

## CHAPTER 3 ALTERNATIVES, INCLUDING THE NO ACTION ALTERNATIVE

**Alternatives**—This section is the heart of the environmental impact statement. Based on information and analysis presented in the sections on the Affected Environment (1502.15) and the Environmental Consequences (1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining issues and providing a clear basis for choice among options by the decisionmaker and the public. (40 CFR 1502.14)

This chapter summarizes the Programmatic Environmental Impact Statement (PEIS) scoping process that gathered input on nationwide permit procedures and practice from Corps personnel, other agencies, and members of the public and used that input to define the Program alternatives to be analyzed. It describes nationwide permit procedures and alternatives, including the no-action alternative, that are analyzed in detail. The chapter describes alternatives that were identified in the scoping process but not considered in detail in the PEIS analysis, and explains why the Corps eliminated those alternatives. The chapter provides text and tabular comparisons of the important aspects of the proposed action and alternatives that would likely cause differences in environmental impacts and summarizes and compares the beneficial and adverse environmental impacts of the alternatives based on the detailed analysis presented in Chapter 5. It then describes mitigation measures developed in the course of evaluating the alternatives that the Corps could employ to reduce or eliminate adverse environmental impacts.

### 3.1 Formulation of the Alternatives—Scoping for the Nationwide Permit PEIS

#### 3.1.1 Public and Agency Participation in the PEIS

In March 1999, the Corps announced its intent to prepare a PEIS for the entire nationwide permit program and initiated a formal scoping process to solicit input from the public and local and Federal agencies on program issues, concerns and opportunities (see Federal Register Notice of Intent, 1999, in Appendix A). Scoping meetings were held in Sacramento, Fort Worth, and Washington, D.C. The cities were chosen because of their central location in the eastern, central, and western regions of the country. Washington, D.C. was included to facilitate participation of interested Federal agencies. Public comments also were received by mail and facsimile.

In the Federal Register announcement, the Corps indicated that the intent of the PEIS was to evaluate the procedures and process associated with nationwide permits, but not to examine impacts associated with individual nationwide permit authorizations.

#### 3.1.2 Issues Identified through Scoping

A number of issues surfaced repeatedly during the scoping process. Prominent issues raised concerned the geographic scale of analysis, data sources, impact characterization and cumulative

impacts, costs to regulated public, Corps personnel and resource requirements, alternatives, and the baseline to evaluate and compare alternatives.

Many commenters said that the range of alternatives to be considered and evaluated in the PEIS should not be limited. Many also wanted the PEIS to address the environmental impacts, cumulative effects and mitigation of the nationwide permit program in terms of acres and functions.

Some commenters said that a PEIS is not required but that should one be conducted, but they urged the Corps to evaluate the costs to the regulated public and to the Corps for each alternative considered. In contrast, some commenters did not believe costs should be considered.

Many commenters suggested that the data available for analysis may not be sufficient to evaluate the alternatives and that the Corps should consider using other agency data to facilitate the analysis of alternatives.

A few commenters requested that the PEIS evaluate the effect of the nationwide permit program on endangered species, address how the regional conditioning process was being implemented to ensure minimal effects, and finally to identify how watershed-planning approaches are being used at the district level.

The Corps reviewed the scoping comments and scoping meeting discussions and incorporated many of them into the definition of alternatives, including the “No Action Alternative.” The source of comments and a general assessment of the issues identified in the scoping meetings is found in Appendix A.

### **3.2 Alternatives Evaluated in Detail**

The Corps considered six alternatives and evaluated the environmental impacts of four of those in detail. The alternatives that were evaluated in detail are described here and summarized in Table 3.2-1. In addition, a sub-alternative of one of the alternatives was examined. This variation represents procedural modifications of Alternative A—the No Action Alternative (1996 nationwide permit program). The procedural variations include varying nationwide permit activity categories.

#### **3.2.1 Alternative A—No Action—1996 Nationwide Permit Program**

The No Action Alternative consists of the nationwide permit regulations published in November 22, 1991 (Federal Register 1991) and the nationwide permits issued on December 13, 1996 (Federal Register 1996). The 1996 nationwide permits became effective on February 11, 1997, and are scheduled to expire on February 11, 2002 (with the exception of nationwide permit 26, which expired on June 7, 2000). This alternative includes 37 nationwide permits. The 1996

**Table 3.2-1. Program Change Across Alternatives  
(Procedural Differences Among Alternatives)**

	Alternative A	Alternative B	Alternative C	Alternative D	Procedural and Threshold Variation (Alternative A1)
	<i>No action—1996 Program Nationwide Permits (NWP)</i>	<i>Replacement with Standard Permits (SP)</i>	<i>Replacement with Letters of Permission (LOP)</i>	<i>Replacement with Regional General Permits (RGP)</i>	<i>Nationwide Permit Limits and Thresholds (NWP issued March 2000)</i>
<b>Permit Coordination Procedures:</b>	<ul style="list-style-type: none"> <li>•Non reporting below threshold</li> <li>•Preconstruction notification (PCN) to agencies for certain activities</li> </ul>	<ul style="list-style-type: none"> <li>•Public notice and opportunity to request public hearing</li> <li>•Agency and public comments</li> </ul>	<ul style="list-style-type: none"> <li>•Requires agency coordination for development of activities and procedures</li> <li>• Continued agency and public notification of certain proposed activities</li> </ul>	<ul style="list-style-type: none"> <li>•Non reporting below threshold</li> <li>• Thresholds based on 1996 program</li> <li>•Coordination depends on agency involvement and public comment on RGP</li> <li>•Assume thresholds and conditions based on 1996 NWP program</li> </ul>	<ul style="list-style-type: none"> <li>•Non reporting below threshold</li> <li>•Thresholds based on Replacement Permits issued in 2000</li> <li>•PCN to agencies for some activities</li> </ul>
<b>Permit Evaluation Procedures:</b>	<ul style="list-style-type: none"> <li>•Agency comments on PCN</li> <li>• National Decision Documents and Supplemental Decision Documents for regional conditions</li> <li>•Regional Conditions</li> <li>•No case by case off-site alternatives analysis</li> <li>• Discretionary Authority</li> <li>•Special Conditions</li> <li>•Compensatory Mitigation to offset impacts and “buy down impacts” for certain activities</li> <li>• General or individual water quality certifications and coastal zone management consistency determinations required for each category of activities</li> </ul>	<ul style="list-style-type: none"> <li>•Review and address agency and public comments</li> <li>•Off-site alternatives analysis</li> <li>•Special Conditions</li> <li>•Environmental Assessment(EA)/ Environmental Impact Statement(EIS)</li> <li>•Compensatory Mitigation to offset impacts</li> <li>•Decision Document for each authorized SP activity</li> <li>•Individual water quality certifications and coastal zone management consistency determinations required</li> </ul>	<ul style="list-style-type: none"> <li>•Categories of activities and procedures developed by Corps and Federal and State agencies</li> <li>•Decision Document for LOP activities and procedures</li> <li>•Abbreviated EA and alternatives analysis procedures</li> <li>•Compensatory Mitigation to offset impacts</li> <li>•Decision Document for each authorized LOP activity</li> <li>• General or individual water quality certifications and coastal zone management consistency determinations required</li> </ul>	<ul style="list-style-type: none"> <li>•Activities developed by Corps, coordinated with agencies and public through public notice</li> <li>•No case by case alternatives analysis</li> <li>•Decision document prepared for each RGP (not for subsequent activities)</li> <li>• Discretionary Authority</li> <li>•Compensatory Mitigation to offset impacts and “buy down impacts”</li> <li>• General or individual water quality certifications and coastal zone management consistency determinations required</li> </ul>	<ul style="list-style-type: none"> <li>•PCN Agency Coordination for review and comment</li> <li>• National and Supplemental Decision Documents</li> <li>•Regional Conditions</li> <li>•No case by case off-site alternatives analysis</li> <li>•Special Conditions</li> <li>•Compensatory Mitigation to offset impacts and “buy down impacts”</li> <li>• General or individual water quality certifications and coastal zone management consistency determinations required</li> </ul>

Federal Register notice reissued many of the nationwide permits. Some nationwide permits and conditions were modified and two new nationwide permits were issued.<sup>1</sup>

In 1996, substantial changes were made to nationwide permit 26. The acreage limit of nationwide permit 26 was reduced from 10 acres to 3 acres. Nationwide permit 26 also prohibited filling or excavating greater than 500 linear feet of stream bed. Pre-construction notification was required for activities resulting in the loss of greater than 1/3 acre of headwaters and isolated waters.

The 1996 nationwide permit package also directed districts to develop standard local operating procedures for the protection of endangered species with the U.S. Fish and Wildlife Service and National Marine Fisheries Service. These procedures are meant to ensure that the Corps bases its “effect” and “jeopardy” decisions on the best available information.

This plan serves as the “No Action” alternative and was the program in effect when the PEIS study commenced.

### **3.2.2 Alternative B—Nationwide Permit Replacement by Standard Permits (No Nationwide Permits—All Standard Permits)**

Under this alternative, all nationwide permit activities would be reviewed through the standard permit process. In other words, all of the nationwide permits would be revoked and all Section 10 and Section 404 activities would require authorization through the standard permit process.

Alternative B is likely to result in substantial increases in unauthorized activities, because of the large number of nationwide permit activities that do not currently report to the Corps. The number of activities currently authorized by non-reporting nationwide permits cannot be reliably estimated. Much of the expected increase in unauthorized activities is likely to be due to Section 10 activities, such as fish and shellfish harvesting devices (e.g., lobster and crab pots) and mooring buoys, which are not typically reported to the Corps. Under this alternative, there are likely to be fewer unauthorized Section 404 activities than unauthorized Section 10 activities. Many project proponents that undertake activities that require Section 404 authorization request verification letters from Corps district offices to ensure that their projects qualify for nationwide permit authorization. For this alternative, the PEIS estimated impacts only for those activities that were verified in FY 1998 as qualifying for nationwide permit authorization; these activities would be evaluated through standard permit procedures.

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<sup>1</sup> It should be noted that during the PEIS study the current nationwide permit process or “No Action Alternative” has, in effect, been modified. A replacement package for the nationwide permits was issued in March 9, 2000. Six Nationwide Permits were modified and five new nationwide permits were issued. The replacement nationwide permits also included two new and seven modified general conditions (Federal Register 2000). However, for the purposes of this study, the 1996 program rules (i.e., the current program) is still used as the “No Action Alternative”.

### **3.2.3 Alternative C—Nationwide Permit Replacement by New Letters of Permission**

This alternative involves the replacement of nationwide permits by letters of permission. Under this alternative, districts would develop alternative procedures for authorizing activities subject to Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. For Section 10 activities, the district would coordinate activities with Federal and state fish and wildlife agencies, as required by the Fish and Wildlife Coordination Act, and conduct a public interest evaluation, but without a public notice. Section 10 letters of permission could only be used to authorize minor work that would not have significant individual or cumulative impacts on the environment and is not controversial. Section 404 letters of permission activities and procedures could be developed by the district through consultation with Federal and state fish and wildlife agencies, the U.S. Environmental Protection Agency, the state water quality certifying agency, and if appropriate the state coastal zone management agency. A public notice advertising the proposed letters of permission procedures and categories of activities would be issued to solicit comments and offer the opportunity for a public hearing.

A Section 401 water quality certification must be issued or waived and if appropriate a coastal zone management consistency concurrence must be obtained either on a generic or individual basis before the letter of permission is effective. Individual standard permits and regional general permits may continue to be used in addition to letters of permission.

Alternative C is also likely to result in substantial increases in unauthorized activities, because of the large number of nationwide permit activities that do not currently report to the Corps. This alternative is also subject to the difficulty of estimating currently authorized non-reporting nationwide permit activities that is described in Section 3.2.2, above. As is the case for Alternative B, the PEIS did not estimate the impacts for those activities that did not receive nationwide permit verifications.

### **3.2.4 Alternative D—Nationwide Permit Replacement by Regional General Permits**

This alternative replaces all nationwide permits with regional general permits. Districts would develop regional general permits to authorize activities previously authorized by the nationwide permits. Individual standard permits and letters of permission may continue to be used in addition to the regional general permits.

### **3.2.5 Alternative A1—Procedural and Threshold Variation of the No Action Alternative**

This alternative includes the following variations on the No Action Alternative, which is based on the 1996 nationwide permit program: a series of replacement and modified permits for nationwide permit 26, with a 1/2 acre limit and a 1/10 acre pre-construction notification threshold for some of the nationwide permits. This alternative variation also imposes general conditions restricting activities in designated critical resource waters and adjacent wetlands and discharges resulting in permanent above-grade fills in mapped 100-year floodplains. This alternative is basically the nationwide permit replacement package issued in March 2000 (Federal

Register 2000). However, the replacement package requires each Corps district to add district-specific regional conditions to the new and modified nationwide permits to ensure that authorized activities cause no more than minimal adverse effects on the aquatic environment. For the analytical purposes of the PEIS, it was assumed that this alternative package would be implemented in the same form across all Corps districts. The analysis also assumes the existence of state and local regulatory programs will not affect the degree to which this alternative imposes new compliance costs on the regulated community.<sup>2</sup>

### **3.3 Alternatives Considered but not Evaluated in Detail**

#### **3.3.1 Other Nationwide Permit Program Alternatives**

##### **3.3.1.1 Nationwide Permit Replacement by State Programmatic General Permits**

This alternative replaces all nationwide permits with state programmatic general permits. In states that have an effective program to protect all waters of the United States, including wetlands, the Corps can develop programmatic general permits to streamline the permitting process by eliminating duplicative Federal and state review of proposed activities that have minimal adverse effects on the aquatic environment. Several districts are using state programmatic general permits. In New England states, the nationwide permits have been revoked and the regulatory program is based on state program thresholds. In Florida, state programmatic general permits have replaced many pier, boat dock, and other activities that previously could have been authorized by letters of permission, nationwide permits, or regional general permits. State programmatic general permits allow the state or local agencies to review projects that meet the terms and conditions of the state programmatic general permit. Depending on the thresholds in the state programmatic general permit, the Corps will continue to review only those applications that exceed certain thresholds, that may affect a Federal project, or may have more than minimal impacts. Typically state programmatic general permits authorize work that is minor and non-controversial.

Implementation of state programmatic general permits varies by district and includes better coordination among Federal and state regulatory and resource agencies. Federal coordination in New England revolves around joint processing meetings. In other states, coordination with Federal agencies for activities eligible for state programmatic general permits is similar to the nationwide permit preconstruction notification requirements. Often the state is responsible for screening applications to determine whether or not the project meets the terms and conditions of the state programmatic general permit and forwards appropriate applications to the Corps for review. In some instances a joint application has been developed and the Corps only receives certain applications as defined in the state programmatic general permit. In others, the Corps continues to receive all applications directly from the applicant. Regulatory Guidance Letter 83-07 provides guidance on the development and implementation of state programmatic general

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<sup>2</sup> More detail of the assumptions can be found in the Costs Analysis for the 2000 Issuance and Modification of Nationwide Permits (unpublished draft report), prepared by the Institute for Water Resources, U.S. Army Corps of Engineers, Alexandria, VA (Institute for Water Resources 2000).

permits in the Corps regulatory program (Corps 1983).

This approach to authorizing regulated activities presently authorized by nationwide permits appears to be a process to be encouraged. However, replacement of the nationwide permit process with state programmatic general permits could only be accomplished by states with agencies that have regulatory programs that offer comparable protection of aquatic resources. Categories of activities and procedures for evaluation and coordination can be developed for state programmatic general permits.

### **3.3.1.2 Activity Regulation by Rules**

This alternative involves activity descriptions and limitations or standards developed through the rulemaking process. Applications would not be required for activities that meet the rules. A rule is an agency's written statement that has the effect of law. The Corps may write rules under authority of Federal law. In the past the Corps has regulated activities using rules. For example, in 1975, activities meeting certain criteria were authorized by rule without the need to submit an application to the Corps. The following is an excerpt from the 1975 Federal Register notice. "All bulkhead and fill activities involving discharges of dredged material or of fill material in navigable waters other than navigable waters of the United States that are less than 500 feet in length, are constructed for property protection, and involve less than an average of one cubic yard per running foot are hereby permitted for purposes of section 404 of the Federal Water Pollution Control Act without further processing under this regulation; provided however, that the procedures of this regulation including those pertaining to individual and general permits... shall apply to any discharge(s) of dredged or fill material if the district engineer determines that the water quality concerns as expressed in the guidelines...indicate the need for such action; and further provided that the conditions specified in ... are met."

Replacement of the nationwide permit process with an "Activity Regulation by Rules" would eliminate case-by-case project review for activities that meet specified terms and conditions (similar to non-reporting nationwide permits in the current program). That is, there would be no application to the Corps and thus no associated administrative costs. Tracking impacts under this scenario would be difficult if not impossible. Impacts associated with this alternative would be similar to the 1996 program or perhaps greater if thresholds were greater than the 1996 program.

### **3.3.1.3 Various Combinations of Nationwide Permit Alternatives**

The nationwide permit program evolved to its current level in direct response to concerns about protecting the resources while relieving the burden on the regulated community. There are currently 39 active nationwide permits with numerous national, regional and district specific conditions. If the various options were considered for each of the active nationwide permits, alone and in combination, this would result in millions of potential alternatives. Looking at sub-categories of nationwide permits would greatly reduce the number of potential alternatives. Various sub-categories of nationwide permits were considered but the number of potential combinations was still unmanageable. The conclusion from this evaluation was that nothing

would be gained by sub-categorizing the nationwide permits because the purpose of this PEIS is to review the effectiveness of the overall nationwide permit program. Decisions resulting from this PEIS process will not preclude further specific or categorical changes to the nationwide permit program and may even foster such modifications.

#### 3.3.1.4 Preferred Alternative

The preferred alternative is defined as the alternative “which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors.”<sup>3</sup> A draft environmental impact statement is not required to identify a preferred alternative. Therefore, the preferred alternative will not be selected until the Nationwide Permit Programmatic Environmental Impact Statement is issued.

### 3.4 Comparison of the Alternatives

This section presents the impacts of the nationwide permit program alternatives in comparative form to define the issues that clearly distinguish the alternatives and provide a clear basis for choice among options by the decision-maker and the public.

#### 3.4.1 Comparison of the Procedures for Each of the Alternatives

The principle differences among the various program alternatives are within the level of information that is required from the applicant and the level of review required by the Corps to evaluate the proposed activities. Table 3.4-1 provides a comparison of the major procedural differences among the various alternatives.

##### 3.4.1.1 Alternative A – Nationwide Permits

Corps regulations contain the nationwide permit rules.<sup>4</sup> A public notice is published in the Federal Register by the Corps headquarters office to solicit comments on the proposed nationwide permits and conditions. Concurrent with this notice, district engineers issue public notices to inform the public of the proposed nationwide permits and any proposed regional conditions. Subsequently, NEPA, Section 404(b)(1) and public interest review documentation is prepared when the categories of activities, conditions and notification requirements are finalized.

Applicants may provide information regarding proposed activities using either the standard permit form<sup>5</sup>, a joint permit application form (if applicable), or letter requesting a verification according to the preconstruction notification procedures of the

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| <p style="text-align: center;"><i>Nationwide Permit Steps</i></p> <ul style="list-style-type: none"><li>• <i>Complete Application/Notification Received</i></li><li>• <i>Agency Coordination</i></li><li>• <i>Verification or Discretionary Authority</i></li></ul> |
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<sup>3</sup> Forty Most Asked Questions Concerning the Council on Environmental Quality’s National Environmental Policy Act Regulations (1981).

<sup>4</sup> 33 CFR Part 330 (Federal Register 1991)

<sup>5</sup> 33 CFR Part 325, Appendix A (Federal Register 1986)

nationwide permit. Any request for verification should include basic project information including the applicant name, project location, brief description including purpose, need and associated impacts, and any other information that is required by the terms of the nationwide permit (e.g. a wetland delineation, disposal site etc.). Upon receipt of notification, the Corps will coordinate the activity with Federal and state agencies as appropriate. Typically decisions on nationwide permit decisions that require a pre-construction notification may be made within as little as 15 days but usually no more than 30 days.

### 3.4.1.2 Alternative B – Standard Permits

Corps regulations provide the basic procedures for processing of Department of the Army individual permits.<sup>6</sup> These regulations describe the information that is required for the Corps to review the proposed activity. Many districts have developed joint application forms that may be used in lieu of the standard application form. Many permit applicants use these forms regardless of the type of permit they are applying for.

Under the standard permit process, the Corps must first determine if an application is complete. The information provided must be adequate for the purpose of issuing a public notice. The objective of the public notice is to provide enough information so that the interested public and Federal and state agencies may offer substantive, site-specific comments.

If an application is complete, a public notice must be issued with 15 days. Additional information may be requested at a later time if such information is necessary to determine if the project is in the public interest and in compliance with the Section 404(b)(1) guidelines, if applicable. Upon receipt of public and agency

*The major steps in evaluating an individual permit are:*

- *Receipt of a Complete Application*
- *Issue Public Notice*
- *Evaluate Comments Received and Request for Public Hearing (if any)*
- *Conduct Public Interest Review and Section 404(b)(1) Analysis (if appropriate)(including alternatives analysis)*
- *Prepare Statement of Findings*
- *Prepare Environmental Assessment or Environmental Impact Statement*
- *Prepare Record of Decision*

comments, the Corps will evaluate the proposed activity and make a decision on whether or not to issue the permit. A statement of findings on the Corps evaluation, the appropriate NEPA documentation, a record of decision, and, if necessary, a Section 404(b)(1) guidelines analysis will be prepared for each standard permit that is issued. The permit is sent to the applicant for signature, to indicate that all conditions of the permit are acceptable. If the applicant signs the permit, it is then finalized by the Corps. Corps districts publish a list of permits issued or denied on a monthly basis.

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<sup>6</sup> 33 CFR Part 325 (Federal Register 1986)

### **3.4.1.3 Alternative C – Letters of Permission**

Similar procedures are used for activities that are processed using letters of permission procedures. However, there is no need to issue a public notice for letters of permission activities and Section 10 only activities need only be coordinated with Federal and state resource agencies and adjacent property owners. A Section 404(b)(1) guidelines analysis is not required for Section 10 only activities.

Corps regulations allow district engineers to develop, in consultation with Federal and state agencies, Section 404 letters of permission. The categories of authorized activities and the procedures under which the activities will be coordinated and evaluated are published in a public notice for review and comment. A decision document evaluating the categories of activities and the procedures to be used under the Section 404 letter of permission is prepared to comply with NEPA and other Federal requirements. Proposed activities are subsequently reviewed in accordance with the approved procedures. For each activity authorized by a Section 404 letter of permission, a decision document will be prepared. Each decision document includes an environmental assessment, a discussion of compliance with the Section 404(b)(1) guidelines, and documentation that the activity is not contrary to the public interest.

On the surface, the administrative procedures associated with standard permits and letters of permission are very similar. However, under the Section 404 letter of permission process, the project specific issues are likely to be much less contentious because the categories of activities and coordination procedures are developed in consultation with the Federal and state commenting agencies. Provided the activity meets the terms of the letter of permission, agency concerns should not be as difficult to resolve. For Section 10 letters of permission, the activities must be non-controversial.

### **3.4.1.4 Alternative D – Regional General Permits**

Regional general permits may be used to authorize activities that are similar in nature and have minimal individual and cumulative adverse effects on the aquatic environment. These permits are developed by Corps districts. The types of activities and associated level of impact may vary depending on regional differences. Compliance with NEPA,

*Section 10 Letter of Permission  
Evaluation Steps*

- *Receipt of Complete Application*
- *Coordination with Fish and Wildlife Agencies and Adjacent Property Owners*
- *Evaluate Comments Received*
- *Conduct Public Interest Review*
- *Prepare Statement of Findings*
- *Prepare Environmental Assessment or Environmental Impact Statement*
- *Prepare Record of Decision*

*Section 404 Letter of Permission  
Evaluation Steps*

- *Receipt of Complete Application*
- *Agency Coordination*
- *Evaluate Comments Received*
- *Conduct Public Interest Review and 404(b)(1) compliance as necessary*
- *Prepare Statement of Findings*
- *Prepare Environmental Assessment*
- *Prepare Record of Decision*

*Regional General Permit Evaluation Steps:*

- *Receipt of complete application (if required)*
- *Agency Coordination (if required)*
- *Verification/Authorization Letter*

Section 404(b)(1) guidelines, and other Federal requirements is accomplished during development and issuance of the regional general permit. For each activity authorized by the regional general permit, project specific documentation is not required provided the proposed activity meets the terms and conditions of the regional general permit. The information required in the permit application and the degree to which proposed activities may be coordinated with agencies depends on the terms of the general permit. These requirements are likely to be similar to, or less than, the requirements under Alternative A.

### **3.4.2 Comparison of the Impacts of the Alternatives on Aquatic Resources**

A relatively small percentage of impacts, authorized under the Corps regulatory program, are authorized by nationwide permit verifications. Corps regulatory data for Fiscal Year (FY) 1998 were examined to illustrate the magnitude of environmental impacts authorized under nationwide permits relative to the overall Corps regulatory program. These data were also used to illustrate and compare impacts of the alternatives on the environment. Nationwide permits authorized only about 26% of impact acreage authorized by the larger Corps regulatory program although accounting for about 47% of the issued permits. A large fraction of the total nationwide permit impact (acres) in 1998 was in wetlands (estimated to be about 80%), but the impacts to other waters were estimated with less certainty. Based on average value per acre (as per economic literature), wetlands comprised over 90% of nationwide permit-impacted resource value in 1998.

Table 3.4-1 presents a summary of the impacts of the alternatives on aquatic, riparian, and wetland ecosystems. Examination and evaluation of functions and service values of aquatic resources is hampered by lack of documentation, e.g., for Cowardin (subclass) classification. There are no estimates on a regional or national scale other than acreage permanently impacted within broad ecosystem classifications. There is no method to account for these functions nationally. Thus, one has to assume change in function from change in impacted acres based on very general knowledge of function and value associated with ecosystem types.

Any tabulation of impacts must acknowledge data entry shortcomings (internal and external) in the Corps (or any other) regulatory database which lessens certainty of any conclusions regarding cumulative impact assessment.

The following comparison examines variation among the alternatives in: impact avoidance and minimization, authorized impacts, unreported impacts, and impacts offset (compensatory mitigation).

#### **3.4.2.1 Variation in Impact Avoidance and Minimization**

The cumulative impact tabulation does not capture the permit applicant's avoidance of aquatic resource impacts prior to the application.

Nationwide permits limits provide an incentive for applicants to minimize impacts to meet acreage limits to qualify for a faster evaluation process which decreases potential environmental

effects. Impacts avoided/minimized to qualify for nationwide permits may be greater than authorized losses.

Off-site alternatives analyses for individual permits do not necessarily result in more avoidance than nationwide permits. Standard permit alternatives analyses typically do not result in withdrawal or denial of permit, that is, the impact is not avoided entirely. According to most case study district supervisors, only zero to two percent (up to five percent maximum) of off-site alternatives analyses result in a change of the original proposed project location to another location.

Corps data suggest small variation in minimization after permit request. Nationwide permits and standard permits show greater minimization than letters of permission or regional general permits—mentioned previously. This minimization amounts to about 21% of the total requested impacts for all permits, or approximately 8,000 acres minimized.

#### **3.4.2.2 Variation in Authorized Losses**

There is little evidence to suggest a reduction in cumulative environmental service impact (e.g., acres) if there is a change in application evaluation from nationwide permits to another permit type procedure. This assumes that compensatory mitigation would be required to offset impacts and be of similar quality for each of the considered alternatives.

#### **3.4.2.3 Unreported Impacts**

Many nationwide permit applicants report impacts that are below the lower reporting limit (preconstruction notification threshold). Indeed even the majority of standard permits authorized are for impact acreage smaller than the nationwide permit lower limits, e.g., for nationwide permit 26.

It is not readily apparent that reducing nationwide permit thresholds for nationwide permit preconstruction notification much more than the recent reductions (March 2000 replacement nationwide permits) would result in a substantial increase in the numbers of permit applications. This is because it appears most potential applicants already report voluntarily.

#### **3.4.2.4 Compensatory Mitigation**

There is little evidence to suggest variation in compensatory mitigation requirements. Although regional general permit impacts have been offset to a smaller extent than impacts authorized under other permit types, it can be expected that activities previously verified under nationwide permits, but now authorized under a regional general permit alternative would provide compensatory mitigation to a similar extent as expected under other permit authorizations.

There is some doubt about the true dimension of overall nationwide permit ratio of compensatory mitigation to impact because of possible errors in database records for nationwide permit 27. If

nationwide permit 27 is excluded from the tabulation of impacts and mitigation, the mitigation ratio falls below 1.0 and is close to that of regional permits.

### 3.4.2.5. Mitigation Success

A critical factor in estimating impacts to aquatic resources is the uncertainty of compliance with compensatory mitigation special conditions.

**Table 3.4-1. General Comparison of Impacts of Nationwide Permit Alternatives on Aquatic Resources**

Impacts to Aquatic Resources	Alternative A (No Action)	Alternative B	Alternative C	Alternative D	Procedural and Threshold Variation – Alternative A1
	<i>No action—1996 Nationwide Permit Program</i>	<i>Replacement with Standard Permits</i>	<i>Replacement with Letters of Permission</i>	<i>Replacement with Regional General Permits</i>	<i>Nationwide Permit Limits and Thresholds (NWP's issued March 2000)</i>
Avoidance and minimization Authorized Impacts Compensatory Mitigation Unreported Impacts	<ul style="list-style-type: none"> <li>•Incentive for minimizing impacts (to meet limits) thus decreasing potential environmental effects and permit evaluation times</li> <li>•Recent increase in compensatory mitigation expected to continue to increase</li> <li>•Very low tidal wetland impact-almost all in relatively abundant freshwater wetland.</li> <li>•Impacts to non-replaceable resources (i.e., controversial) reclassified to SP review.</li> <li>•Below threshold impact estimated to be small (5%).</li> </ul>	<ul style="list-style-type: none"> <li>•No incentive for minimizing impacts (to meet limits) thus potential increase in environmental effects</li> </ul>	<ul style="list-style-type: none"> <li>•Similar to No Action Alternative (for Section 404 LOP activities)</li> <li>•No evidence of negotiated reduction in acres impact.</li> </ul>	<ul style="list-style-type: none"> <li>•Incentive for minimizing impacts (to meet limits) thus decreasing potential environmental effects and permit evaluation times</li> <li>•Recent increase in compensatory mitigation expected to continue to increase</li> <li>•Rarely required compensatory mitigation in past, but likely increase in compensatory mitigation in manner similar to other alternatives</li> <li>•Greater tidal wetland impact</li> </ul>	<ul style="list-style-type: none"> <li>•Incentive for minimizing impacts (to meet limits) thus decreasing potential environmental effects and permit evaluation times</li> <li>•Recent increase in compensatory mitigation expected to continue to increase</li> <li>•Decrease overall individual and cumulative impacts associated with reduced limits and 2 general conditions.</li> <li>•Compensatory mitigation will offset impacts</li> </ul>

### 3.4.2.6 Discussion and Summary

As per FY 1998 regulatory data, nationwide permits appeared to be at least as effective as standard permits (and more effective than regional general permits or letters of permission) at reducing total program impact acreage by encouraging developers to reduce impacts after permit application.

While over one half of the authorizations were nationwide permit verifications, they resulted in a little more than one fourth of the documented impact and nearly all of that impact occurred in relatively abundant nontidal wetlands. Regional permits impacted tidal wetlands over five times

more than nationwide permits. Impacts below threshold size were estimated to add about 5% to the total nationwide permit impact. Permit compliance was generally high among all permit types (for the small percent examined). There is no evidence that mitigation success differs among permit types, once mitigation is required. The ratio of mitigation to impact for nationwide permit impacts is uncertain and may be half that of individual permits, but not lower than for regional permits. Given the information available and excepting the possible low mitigation ratio, nationwide permits in FY 1998 appeared to complement standard permits well in reducing net environmental impact.

### 3.4.3 Comparison of the Impacts of the Alternatives on Permit Applicants

This section summarizes the impacts of the alternatives on permit applicants. Brief descriptions of the findings of the impacts analysis for the different aspects of the socioeconomic environment are given in Table 3.4-2. Details of the comparison of impacts on permit applicants are presented in Chapter 5 and Appendix D.

A prominent cost in dollar terms is the cost associated with submitting a permit application. These direct compliance costs vary greatly by type of permit, geography and region of the country. The comparison of these costs is **for illustrative purposes only** since estimation of these costs is complicated by, among other things, the wide variability in the types and characteristics of potentially affected activities and the economic settings in which they occur.

The PEIS did not estimate impacts for those regulated activities that did not report to the Corps. That is, the costs associated with each alternative were estimated from only those nationwide permit activities that were verified by the Corps in FY 1998.

Replacement of nationwide permits with standard permits would more than triple the direct compliance costs for activities verified under the 1996 nationwide permits (as per the No Action Alternative A). This would represent an 80% increase in the compliance cost for the overall regulatory program. Replacement of nationwide permits with letters of permission will result in compliance costs about 25% greater than for nationwide permits, while replacement with regional general permits would result in comparable costs to nationwide permits. A procedural variation of the No Action Alternative would cost the regulated public about 13% more than the No Action Alternative.

Permit applicants also incur indirect costs of compliance with the Section 404 program. These are “opportunity costs” that are not necessarily reflected in out-of-pocket expenses. Opportunity costs include permitting time costs and any development values foregone as a result of the Corps application of the Section 404(b)(1) guidelines “sequencing” rules. Opportunity costs increase as the time it takes for the Corps to process permit applications increases. Data from FY 1998 demonstrate the average amount of time required to authorize Section 10 and Section 404 activities by each permit type. In FY 1998, a nationwide permit verification was issued in an average of 18 days and a regional general permit verification was issued in an average of 10 days. During this fiscal year, the average evaluation time standard permits and letters of permission

was 95 days and 36 days, respectively. Shifting nationwide permit activities to standard permits (Alternative B) or letters of permission (Alternative C) would increase the time it takes to complete the respective permit evaluation, potentially increasing opportunity costs. Also, systemic effects of increasing standard permit applications and letters of permission applications would increase the Corps workload and thus further increase average evaluation days for those permits. This increase in workload and expected increase in average evaluation days is presented in Chapter 5.

Implementation of Alternative A1 would result in another opportunity cost. The requirement for a vegetated buffer adjacent to open waters located at project sites incurs an opportunity cost that can reduce potential development value of the proposed project.

**Table 3.4-2. General Comparison of Impacts of Nationwide Permit Alternatives on Permit Applicants**

	<b>Alternative A (No Action)</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Procedural and Threshold Variation – Alternative A1</b>
	<i>No action—1996 Program</i>	<i>Replacement with Standard Permits</i>	<i>Replacement with Letters of Permission</i>	<i>Replacement with Regional General Permits</i>	<i>Nationwide Permit Limits and Thresholds (NWPs issued March 2000)</i>
Direct compliance costs	Least cost  (\$233 million per year)	Greatest compliance costs  (\$754 million per year)	Slightly greater than No Action Alternative  (\$293 million per year)	Least cost—Similar impact to No Action Alternative  (\$230 million per year)	Slightly greater cost than No Action Alternative  (\$262 million per year)
Opportunity costs	Least cost	Greatest opportunity costs	Slightly greater than No Action Alternative	Least cost—Similar impacts to No Action Alternative	Slightly greater cost than No Action Alternative

**3.4.4 Comparison of the Impacts of the Alternatives on the Administration of the Program**

This section summarizes the impacts of the alternatives on administration of the regulatory program. This address basically Corps administration of the program. Brief descriptions of the findings of the impacts analysis for the different aspects of the socioeconomic environment are given in Table 3.4-3.

Each of the alternative permit programs evaluated in this PEIS will directly affect the efficiency with which each district is able to process each type of permit. Changes in permitting efficiency also have implications for the regulated public as mentioned in the previous section. Increases in permit workload would likely increase the average evaluation days required to process a permit, all other things equal (e.g., budget). Similarly, increases in the number of days the district dedicates to permitting would likely decrease the average evaluation days required to process a permit. The PEIS developed illustrative comparisons of the alternatives. Details of the methodology and analysis are presented in Chapter 5 and Appendix D.

**Table 3.4-3. Comparison of Impacts of the Nationwide Permit Alternatives on Program Administration (Corps Costs)**

	<b>Alternative A (No Action)</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Procedural and Threshold Variation – Alternative A1</b>
	<i>No action—1996 Program</i>	<i>Replacement with Standard Permits</i>	<i>Replacement with Letters of Permission</i>	<i>Replacement with Regional General Permits</i>	<i>Nationwide Permit Limits and Thresholds (NWP's issued March 2000)</i>
Corps workload or administrative costs	Least cost  (\$16 million per year)	Greatest workload costs  (\$98 million per year)	<ul style="list-style-type: none"> <li>•Greatest 1<sup>st</sup> year costs because upfront development costs</li> <li>•Agency administrative costs decrease after implementation but remain higher than No Action Alternative</li> </ul> (•\$103 million the first year •\$448 million over five years)	<ul style="list-style-type: none"> <li>•Least cost (similar to No Action Alternative)</li> <li>•Incur costs upfront development costs</li> </ul> (•\$52 million the first year •\$252 million over five years)	<ul style="list-style-type: none"> <li>•Slightly greater cost than No Action Alternative</li> </ul> (\$23 million per year)
Other agency workload or administrative costs	Least cost	Greatest workload costs on all Federal agencies over time	•Increased agency review	•Least cost (similar to No Action Alternative)	•Slightly greater cost than No Action Alternative

Implementation of Alternative B or C (Shifting nationwide permits to standard permit or letter of permission processing) would increase the number of Section 404 standard permits or letters of permission issued fourfold and the average evaluation days approximately 13 to 17% by year five. Use of regional general permits to replace nationwide permits (Alternative D) would not be expected to increase average evaluation days

The above estimates of increased permitting times are based on the assumption that Corps district annual permitting budgets would remain roughly at current levels. The PEIS also estimated the increased regulatory program permitting budget that the Corps would need to implement the alternatives while maintaining current levels of permitting efficiency.

Implementation of Alternatives C and D would face one-time permit development costs – costs incurred only in the first year of the program and not faced by Alternative B. These costs would be associated with developing, coordinating, and implementing a letter of permission or regional general permit process.

Replacement of nationwide permits with standard permits or letters of permission would increase Corps costs five to six times the cost of the No Action Alternative (i.e., the 1996 nationwide permit program).<sup>7</sup> This would represent about a doubling of the overall Corps program costs.

<sup>7</sup>Average evaluation days for letters of permission are less than for standard permits. Actual costs to administer

The total estimated expenditure for processing FY 1998 nationwide permits is \$16 million. The total Corps regulatory budget was \$107 million. Procedural variations of the No Action Alternative would increase Corps costs about 40% over the No Action Alternative costs. These cost estimates include only those applications previously authorized as nationwide permits under Alternatives A and A1, or shifted to standard permits, letters of permission, or regional general permits. Any additional project proponents that might submit permit applications under Alternatives B and C would impose additional costs to the Corps to process those applications.

### **3.4.5 Comparison Summary**

Nationwide permits provide an efficient method for administering the Corps regulatory program. Little evidence exists for suggesting major variation in environmental service impact, except for possible lower compensatory mitigation ratio, which could be readily modified or corrected as appropriate.

Replacement of the nationwide permit process with other permits – standard permits, letters of permission – would require increased other Federal and state agency involvement to fully capture or realize the environmental oversight inherent to those permits. However, it is not evident that the other agencies have sufficient staffing to accommodate a large increase in review workload.

Replacement of the nationwide permit process with the regional general permit process may result in reduced coordination with other agencies and possibly less consistent protection of irreplaceable resources. However, the Corps can still coordinate regional general permits with other agencies.

Replacement of the nationwide permit process with state programmatic general permits could only be accomplished by states with agencies that have similar programs that offer protection of aquatic resources. Categories of activities and procedures for evaluation and coordination can be developed for state programmatic general permits.

Replacement of the nationwide permit process to an “Activity Regulation by Rules” would eliminate case-by-case project review for activities that meet specified terms and conditions (similar to non-reporting nationwide permits in the current program). That is, there would no application to the Corps and thus no associated administrative costs. Tracking impacts under this scenario would be difficult if not impossible. Thus, there would be no “muscle” in the regulation to cause compliance. Impacts associated with this alternative would be similar to the 1996 program or perhaps greater if thresholds were greater than the 1996 program.

Most other alternatives are much more costly to administer and impose higher compliance costs (in some cases much higher) on the regulated public. However, Alternative A1 (Procedural and Threshold Variation of No Action Alternative) is less costly than the other alternatives, but still has higher costs than the No Action Alternative.

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letters of permission are also less, but the PEIS could not estimate this.

The alternatives were examined as wholesale replacement permit schemes for nationwide permits. The above findings should not discredit or discourage use of the alternatives on a local or regional basis, e.g., letters of permission or regional general permits. For example, other agencies may provide appropriate input or responsibility for implementation of a letters of permission process that can yield both environmental protection while reducing compliance and administrative costs.

### **3.5 Nationwide Permit Program Deficiencies to be Addressed to Reduce or Eliminate Adverse Environmental Impacts**

Implementation of nationwide permit procedures can continue to ensure that only minimal adverse impacts ensue while maintaining a streamlined permitting process that is an effective component of the larger permit program. However, several issues are identified in this PEIS that need to be addressed to reduce or eliminate potential adverse environmental impacts. This section identifies those deficiencies and also identifies improvements already underway that may help address those deficiencies in part. In essence, addressing those deficiencies would represent mitigation for the continuation of nationwide permit procedures.

According to CEQ NEPA regulations at 40 CFR 1508.20, mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- Compensating for the impact by replacing or providing substitute resources or environments.

Potential adverse impacts to aquatic resources are described in Chapter 5. Three aspects of nationwide permit practice need to be addressed to ensure nationwide permit procedures adequately mitigate for impacts to aquatic resources. One, data entry shortcomings associated with the Corps regulatory database call into question the magnitude of impacts and compensatory mitigation. Two, methods for assessment of cumulative impacts at the Corps district, watershed and permit-level are elusive. Three, although there may be recent improvement, there is strong question whether the amount of compensation actually resulting from required compensatory mitigation is sufficient on the whole to offset the cumulative impacts at the national level.

Finally, this section discusses procedures to ensure protection of endangered species and cultural and historical resources. While not identified as an area that necessarily needs improvements, these procedures are critical to ensuring nationwide permit objectives.

Certainly improvements are already being implemented in many Corps districts that address the needs above. These improvements and other suggestions and recommendations are offered below.

### 3.5.1 Regulatory Database Data Entry and Other Information Deficiencies

Corps Headquarters has explicit guidance for field office data entry into the Corps regulatory database (Regulatory Analysis and Management System (RAMS)) and is continuing efforts of the past nine years to improve data entry practice. Among the data entry deficiencies that need to be addressed and emphasized for immediate improvement are the following.

- (a) First, a standard database does not exist across all districts and there is no national-level guidance that explains why the data are needed for national environmental accounting, how the districts might use the data, and explicitly what data should be recorded in each data field for each permit type.
- (b) Impact and mitigation data are not gathered consistently for the entire permit program other than the nationwide permits. The lack of data for impacts to other waters and associated mitigation under standard permits, letters of permission and regional general permits limited a comparison of effectiveness for alternative programs. Cowardin wetland system data are not provided for permits other than nationwide permits. These data would improve future environmental impact statements and contribute to improved assessments of environmental status, such as progress toward national environmental goals.
- (c) Blank data fields in the database cannot be interpreted with certainty because they may be zero impact, temporary impact, impacts to other waters of undocumented degree, or missing data. This deficiency has greatly limited the value of the database for impact analysis.
- (d) Functional data are not easily obtained from the database for both impact and compensatory mitigation with reporting categorized only at the systems level of the Cowardin et al. (1979) classification. Class level identification, including HGM classification when available, would make functional assessments of compensatory mitigation effectiveness that much more thorough.
- (e) The existing database does not assure that temporary impacts cannot be misinterpreted as permanent impacts. Similarly, there is no way to identify wetland class conversion and if that is considered a loss or gain in function.
- (f) Database evidence strongly suggests that data entered for impact and compensatory mitigation under nationwide permit 27 restoration activities were often confused with the restoration results leading to overestimates of impacts, mitigation and mitigation/impact ratios.
- (g) Stream and other “linear” impacts in classes of other water cannot be calculated as acreage of impact because mean width of impact is not recorded. Without estimating all impacts in acres, total impact cannot be summed accurately. In addition, descriptions of impacts in Verification letters do not describe activity in the detail needed, including all units.
- (h) Compensatory mitigation is not now categorized in the database by the action taken, i.e., identified as restoration, creation, preservation, enhancement, or a mix of actions. This results in an underestimate of mitigation action taken.

The above deficiencies might be corrected relatively easily by universal changes in database entry. Other deficiencies are more involved however, and might be corrected using a much smaller representative sample of permit actions to obtain statistically rigorous data. The database

is especially deficient about impact on and compensatory mitigation for ecosystem functions. This deficiency limits interpretation of impact and compensatory mitigation effect on wetland function because there is no information about the locations of impact and mitigation with respect to the affected watershed or other ecoregional definition. In addition there is no estimation of the relative completeness of impact to wetland functions or compensatory mitigation, which is especially relevant when enhancement is used for compensatory mitigation. The functions of one acre of wetland often are impacted partially between no permanent impact and complete permanent impact, which are the only data options now recorded. Similarly, there is no information provided about the relative functional integrity of the ecosystem before impact and compensatory mitigation. There is no information provided about the valued functions associated with the area of impact or compensatory mitigation, nor is there information tracking mitigation based on consistent national guidelines focused on sustaining functions and value.

In addition to the database deficiencies other knowledge deficiencies hamper regulatory effectiveness and efficiency. There is less than sufficient knowledge about ecosystem function and service levels for each Cowardin et al. (1979) class of aquatic habitat, such as the rates of production, organic export, materials sequestration, hydrologic effects, and habitat in process index models that can ultimately be translated into service value. Another general deficiency is knowledge about the factors that contribute most to the value of ecosystem services and elements in models that might be developed for relatively rapid estimation of values. Some of this function and value information exists but has yet to be integrated into useful models for regulatory applications. As the regulatory database now stands, the data cannot be easily analyzed in a landscape (geographic) context.

### **3.5.2 Cumulative Impact Analysis Deficiencies**

Rigorous cumulative impact analysis appears problematic in district practice. The most appropriate basis for considering cumulative impacts is on a watershed or some other regional basis (e.g., ecoregion or a coastline segment for estuarine impacts). Corps Headquarters has strongly encouraged a watershed planning approach, especially for implementing streamlined permitting approaches. Corps Headquarters has recently provided specific recommendations to field offices for considering cumulative effects. Headquarters recommendations state that a typical evaluation might consider past, present and reasonably foreseeable future impact to a wetland system of several connected wetland areas. These Headquarters recommendations call for the Corps to identify the extent and intensity of cumulative effects in the proposed project study area in consideration of on-site avoidance or level of mitigation required. For example, where there has been substantial historic loss of high value aquatic areas or expected future losses are large, remaining aquatic resources will be considered relatively high value, thus leading a higher level of mitigation to fully offset impacts.

Districts are holding workshops with other agencies (e.g., Omaha and Jacksonville districts) to discuss tools and methods for analyzing cumulative effects. To facilitate cumulative impact assessment, many Corps districts are implementing a geographic information system (GIS) to help assist permit decisions. In most cases, these are linked to state or other Federal agency

databases. GIS data layers (e.g., streams, and wetlands) linked to permit data can help the Project Manager consider remaining resource stock and permitting trends on a case-by-case basis. Corps regulatory GIS development is especially facilitated in states or other regions that have already implemented such systems.

### **3.5.3 Compensatory Mitigation Success Deficiencies**

Compensatory mitigation is a critical part of the equation of achieving minimal impacts and the nationwide permit contribution to “no overall net loss of wetlands”. Compensatory mitigation that is not implemented, or does not achieve performance criteria, strongly jeopardizes full replacement of lost wetlands and impacted functions. However the extent to which it replaces or does not replace lost wetlands and function cannot now be ascertained. Scientific and other literature generally suggests problems with compensatory mitigation in terms of both permit compliance and the ability to replace lost functions and values. While it is not evident that many compensatory mitigation projects required as a condition to issued nationwide permits are reviewed for compliance with permit conditions, increased review itself is not sufficient to minimize the problems. Poor mitigation project design and siting are major deterrents to the replacement of lost functions and values. Improvements in these planning aspects are in progress as discussed below. Other options for improvement are also offered below. Some of the options would be outside of the Corps domain to implement.

#### **3.5.3.1 Guidelines at Corps District Level**

In the past several years, many Corps districts have established guidelines (or use recently established state guidance) describing planning, construction, and monitoring of compensatory mitigation sites. Also many state agencies (and other agencies) are developing compensatory mitigation guidance. Many districts apply compensation ratios that are at least partially based on some estimation of likelihood of mitigation success. Appendix B provides a list of districts with compensatory mitigation guidance.

#### **3.5.3.2 Using A Watershed or Regional Perspective**

Mitigation planning (design and siting) can be improved through application of a watershed-based (or some other appropriate region, e.g., ecoregion) approach that considers past and current aquatic resource conditions to identify appropriate sites and desired wetland classes. Such an approach can be enabled through: (1) development of official watershed or regional plans (e.g., Special Area Management Plans) or other priorities and strategies, and (2) establishment of regionally-based mitigation ventures sited according to the watershed or regional needs and expected mitigation needs, e.g., mitigation banks and in-lieu fee arrangements. Towards this end, local, state, and Federal agencies should promote development of regional approaches.

### 3.5.3.3 Other Options for Securing More Successful Mitigation

Other potential approaches to achieving more successful mitigation could involve other agencies or might require congressional action. These include:

- Transferring mitigation monitoring and compliance to other Federal agencies
- Transferring mitigation monitoring and/or compliance to designated non-governmental organizations
- Increasing funding to Corps specifically for oversight

Two other options would use watershed plans or priority lists for mitigation. These options would also require other agency involvement and/or congressional action.

- Contract some or all of the compensatory projects (e.g., for off-site compensation in regions of the country where mitigation banks or in-lieu fee compensation arrangements are not available) to an entity other than the Corps or the permittee. This approach would make use of state grants or other designated Federal monies to fund the compensatory mitigation program. For example the National Fish and Wildlife Foundation could be contracted to provide the mitigation. The Federal Treasury or designated fund would then be reimbursed by applicants.
- Implement a competitive bid process. The Corps and appropriate resource agencies, funded by grants, etc, would solicit proposals from commercial mitigation credit sellers for quality-assured wetland projects that provide the requested watershed priority wetland projects. Contracts would be awarded using the capitalized fund. The sellers would not have to wait to receive funds from applicants. Permit applicants would reimburse the designated fund (see Scodari and Shabman (2001) for a description of such a system). This approach could be accomplished in pilot programs for rapidly suburbanizing and urbanizing watersheds.

### 3.5.3.4 Use of Preservation

Many of the problems reported for compensatory mitigation projects are related to risky techniques (e.g., in non-hydrologically sustainable environments) or poor siting (e.g., adjacent to the authorized wetland impact otherwise surrounded by commercial development). If compensatory mitigation is required for a permit, but only compensation options with low probability of success are available, preservation as compensation should be encouraged (at high exchange ratios to account for incremental function gained/lost) in concert with a watershed vision. Preservation when there is immediacy or relative certainty of non-regulated threat to the wetland could be especially utilized when permit compensatory mitigation conditions require greater acreage than authorized impact acreage. In such a case, preservation could provide the compensation amounts that exceed the authorized impact acreage.

### **3.5.4 Endangered Species and Cultural Resources**

In administering the regulatory program the Corps must ensure that activities are not likely to jeopardize endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. To ensure the protection of threatened and endangered species and their habitat, the Corps first coordinates certain activities with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, to determine the effect of the activity on species and habitat and whether conditions are necessary to include in the permit authorization. Certain nationwide permit activities and all individual permit activities are coordinated with the U.S. Fish and Wildlife Service and National Marine Fisheries Service. If any proposed activity may adversely affect threatened and endangered species or critical habitat, the Corps must initiate Section 7 consultation in accordance with the Endangered Species Act. A biological assessment prepared by the applicant and a subsequent biological opinion prepared by the Service often results in conditions to assure that the activity will not jeopardize species or its' critical habitat.

General condition 11 addresses the requirements of the Endangered Species Act. Nationwide permits do not authorize the "take" of a threatened or endangered species nor can activities that result in jeopardy opinion be authorized by a nationwide permit unless appropriate conditions are included in the permit authorization. Often if an activity involves jeopardy opinion for endangered species, discretionary authority is asserted to allow the activity to be reviewed under the standard permit process and complete Section 7 consultation.

The National Historic Preservation Act is the principle piece of legislation that requires that the Corps evaluate the potential effects of proposed activities on cultural resources and historic properties. Corps regulations provide the procedures that must be followed in the regulatory program to comply with the National Historic Preservation Act and other laws dealing with historic properties.<sup>8</sup> The state historic preservation officer is afforded the opportunity to comment on certain nationwide permit activities and all individual permit activities. In addition, the Advisory Council on Historic Preservation may review certain activities (e.g., no adverse effect or adverse effect determinations). Project specific special conditions or a Memorandum of Agreement may be used to formalize conditions to protect cultural or historic properties and to require mitigation as necessary. Nationwide permit general condition 12 addresses historic properties and cultural resources.

### **3.5.5 Environmental Justice**

Since the nationwide permits authorize only activities with minimal individual and cumulative adverse effects on the aquatic environment, the nationwide permit program complies with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations". District engineers can exercise discretionary authority and require a standard permit for proposed nationwide permit activities that may result in more than minimal adverse effects on public interest factors related to Environmental Justice.

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<sup>8</sup> 33 CFR Part 325, Appendix C (Federal Register 1990)

In specific geographic areas that have substantive Environmental Justice issues, division engineers can also impose, after public notice and comment, regional conditions on nationwide permits to address those issues.