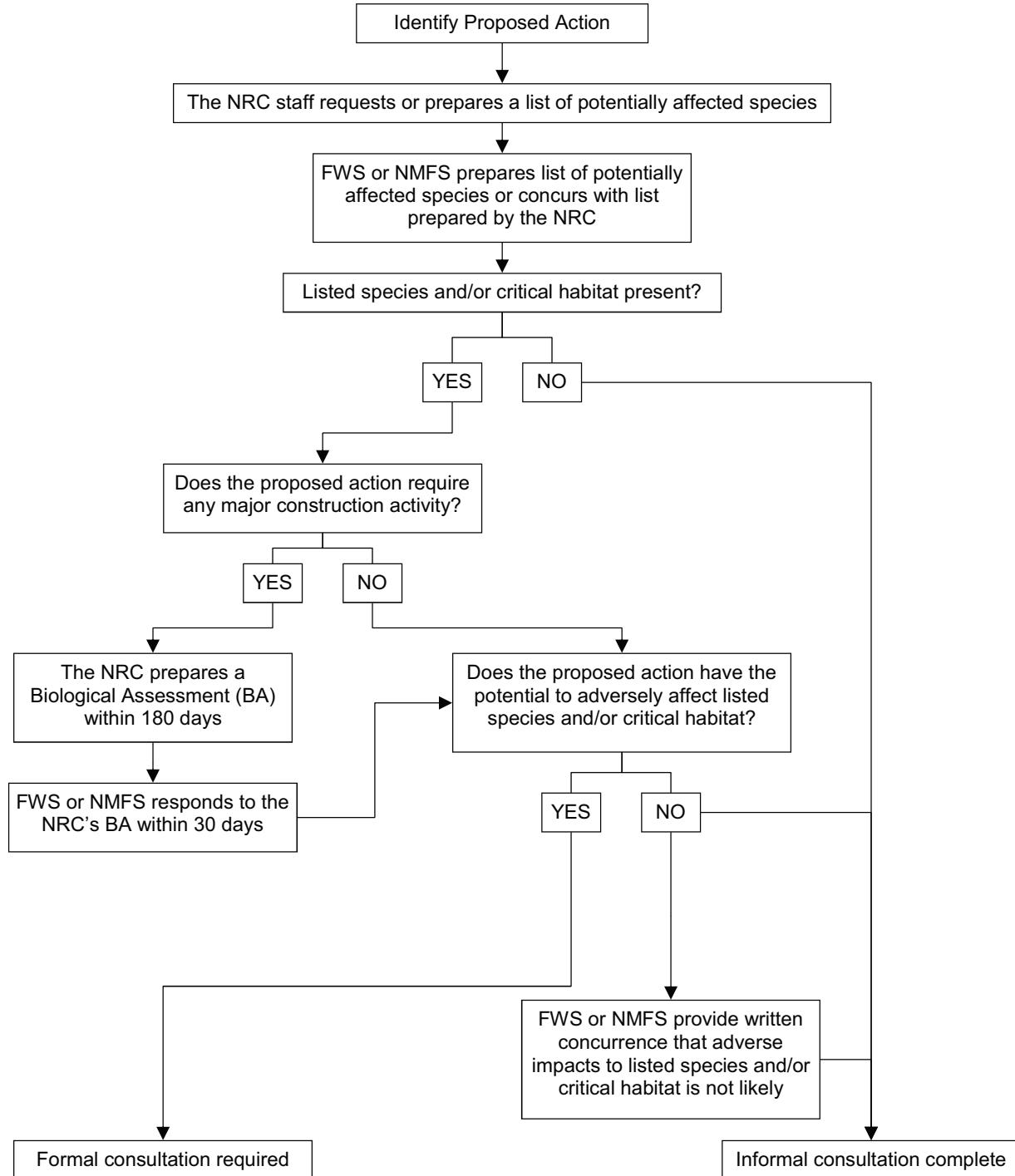
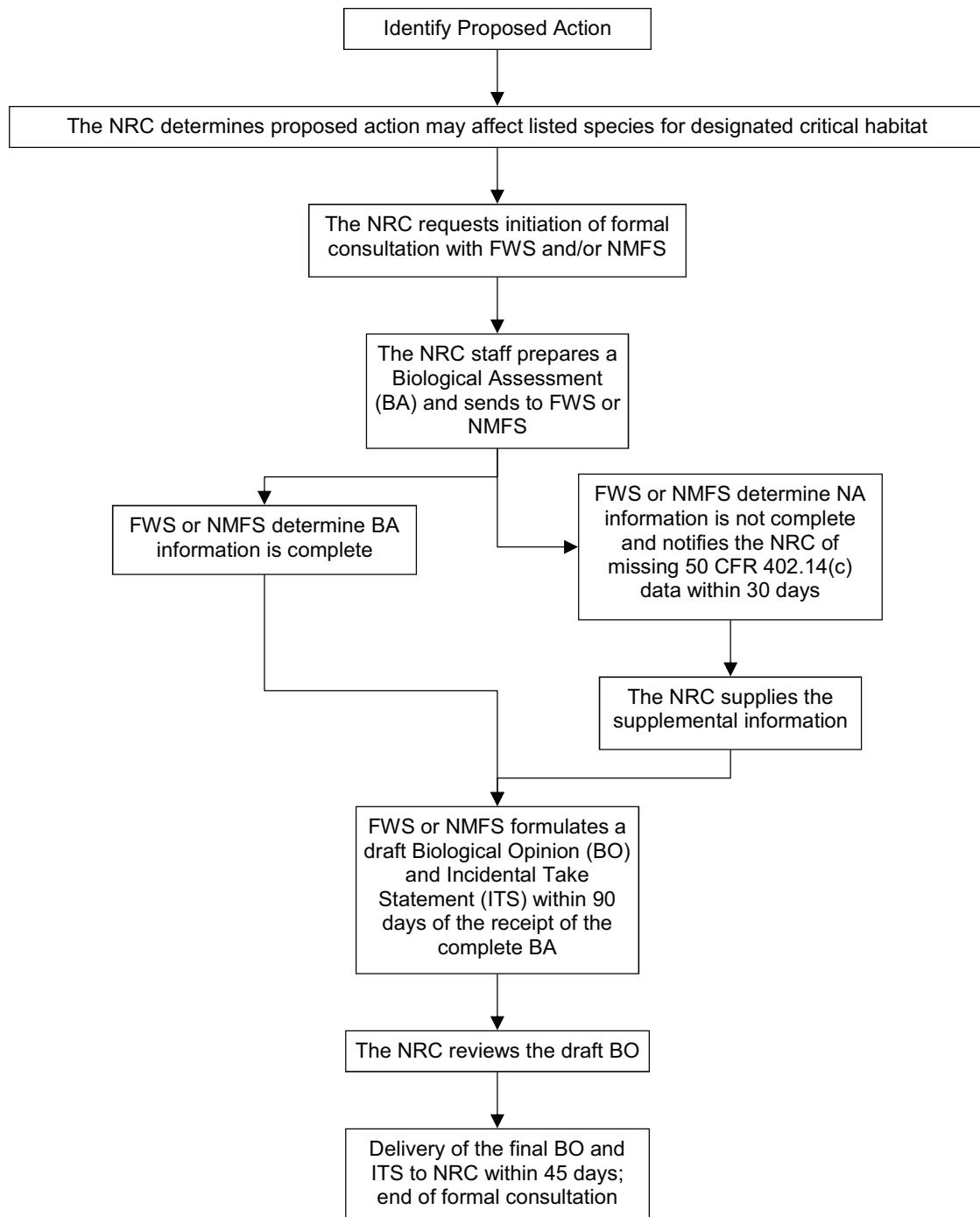


Figure 5. Endangered Species Act Section 7 Formal Consultation Process Flow Chart

Appendix F

National Historic Preservation Act Section 106 Process Flow Chart

Figure 6. National Historic Preservation Act Section 106 Consultation Process Flow Chart

