DECISION DOCUMENT
NATIONWIDE PERMIT 48

This document discusses the factors considered by the Corps of Engineers (Corps) during the issuance process for this Nationwide Permit (NWP). This document contains: (1) the public interest review required by Corps regulations at 33 CFR 320.4(a)(1) and (2); (2) a discussion of the environmental considerations necessary to comply with the National Environmental Policy Act; and (3) the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230). This evaluation of the NWP includes a discussion of compliance with applicable laws, consideration of public comments, an alternatives analysis, and a general assessment of individual and cumulative impacts, including the general potential effects on each of the public interest factors specified at 33 CFR 320.4(a).

1.0 Text of the Nationwide Permit

Existing Commercial Shellfish Aquaculture Activities. This NWP authorizes the installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures necessary for the continued operation of the existing commercial aquaculture activity. This NWP also authorizes discharges of dredged or fill material necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities. Rafts and other floating structures must be securely anchored and clearly marked.

This NWP does not authorize new operations or the expansion of the project area for an existing commercial shellfish aquaculture activity. This NWP does not authorize the cultivation of new species (i.e., species not previously cultivated in the waterbody). This NWP does not authorize attendant features such as docks, piers, boat ramps, stockpiles, staging areas, or the deposition of shell material back into waters of the United States as waste.

Reporting: For those activities that do not require pre-construction notification, the permittee must submit a report to the district engineer that includes the following information: (1) the size of the project area for the commercial shellfish aquaculture activity (in acres); (2) the location of the activity; (3) a brief description of the culture method and harvesting method(s); (4) the name(s) of the cultivated species; and (5) whether canopy predator nets are being used. This is a subset of the information that would be required for pre-construction notification. This report may be provided by letter or using an optional reporting form provided by the Corps. Only one report needs to be submitted during the period this NWP is valid, as long as there are no changes to the operation that require pre-construction notification. The report must be submitted to the district engineer within 90 days of the effective date of this NWP.

Notification: The permittee must submit a pre-construction notification to the district engineer if: (1) the project area is greater than 100 acres; or (2) there is any reconfiguration of the aquaculture activity, such as relocating existing operations into portions of the project area

not previously used for aquaculture activities; or (3) there is a change in species being cultivated; or (4) there is a change in culture methods (e.g., from bottom culture to off-bottom culture); or (5) dredge harvesting, tilling, or harrowing is conducted in areas inhabited by submerged aquatic vegetation. (See general condition 27.) (Sections 10 and 404)

Note: The permittee should notify the applicable U.S. Coast Guard office regarding the project.

1.1 Requirements

General conditions of the NWPs are in the Federal Register notice announcing the issuance of this NWP. Pre-construction notification requirements, additional conditions, limitations, and restrictions are in 33 CFR part 330.

1.2 Statutory Authority

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 404 of the Clean Water Act (33 U.S.C. 1344)

1.3 Compliance with Related Laws (33 CFR 320.3)

1.3.1 General

NWPs are a type of general permit designed to authorize certain activities that have minimal adverse effects on the aquatic environment and generally comply with the related laws cited in 33 CFR 320.3. Activities that result in more than minimal adverse effects on the aquatic environment, individually or cumulatively, cannot be authorized by NWPs. Individual review of each activity authorized by an NWP will not normally be performed, except when pre-construction notification to the Corps is required or when an applicant requests verification that an activity complies with an NWP. Potential adverse impacts and compliance with the laws cited in 33 CFR 320.3 are controlled by the terms and conditions of each NWP, regional and case-specific conditions, and the review process that is undertaken prior to the issuance of NWPs.

The evaluation of this NWP, and related documentation, considers compliance with each of the following laws, where applicable: Sections 401, 402, and 404 of the Clean Water Act; Section 307(c) of the Coastal Zone Management Act of 1972, as amended; Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended; the National Environmental Policy Act of 1969; the Fish and Wildlife Act of 1956; the Migratory Marine Game-Fish Act; the Fish and Wildlife Coordination Act, the Federal Power Act of 1920, as amended; the National Historic Preservation Act of 1966; the Interstate Land Sales Full Disclosure Act; the Endangered Species Act; the Deepwater Port Act of 1974; the Marine Mammal Protection Act of 1972; Section 7(a) of the Wild and Scenic Rivers Act; the Ocean Thermal Energy Act of 1980; the National Fishing Enhancement Act of 1984; and the Magnuson-Stevens Fishery and Conservation and Management Act. In addition, compliance

of the NWP with other Federal requirements, such as Executive Orders and Federal regulations addressing issues such as floodplains, essential fish habitat, and critical resource waters is considered.

1.3.2 Terms and Conditions

Many NWPs have notification requirements that trigger case-by-case review of certain activities. Two NWP general conditions require case-by-case review of all activities that may adversely affect Federally-listed endangered or threatened species or historic properties (i.e., general conditions 17 and 18). General condition 15 restricts the use of NWPs for activities that are located in Federally-designated wild and scenic rivers. None of the NWPs authorize artificial reefs. General condition 24 prohibits the use of an NWP with other NWPs, except when the acreage loss of waters of the United States does not exceed the highest specified acreage limit of the NWPs used to authorize the single and complete project.

In some cases, activities authorized by an NWP may require other federal, state, or local authorizations. Examples of such cases include, but are not limited to: activities that are in marine sanctuaries or affect marine sanctuaries or marine mammals; the ownership, construction, location, and operation of ocean thermal conversion facilities or deep water ports beyond the territorial seas; activities that result in discharges of dredged or fill material into waters of the United States and require Clean Water Act Section 401 water quality certification; or activities in a state operating under a coastal zone management program approved by the Secretary of Commerce under the Coastal Zone Management Act. In such cases, a provision of the NWPs states that an NWP does not obviate the need to obtain other authorizations required by law. [33 CFR 330.4(b)(2)]

Additional safeguards include provisions that allow the Chief of Engineers, division engineers, and/or district engineers to: assert discretionary authority and require an individual permit for a specific activity; modify NWPs for specific activities by adding special conditions on a case-by-case basis; add conditions on a regional or nationwide basis to certain NWPs; or take action to suspend or revoke an NWP or NWP authorization for activities within a region or state. Regional conditions are imposed to protect important regional concerns and resources. [33 CFR 330.4(e) and 330.5]

1.3.3 Review Process

The analyses in this document and the coordination that was undertaken prior to the issuance of the NWP fulfill the requirements of the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, and other acts promulgated to protect the quality of the environment.

All NWPs that authorize activities which may result in discharges of dredged or fill material into waters of the United States require water quality certification. NWPs that authorize activities within, or affecting land or water uses within a state that has a Federally-approved

coastal zone management program, must also be certified as consistent with the state's program. The procedures to ensure that the NWPs comply with these laws are described in 33 CFR 330.4(c) and (d), respectively.

1.4 Public Comment and Response

For a summary of the public comments received in response to the September 26, 2006, Federal Register notice, refer to the preamble in the Federal Register notice announcing the issuance of this NWP. The substantive comments received in response to the September 26, 2006, Federal Register notice were used to improve the NWP by changing NWP terms and limits, notification requirements, and/or NWP general conditions, as necessary.

We proposed to issue this new NWP to authorize ongoing shellfish aquaculture activities throughout the United States.

The majority of commenters expressed their support for this new NWP, stating that existing commercial shellfish operations do not have more than minimal adverse impacts on the aquatic environment and contribute benefits to the ecosystem that balance any adverse impact. Referencing numerous scientific studies as evidence of the beneficial aspects of shellfish culture, many of these commenters expressed their desire for the 25-acre threshold for pre-construction notification to be raised considerably, or eliminated entirely, stating it was arbitrary and created an unnecessary bureaucratic paperwork burden for the operators and the Corps. In addition, many commenters recommended that the NWP not be limited only to existing operations but also be available for the expansion of existing operations and for new operations. One commenter supported limiting this NWP to existing operations. A few commenters objected to the issuance of this NWP, stating that commercial shellfish aquaculture operations of unlimited size threaten submerged aquatic vegetation, shorebirds, and other estuarine resources, and potentially exceed the minimal impact threshold, both individually and cumulatively. Several commenters believed that potential for adverse impacts was related more to specific activities than to the geographic extent of an operation, and that whether an operation engaged in these activities was thus a better basis for limits or pre-construction notification thresholds. One commenter recommended requiring pre-construction notification for the use of canopy predator nets that cover broad areas of an aquaculture operation because of potential impacts to a variety of aquatic species. One commenter recommended requiring pre-construction notification for all activities authorized by this NWP, while another commenter suggested a simple reporting requirement in lieu of a pre-construction notification.

Since shellfish improve water quality and increase food production, we believe that there is generally a net increase in aquatic resource functions in estuaries or bays where shellfish are produced. We do not believe it is necessary to require pre-construction notification for all activities authorized by this NWP, including those that involve canopy predator nets. Concerns regarding the use of canopy predator nets are more appropriately address through regional conditions imposed by division engineers, or by special conditions added to NWP authorizations by district engineers. After review of the comments and of scientific

literature, we have modified the pre-construction notification requirements. Pre-construction notification will be required if the project area is greater than 100 acres or if the operation conducts any of the following activities: any reconfiguration of the aquaculture activity, such as relocating existing operations into portions of the project area not previously used for aquaculture activities; a change in species being cultivated; a change in culture methods (e.g., from bottom culture to off-bottom culture); or dredge harvesting, tilling, or harrowing in areas inhabited by submerged aquatic vegetation. We do not believe it is necessary to require pre-construction notification for on-going operations, unless the project area is greater than 100 acres or the operation involves dredge harvesting, tilling, or harrowing in areas inhabited by submerged aquatic vegetation, since on-going operations not meeting these criteria are unlikely to result in significant adverse environmental effects. However, in order to generate better information for future permitting decisions, for those activities that do not require pre-construction notification, we are requiring operators to submit a brief report that will provide the district engineer with basic information on the activity. The report must include the size of the project area, the location of the aquaculture operations, a brief description of the culture methods used, a brief description of the harvesting method(s) used, the name(s) of the cultivated species, and a statement addressing whether canopy predator nets will be used. For each existing operation not submitting a pre-construction notification, the report needs to be submitted within 90 days of the effective date of this NWP. Following submission of this one-time report, no further reporting is necessary. However, if there are any changes to the operation that require Department of the Army (DA) authorization, then pre-construction notification is required if the proposed changes meet any of the pre-construction notification triggers. Depending on the region and culture method used, there may be additional restrictions (e.g., limits on timing of certain activities) that are necessary to further minimize impacts to aquatic resources. These regional concerns are best addressed by district engineers in coordination with State and local agencies and handled through regional conditioning.

Many commenters were confused about the definitions of "existing operation" and "project area" and requested clarification of these terms.

For the purposes of this NWP, an existing operation is one that has been granted a permit, license, or lease from a state or local agency specifically authorizing commercial aquaculture activities and which has undertaken such activities prior to the date of issuance of this NWP. For the purposes of this NWP, the project area is defined as the area of waters of the United States occupied by the existing operation. In most cases, the project area will consist of the area covered by the state or local aquaculture permit, license, or lease. The project area may consist of several sites that are not contiguous. The project area may include areas in which there has been no previous aquaculture activity and/or areas that periodically are allowed to lie fallow as part of normal operations. Relocation of existing operations into portions of the project area not previously used for aquaculture activities may be authorized by this NWP but will require a pre-construction notification. Cultivation in areas that were previously used but allowed to lie fallow does not require a pre-construction notification. Operators should maintain appropriate documentation showing which areas were previously cultivated.

This NWP is limited to work associated with the continued operation of existing commercial shellfish operations, many of which have been in place for hundreds of years. The potential for adverse environmental impacts from such existing operations is minimal, and we support the objectives of the U.S. Department of Commerce's Aquaculture Policy to increase shellfish productivity in this country. Although we believe new projects and the expansion of existing operations are also unlikely to have a high potential for adverse affects on the aquatic environment, without an established data set from which to work, we are not prepared to include them in this NWP at this time. Although new projects and the expansion of existing operations are not authorized initially by this NWP, once authorized by another form of DA permit, such as a regional general permit or an individual permit, the commercial shellfish activities may continue in accordance with the terms and conditions of the issued permit and/or this NWP. Division engineers will conduct regional reviews of commercial shellfish aquaculture activities in coordination with interested agencies and shellfish producers over the next 5 years. After these reviews are completed, we may be prepared to propose an NWP to authorize new commercial shellfish aquaculture operations and the expansion of existing operations in the next NWP re-issuance cycle. The information gathered through the pre-construction notification process and reporting requirement for existing operations in the current NWP will support this effort.

Several commenters expressed confusion regarding whether ongoing commercial shellfish operations require reauthorization under this NWP, if those existing operations have previously been permitted by the Corps.

Existing operations previously authorized by another NWP or another form of DA permit, such as a regional general permit or an individual permit, are covered until the expiration of the original permit. If the operator wishes to continue, and the operation's size, conditions, and/or practices trigger the pre-construction notification requirements of this NWP, then a pre-construction notification must be submitted to the appropriate district office for review prior to the expiration date of the original permit in order to remain in compliance with Federal laws. If the pre-construction notification requirements are not triggered, the operator must submit the required brief report within 90 days of the beginning of coverage under this NWP.

This NWP authorizes the continued operation of existing commercial shellfish aquaculture operations. The continued operation of an aquaculture activity may involve removing and replacing structures in navigable waters of the United States on a recurring basis and requires a current DA permit. However, if an operator is installing a fixed structure, the construction period for a DA permit is the period of time where the permittee is authorized to conduct work in navigable waters of the United States and/or discharge dredged or fill material into waters of the United States. Once the DA permit expires, further authorization is not required to maintain the structures or fills, but if additional work in navigable waters or discharges of dredged or fill material in jurisdictional waters are necessary for the continued operation of those activities, then another DA permit is required.

Many commenters were confused about the requirement to submit a pre-construction notification, assuming that having to submit a pre-construction notification meant that an individual permit would be required. The requirement to submit a pre-construction notification does not mean that an individual permit will be required. Instead, it means that a district office will review the project, in coordination with appropriate resource agencies, within a 45-day timeframe and respond to the applicant with either a verification of the applicability of the NWP or a determination that an individual permit, or other type of DA permit, is required. If the applicant does not hear back from the Corps within 45 days, he or she may assume that the operation is authorized by the NWP.

A pre-construction notification is a brief document that is intended to provide the district engineer with enough information to determine whether an activity is authorized by NWP. The information requirements for a pre-construction notification are listed in paragraph (b) of general condition 27, Pre-Construction Notification. Detailed studies or analyses are not required for pre-construction notifications. The required description of the direct and indirect adverse environmental effects that are expected to result from the NWP activity should be brief, but with sufficient detail to allow the district engineer to determine whether the adverse environmental effects will be minimal and assess the need for compensatory mitigation. The description for the pre-construction notification should include the size of the project area, the name(s) of the species being cultivated, the types of cultivation methods (e.g., long lines, bottom culture, rack and bags), and the harvesting method (e.g., hand pick, dredge, long line harvest). The description should also state when dredge harvesting, harrowing, or tilling will occur in waters with SAV.

For all projects that do not trigger the pre-construction notification requirements of the NWP, submission of a brief report is required. This reporting requirement will help us monitor the use of this NWP, to help ensure that it authorizes only those activities that have minimal individual and cumulative adverse effects on the aquatic environment and other public interest review factors. We have attempted to keep the reporting requirement as simple as possible, to minimize administrative burdens on operators.

A few commenters suggested that NWP 48 is unnecessary because NWPs 4 and 27 adequately cover all the needs of commercial shellfish operations.

Although shellfish seeding activities were authorized by previous versions of NWP 4, that NWP did not authorize additional structures or work in navigable waters commonly associated with commercial shellfish aquaculture activities, such as the installation of stakes and netting in navigable waters to prevent predators from feeding upon the shellfish. Because of the issuance of this NWP and the modification of NWP 27, it is no longer necessary to include shellfish seeding in the list of activities authorized by NWP 4 and we have removed it. NWP 27 does not cover commercial shellfish operations. It covers shellfish habitat restoration activities, including shellfish seeding, that are conducted to restore shellfish populations. Restored populations may, at some future date, be subject to recreational harvesting; but the purpose of activities conducted under NWP 27 is restoration, not commercial aquaculture. Although NWP 48 represents a change in how commercial

shellfishing operations are being regulated by the Corps, structures and other work in navigable waters of the United States have been regulated activities for decades. Discharges of dredged or fill material into waters of the United States have been regulated under Section 404 of the Clean Water Act since 1972, but the definitions of these terms have changed over the years. Individual permits remain a permitting tool that will be necessary in some circumstances. There are several districts that currently have regional general permits in place to authorize aquaculture activities and more general permits are expected to be developed.

In the preamble to the September 26, 2006, proposal, we solicited comments on whether to impose limits on the quantity of dredged or fill material that could be discharged into navigable waters under this NWP. One commenter said that this NWP should be conditioned to prohibit discharges of dredged or fill material or to require pre-construction notification for each activity involving such discharges. Many commenters stated that there should be no limitation on the quantity of dredged or fill material that could be discharged into navigable waters because the cost of such material is limiting and also because most of the material is removed during harvest. Many mentioned large Federal restoration projects that have utilized shellfish seeding methods to enhance estuaries. Several commenters objected to having no limits and several suggested limiting the discharge to 3 to 6 inches or a certain percentage of the water column. Several others indicated that materials such as marl, concrete, and gravel, in addition to shell and shell fragments, should be included in the material authorized for discharge.

It would be illogical to prohibit discharges of dredged or fill material under this permit, since without such discharges, no permit is required anyway. This NWP authorizes discharges of dredged or fill material into waters of the United States only for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities for on-going commercial shellfish aquaculture activities. With the exception of harvesting activities, such discharges usually enhance habitat characteristics to support the growth of shellfish. As for harvesting activities, pre-construction notification is required for dredge harvesting in areas inhabited by submerged aquatic vegetation, so case-by-case review will be conducted to determine if the activity results in more than minimal adverse effects on the aquatic environment. Pre-construction notification is also required for tilling and harrowing in submerged aquatic vegetation. Other harvesting activities that are part of on-going activities are unlikely to result in more than minimal adverse effects. Division engineers may impose regional conditions on this NWP to further restrict cultivation or harvesting practices or to require pre-construction notification for additional practices that may be of concern within a particular area.

Many commenters expressed concern over whether the gear associated with commercial shellfish culture would be authorized by this NWP, noting that much of the in-water gear serves as habitat for other aquatic species and is necessary for the success of a commercial shellfish venture. Other commenters expressed concern over the waste and trash left by geoduck operations and the adverse impacts that litter has on the surrounding intertidal environment.

This NWP authorizes structures or work in navigable waters of the United States, as well as discharges of dredged or fill material into all waters of the United States for the purposes of the commercial seeding, rearing, cultivating, transplanting, and harvesting of shellfish, which may involve the installation of buoys, floats, racks, trays, nets, lines, tubes, and containers, as well as other associated structures and work. The language of the NWP has been modified to clarify that it does not authorize the discharge of dredged or fill material into waters of the United States for attendant features of commercial aquaculture operations such as boat ramps, stockpiles, staging areas, and moorings or for the deposition of shell material back into tidal waters as a waste material. As stated above, discharges of dredged or fill material below the high tide line/ordinary high water mark must be of the minimum necessary to provide suitable planting substrate. Examples of commercial shellfish species for which this NWP may be used to authorize existing commercial aquaculture activities include oysters, clams, geoducks, mussels, and scallops. The proposed NWP does not authorize commercial aquaculture activities for crustaceans or finfish. Types of gear specific to a particular region or species are best evaluated on a regional basis by the district engineer and can be addressed through regional conditions.

There are different types of shellfish seed that can be used to increase shellfish production. Shellfish seed may consist of immature individual shellfish, an individual shellfish attached to a shell or shell fragment (i.e., spat on shell) and shellfish shells, shell fragments, and/or shell fragments mixed with gravel/concrete/limestone placed into waters to provide a substrate for attachment by free swimming shellfish larvae (i.e., natural catch). Several commenters asked that we clarify the definition of shellfish seeding. We have provided a definition of shellfish seeding in the "Definitions" section of the NWPs. This definition was based on the definition provided in the preamble to the September 26, 2006, Federal Register notice (71 FR 56275).

Most commenters asked that we clarify our definition of submerged aquatic vegetation (SAV) and asked that we limit our concern to those species of aquatic vegetation that have been shown to have beneficial environmental effects. Some commenters expressed concern that any commercial aquaculture activity would have a negative impact on SAV and therefore this NWP should not be issued. Many commenters asked that we remove the pre-construction notification requirement for operations having more than 10 acres of the project area occupied by SAV, stating that shellfish beds clarify the water thereby increasing the likelihood that SAV would colonize their project area. A few commenters suggested that we define the density of bed and length of time present (i.e., recognize seasonal population fluctuation) necessary to trigger the reporting requirement.

Commercial shellfish aquaculture activities often take place in, and are found to co-exist with, intertidal areas that are occupied by submerged aquatic vegetation (i.e., vegetated shallows). The definition of vegetated shallows (see Part D, Definitions) clarifies that vegetated shallows are those areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine

systems and a variety of vascular rooted plants in freshwater systems. Macroalgae are not included in our definition of SAV nor is it our intent to provide protection for noxious or invasive species such as Zostera japonica. However, to minimize adverse effects to valuable aquatic habitat, such as shallows vegetated by species such as Zostera marina, we are requiring pre-construction notification for dredge harvesting, tilling, or harrowing in areas inhabited by SAV. To capture the regional variances, such as colonization rate, population shifts, density, and species composition, districts may choose to further refine the definition of SAV in their regional conditions to better reflect environmental circumstances in their region. We are removing the proposed requirement to submit a pre-construction notification if the project area includes 10 acres or more of SAV because we have determined that only certain types of activities (dredge harvesting, tilling, harrowing) in SAV areas have the potential to cause more than minimal adverse impacts.

The majority of commenters objected to the proposed prohibition against the cultivation of new species by an operation while recognizing the need to protect the environment from invasive species colonization. A few commenters were in favor of the prohibition citing concerns about invasive species and changing culture methods. One commenter said that this NWP should not authorize experimental cultivation of new species in a waterbody.

Upon review of the comments, the proposed NWP has been modified slightly. The NWP does not authorize aquaculture activities for any species that were not previously cultivated in the waterbody. However, under this NWP, an individual operator can change the species grown under this NWP within the project area, provided the change is limited to species that have been previously cultivated in the water body. Such a change would require pre-construction notification. The commercial production of a shellfish species that has not been previously commercially produced in the waterbody, including new exotic (non-native) species, may only be authorized by an individual permit or a regional general permit if applicable. Also, this NWP does not authorize experimental cultivation of new species. It only authorizes on-going commercial shellfish aquaculture activities, provided those activities satisfy the terms and conditions of this NWP. Experimental cultivation is considered to be a new activity, and may be authorized by other DA permits if it involves activities subject to the Corps regulatory jurisdiction.

Producers must be licensed, as required, through their State's regulatory agency. Commercial harvest will only commence under each State's Shellfish Authority, as delegated by the U.S. Food and Drug Administration under the National Shellfish Sanitation Program. To be eligible for coverage under this NWP, producers must obtain all required permits or licenses required for their culture activities, such as transfer permits, development permits, and land-use permits.

In response to commenters concerned about the individual and cumulative adverse effects to the environment and the many commenters who stated that acreage limits were not an adequate way of establishing or evaluating the interaction of the shellfish operation with the aquatic environment, an additional pre-construction notification threshold has been added. When an existing operation decides to change culture methods, for example to go from

bottom-culture to long-line or from long-line to bottom culture, pre-construction notification is required. These existing operations may be authorized by this NWP, after the district engineer has reviewed the pre-construction notification and determined that the new activity complies with the terms and conditions of the NWP and will have minimal adverse effects.

We are also committed to conducting programmatic reviews of commercial shellfish activities generally to ensure that the Corps is authorizing only those activities that result in minimal individual or cumulative adverse effects on the aquatic environment with this NWP or other general permits for aquaculture activities. These reviews will begin as soon as possible in all divisions, and will involve Federal, State and local agencies, stakeholders, and the general public to help the Corps develop future regional and special conditions to mitigate impacts to the aquatic environment or other aspects of the public interest which may result from commercial shellfish aquaculture activities. Completion of these programmatic reviews is not necessary for authorization under this NWP. The data collected through the pre-construction notification and reporting requirements will support these reviews.

One commenter said that this NWP should include conditions prohibiting the use of pesticides. A commenter stated that this NWP should require pre-construction notification for any activity located in National Park Service units, and that review by the National Park Service should be conducted before the activity is authorized by this NWP.

The Corps does not regulate application of pesticides under Section 10 of the Rivers and Harbors Act of 1899 or Section 404 of the Clean Water Act. The application of pesticides into aquatic environments is regulated by other agencies through other authorities. We do not agree that pre-construction notification should be required for on-going commercial shellfish aquaculture activities being conducted in areas under the purview of the National Park Service. The National Park Service has the authority to control the activities conducted in its units, to ensure that those activities are consistent with any management requirements or objectives established for those units.

2.0 Alternatives

This evaluation includes an analysis of alternatives based on the requirements of NEPA, which requires a more expansive review than the Clean Water Act Section 404(b)(1) Guidelines. The alternatives discussed below are based on an analysis of the potential environmental impacts and impacts to the Corps, Federal, Tribal, and state resource agencies, general public, and prospective permittees. Since the consideration of off-site alternatives under the 404(b)(1) Guidelines does not apply to specific projects authorized by general permits, the alternatives analysis discussed below consists of a general NEPA alternatives analysis for the NWP.

2.1 No Action Alternative (No Nationwide Permit)

The no action alternative would not achieve one of the goals of the Corps Nationwide Permit Program, which is to reduce the regulatory burden on applicants for activities that result in minimal adverse effects on the aquatic environment, individually or cumulatively. The no action alternative would also reduce the Corps ability to pursue the current level of review for other activities that have greater adverse effects on the aquatic environment, including activities that require individual permits as a result of the Corps exercising its discretionary authority under the NWP program. The no action alternative would also reduce the Corps ability to conduct compliance actions.

If this NWP is not available, substantial additional resources would be required for the Corps to evaluate these minor activities through the individual permit process, and for the public and Federal, Tribal, and state resource agencies to review and comment on the large number of public notices for these activities. In a considerable majority of cases, when the Corps publishes public notices for proposed activities that result in minimal adverse effects on the aquatic environment, the Corps typically does not receive responses to these public notices from either the public or Federal, Tribal, and state resource agencies. Another important benefit of the NWP program that would not be achieved through the no action alternative is the incentive for project proponents to design their projects so that those activities meet the terms and conditions of an NWP. The Corps believes the NWPs have significantly reduced adverse effects to the aquatic environment because most applicants modify their projects to comply with the NWPs and avoid the delays and costs typically associated with the individual permit process.

In the absence of this NWP, Department of the Army (DA) authorization in the form of another general permit (i.e., regional or programmatic general permits, where available) or individual permits would be required. Corps district offices may develop regional general permits if an NWP is not available, but this is an impractical and inefficient method for activities with minimal individual or cumulative adverse effects on the aquatic environment that are conducted across the Nation. Not all districts would develop these regional general permits for a variety of reasons. The regulated public, especially those companies that conduct work in more than one Corps district, would be adversely affected by the widespread use of regional general permits because of the greater potential for lack of consistency and predictability in the authorization of similar activities with minimal adverse effects on the aquatic environment. These companies would incur greater costs in their efforts to comply with different regional general permit requirements between Corps districts. Nevertheless, in some states Corps districts have issued programmatic general permits to take the place of this and other NWPs. However, this approach only works in states with regulatory programs comparable to the Corps Regulatory Program.

2.2 National Modification Alternatives

Since the Corps Nationwide Permit program began in 1977, the Corps has continuously strived to develop NWPs that authorize activities that result only in minimal adverse effects

on the aquatic environment, individually or cumulatively. Every five years the Corps reevaluates the NWPs during the reissuance process, and may modify an NWP to address concerns for the aquatic environment. Utilizing collected data and institutional knowledge concerning activities authorized by the Corps regulatory program, the Corps reevaluates the potential impacts of activities authorized by NWPs. The Corps also uses substantive public comments on proposed NWPs to assess the expected impacts. This NWP was developed to authorize structures, work, and discharges for the continued operation of existing commercial shellfish aquaculture activities, provided those activities have minimal adverse effects on the aquatic environment. The Corps has considered alternative limits and applicable waters for this NWP, as well as modifying or adding NWP general conditions, as discussed in the preamble of the Federal Register notice announcing the issuance of this NWP.

In the September 26, 2006, Federal Register notice, the Corps requested comments on the proposed issuance of this NWP.

2.3 Regional Modification Alternatives

An important aspect for the NWPs is the emphasis on regional conditions to address differences in aquatic resource functions, services, and values across the nation. All Corps divisions and districts are expected to add regional conditions to the NWPs to enhance protection of the aquatic environment and address local concerns. Division engineers can also revoke an NWP if the use of that NWP results in more than minimal adverse effects on the aquatic environment, especially in high value or unique wetlands and other waters.

Corps divisions and districts also monitor and analyze the cumulative adverse effects of the NWPs, and if warranted, further restrict or prohibit the use of the NWPs to ensure that the NWPs do not authorize activities that result in more than minimal adverse effects on the aquatic environment. To the extent practicable, division and district engineers will use regulatory automated information systems and institutional knowledge about the typical adverse effects of activities authorized by NWPs, as well as substantive public comments, to assess the individual and cumulative adverse effects on the aquatic environment resulting from regulated activities. When conducting such assessments, division and district engineers can only consider those activities regulated by the Corps under Section 10 of the Rivers and Harbors Act, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972. Adverse impacts resulting from activities outside of the Corps scope of review, such as the construction or expansion of upland developments, cannot be considered in the Corps analysis of cumulative adverse effects on the aquatic environment.

2.4 Case-specific On-site Alternatives

Although the terms and conditions for this NWP have been established at the national level to authorize most activities that have minimal adverse effects on the aquatic environment, division and district engineers have the authority to impose case-specific special conditions

on an NWP authorization to ensure that the authorized work will result in minimal adverse effects.

General condition 20 requires the permittee to minimize and avoid impacts to waters of the United States to the maximum extent practicable on the project site. Off-site alternatives cannot be considered for activities authorized by NWPs. During the evaluation of a pre-construction notification, the district engineer may determine that additional avoidance and minimization is practicable. The district engineer may also condition the NWP authorization to require mitigation to reduce impacts to waters of the United States and ensure that the net adverse effects on the aquatic environment are minimal. As another example, the NWP authorization can be conditioned to prohibit the permittee from conducting the work during certain times of the year to protect specific resources. If the proposed work will result in more than minimal adverse effects on the aquatic environment, then the district engineer will exercise discretionary authority and require an individual permit. Discretionary authority can be asserted where there are concerns for the aquatic environment, including high value aquatic habitats. The individual permit review process requires a project-specific alternatives analysis, including the consideration of off-site alternatives, and a public interest review.

3.0 Affected Environment

The affected environment consists of terrestrial and aquatic ecosystems. The total land area in the contiguous United States is approximately 1,930,000,000 acres (Dahl 2006). Alaska is 366,050,000 acres in size and Hawaii is 4,110,720 acres in size (source: http://www.usgs.gov/state/ , accessed July 25, 2005). Terrestrial ecosystems comprise more than 93 percent of the contiguous United States and most are abundant compared to aquatic ecosystems, which make up the remainder (Dahl 2006). In the contiguous United States, approximately 67 percent of the land is privately owned, 31 percent is held by the United States government, and two percent is owned by state or local governments (Dale et al. 2000). Developed non-federal lands comprise 4.4 percent of the total land area of the contiguous United States (Dale et al. 2000).

The Federal Geographic Data Committee has established the Cowardin system developed by the U.S. Fish and Wildlife Service (USFWS) (Cowardin et al. 1979) as the national standard for wetland mapping, monitoring, and data reporting (Dahl 2006) (see also http://www.fgdc.gov/standards/projects/FGDC-standards-projects/wetlands/fgdc-announce , accessed April 3, 2006). The Cowardin system is a hierarchical system which describes various wetland and deepwater habitats, using structural characteristics such as vegetation, substrate, and water regime as defining characteristics. Wetlands are defined by vegetation type, soils, and flooding frequency. Deepwater habitats are permanently flooded areas located below the wetland boundary. In rivers and lakes, deepwater habitats are usually more than two meters deep.

There are five major systems in the Cowardin classification scheme: marine, estuarine, riverine, lacustrine, and palustrine (Cowardin et al. 1979). The marine system consists of open ocean on the continental shelf and its high energy coastline. The estuarine system consists of tidal deepwater habitats and adjacent tidal wetlands that are usually partially enclosed by land, but may have open connections to open ocean waters. The riverine system generally consists of all wetland and deepwater habitats located within a river channel. The lacustrine system generally consists of wetland and deepwater habitats located within a topographic depression or dammed river channel, with a total area greater than 20 acres. The palustrine system generally includes all non-tidal wetlands and wetlands located in tidal areas with salinities less than 0.5 parts per thousand; it also includes ponds less than 20 acres in size. Approximately 95 percent of wetlands in the conterminous United States are freshwater wetlands, and the remaining 5 percent are estuarine or marine wetlands (Dahl 2006).

The Emergency Wetlands Resources Act of 1986 (Public Law 99-645) requires the USFWS to submit wetland status and trends reports to Congress (Dahl 2006). The latest status and trends report, which covers the period of 1998 to 2004, is summarized in Table 3.1.

Table 3.1. Estimated aquatic resource acreages in the conterminous United States in 2004 (Dahl 2006).

Aquatic Habitat Category	Estimated Area in 2004 (acres)
Marine	128,600
Estuarine intertidal non-vegetated	600,000
Estuarine intertidal vegetated	4,571,700
All intertidal waters and wetlands	5,300,300
Palustrine non-vegetated	6,633,900
Palustrine vegetated	95,819,800
• Palustrine emergent wetlands	26,147,000
• Palustrine forested wetlands	52,031,400
• Palustrine shrub wetlands	17,641,400
All palustrine aquatic habitats	102,453,700
Lacustrine deepwater habitats	16,773,400
Riverine deepwater habitats	6,813,300
Estuarine subtidal habitats	17,717,800
All aquatic habitats	149,058,500

The acreage of lacustrine deepwater habitats does not include the open waters of Great Lakes (Dahl 2006).

According to Hall et al. (1994), there are more than 204 million acres of wetlands and deepwater habitats in the State of Alaska, including approximately 174.7 million acres of wetlands. Wetlands and deepwater habitats comprise approximately 50.7 percent of the surface area in Alaska (Hall et al. 1994).

The National Resources Inventory (NRI) is a statistical survey conducted by the Natural Resources Conservation Service (NRCS) (2003) of natural resources on non-federal land in the United States. The NRCS defines non-federal land as privately owned lands, tribal and trust lands, and lands under the control of local and State governments. The land use determined by 2003 NRI is summarized in Table 3.2. The 2003 NRI estimates that there are 110,760,000 acres of palustrine and estuarine wetlands on non-Federal land and water areas in the United States (NRCS 2003).

Table 3.2. The 2003 National Resources Inventory acreages for palustrine and estuarine wetlands on non-federal land, by land cover/use category (NRCS 2003).

National Resources Inventory Land Cover/Use Category	Area of Palustrine and Estuarine Wetlands (acres)
cropland, pastureland, and Conservation Reserve Program land	16,730,000
forest land	65,440,000
Rangeland	7,740,000
other rural land	15,800,000
developed land	1,590,000
water area	3,460,000
Total	110,760,000

The land cover/use categories used by the 2003 NRI are defined below (NRCS 2003). Croplands are areas used to produce crops adapted for harvest. Pastureland is land managed for livestock grazing, through the production of introduced forage plants. Conservation Reserve Program land is under a Conservation Reserve Program contract. Forest land is comprised of at least 10 percent single stem woody plant species that will be at least 13 feet tall at maturity. Rangeland is land on which plant cover consists mostly of native grasses, herbaceous plants, or shrubs suitable for grazing or browsing, and introduced forage plant species. Other rural land consists of farmsteads and other farm structures, field windbreaks, marshland, and barren land. Developed land is comprised of large urban and built-up areas (i.e., urban and built-up areas 10 acres or more in size), small built-up areas (i.e., developed lands 0.25 to 10 acres in size) , and rural transportation land (e.g., roads, railroads, and associated rights-of-way outside urban and built-up areas). Water areas are comprised of waterbodies and streams that are permanent open waters.

Leopold, Wolman, and Miller (1964) estimated that there are approximately 3,250,000 miles of river and stream channels in the United States. This estimate is based on an analysis of

1:24,000 scale topographic maps, by stream order. This estimate does not include many small streams. Many small streams are not mapped on 1:24,000 scale U.S. Geological Survey topographic maps (Leopold 1994) or included in other analyses (Meyer and Wallace 2001). In a study of stream mapping in the southeastern United States, only 20% of the stream network was mapped on 1:24,000 scale topographic maps, and nearly none of the observed intermittent or ephemeral streams were indicated on those maps (Hansen 2001). For a 1:24,000 scale topographic map, the smallest tributary found by using 10-foot contour interval has drainage area of 0.7 square mile and length of 1,500 feet, and smaller channels are common throughout the United States (Leopold 1994). Due to the difficulty in mapping small streams, there are no accurate estimates of the total number of river or stream miles in the conterminous United States that may be classified as "waters of the United States."

The USFWS status and trends study does not assess the condition or quality of wetlands and deepwater habitats (Dahl 2006). The Nation's aquatic resource base is underestimated by the USFWS status and trends study, the National Wetland Inventory (NWI), and studies that estimate the length or number of stream channels within watersheds (see above). The 2006 status and trends study does not include Alaska and Hawaii. The underestimate by the status and trends study and the NWI results from the minimum size of wetlands detected through remote sensing techniques and the difficulty of identifying certain wetland types through those remote sensing techniques. The NWI maps do not show small or linear wetlands (Tiner 1997) that may be directly impacted by activities authorized by NWPs. For the latest USFWS status and trends study, most of the wetlands identified are larger than 2.5 acres, but the minimum size of detectable wetland varies by wetland type (Dahl 2006). Some wetland types less than one acre in size can be identified; the smallest wetland detected for the most recent status and trends report was 0.005 acre (Dahl 2006). Because of the limitations of remote sensing techniques, certain wetland types are not included in the USFWS status and trends study: seagrass beds, submerged aquatic vegetation, submerged reefs, certain types of forested wetlands, and emergent wetlands along the Pacific coast (Dahl 2006). Therefore, activities authorized by NWPs will adversely affect a smaller proportion of the Nation's wetland base than indicated by the wetlands acreage estimates provided in the most recent status and trends report, or the NWI maps for a particular region.

Not all of the Nation's aquatic resources are subject to regulatory jurisdiction under Section 404 of the Clean Water Act. Waters of the United States subject to Section 404 of the Clean Water Act are defined at 33 CFR part 328. Some wetlands are not subject to Clean Water Act jurisdiction because they do not meet the criteria at Part 328. In its decision in *Solid Waste County of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001), the U.S. Supreme Court ruled that Clean Water Act jurisdiction does not apply to isolated, intrastate, non-navigable waters based on their use as habitat for migratory birds. Tiner (2003) estimated that in some areas of the country, the proportion of wetlands that are geographically isolated, and may not be subject to Clean Water Act jurisdiction is approximately 20 to 50 percent of the wetland area, and there are other areas where more than 50 percent of the wetlands are geographically isolated. Geographically isolated wetlands comprise a substantial proportion of the wetlands found in regions with arid, semi-arid, and semi-humid climates, as well as areas with karst topography (Tiner 2003).

However, it is difficult to determine from maps or aerial photographs whether wetlands are hydrologically isolated from other waters, because there may be small surface hydrologic connections that are not included on those maps or detected by those photographs (Tiner 2003).

This NWP authorizes activities in waters of the United States, including navigable waters. The waters in which this NWP would normally be used are the estuarine and marine systems of the Cowardin classification system.

Wetland functions are the biophysical processes that occur within a wetland (King et al. 2000). Wetlands provide many functions, such as habitat for fish and shellfish, habitat for waterfowl and other wildlife, habitat for rare and endangered species, food production, plant production, flood conveyance, flood-peak reduction, flood storage, shoreline stabilization, water supply, ground water recharge, pollutant removal, sediment accretion, and nutrient uptake (NRC 1992).

Functions provided by streams include sediment transport, water transport, transport of nutrients and detritus, habitat for many species of plants and animals (including endangered or threatened species), and maintenance of biodiversity (NRC 1992). Streams also provide nutrient cycling functions, food web support, and transport organisms (Allan 1995).

Freshwater ecosystems provide services such as water for drinking, household uses, manufacturing, thermoelectric power generation, irrigation, and aquaculture; production of finfish, waterfowl, and shellfish; and non-extractive services, such as flood control, transportation, recreation (e.g., swimming and boating), pollution dilution, hydroelectric generation, wildlife habitat, soil fertilization, and enhancement of property values (Postel and Carpenter 1997).

Marine ecosystems provide a number of ecosystem services, including fish production; materials cycling (e.g., nitrogen, carbon, oxygen, phosphorous, and sulfur); transformation, detoxification, and sequestration of pollutants and wastes produced by humans; support of ocean-based recreation, tourism, and retirement industries; and coastal land development and valuation, including aesthetics related to living near the ocean (Peterson and Lubchenco 1997).

Activities authorized by this NWP will provide a wide variety of goods and services that are valued by society. For example, commercial shellfish aquaculture activities provide sources of protein and other nutrients to human populations. Commercial shellfish aquaculture activities can also produce other compounds that are used by society.

4.0 Environmental Consequences

4.1 General Evaluation Criteria

This document contains a general assessment of the foreseeable effects of the individual activities authorized by this NWP, the anticipated cumulative effects of those activities, and the potential future losses of waters of the United States that are estimated to occur until the expiration date of the NWP. In the assessment of these individual and cumulative effects, the terms and limits of the NWP, notification requirements, and the standard NWP general conditions are considered. The supplementary documentation provided by division engineers will address how regional conditions affect the individual and cumulative effects of the NWP.

The following evaluation comprises the NEPA analysis, the public interest review specified in 33 CFR 320.4(a)(1) and (2), and the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230).

The issuance of an NWP is based on a general assessment of the effects on public interest and environmental factors that are likely to occur as a result of using this NWP to authorize activities in waters of the United States. As such, this assessment must be speculative or predictive in general terms. Since NWPs authorize activities across the nation, projects eligible for NWP authorization may be constructed in a wide variety of environmental settings. Therefore, it is difficult to predict all of the indirect impacts that may be associated with each activity authorized by an NWP. For example, the NWP that authorizes 25 cubic yard discharges of dredged or fill material into waters of the United States may be used to fulfill a variety of project purposes. Indication that a factor is not relevant to a particular NWP does not necessarily mean that the NWP would never have an effect on that factor, but that it is a factor not readily identified with the authorized activity. Factors may be relevant, but the adverse effects on the aquatic environment are negligible, such as the impacts of a boat ramp on water level fluctuations or flood hazards. Only the reasonably foreseeable direct or indirect effects are included in the environmental assessment for this NWP. Division and district engineers will impose, as necessary, additional conditions on the NWP authorization or exercise discretionary authority to address locally important factors or to ensure that the authorized activity results in no more than minimal individual and cumulative adverse effects on the aquatic environment. In any case, adverse effects will be controlled by the terms, conditions, and additional provisions of the NWP. For example, Section 7 Endangered Species Act consultation will be required for activities that may affect endangered or threatened species or critical habitat.

4.2 Impact Analysis

This NWP authorizes structures, work, and discharges of dredged or fill material into navigable waters of the United States for the continued operation of existing commercial shellfish aquaculture activities. This NWP does not authorize the expansion of the project area for the commercial shellfish aquaculture activity.

Pre-construction notification is required if: (1) the project area is greater than 100 acres; or (2) there is any reconfiguration of the aquaculture activity, such as relocating existing operations into portions of the project area not previously used for aquaculture activities; or (3) there is a change in species being cultivated; or (4) there is a change in culture methods (e.g., from bottom culture to off-bottom culture); or (5) dredge harvesting, tilling, or harrowing is conducted in areas inhabited by submerged aquatic vegetation. The pre-construction notification requirement allows district engineers to review proposed activities on a case-by-case basis to ensure that the adverse effects of those activities on the aquatic environment are minimal. If the district engineer determines that the adverse effects of a particular project are more than minimal after considering mitigation, then discretionary authority will be asserted and the applicant will be notified that another form of DA authorization, such as a regional general permit or individual permit, is required (see 33 CFR 330.4(e) and 330.5).

Additional conditions can be placed on proposed activities on a regional or case-by-case basis to ensure that the work has minimal adverse effects on the aquatic environment. Regional conditioning of this NWP will be used to account for differences in aquatic resource functions, services, and values across the country, ensure that the NWP authorizes only those activities with minimal individual or cumulative adverse effects on the aquatic environment, and allow each Corps district to prioritize its workload based on where its efforts will best serve to protect the aquatic environment. Regional conditions can prohibit the use of an NWP in certain waters (e.g., high value waters or specific types of wetlands or waters), lower notification thresholds, or require pre-construction notification for all work in certain watersheds or types of waters. Specific NWPs can also be revoked on a geographic or watershed basis where the adverse effects resulting from the use of those NWPs are more than minimal.

In high value waters, division and district engineers can: 1) prohibit the use of the NWP in those waters and require an individual permit or regional general permit; 2) impose an acreage limit on the NWP; 3) lower the notification threshold of the NWP to require notification for activities with smaller impacts in those waters; 4) require notification for all activities in those waters; 5) add regional conditions to the NWP to ensure that the adverse environmental effects are minimal; or 6) for those activities that require notification, add special conditions to NWP authorizations, such as compensatory mitigation requirements, to ensure that the adverse effects on the aquatic environment are minimal. NWPs can authorize activities in high value waters as long as the individual and cumulative adverse effects on the aquatic environment are minimal.

The construction and use of fills for temporary access for construction may be authorized by NWP 33 or regional general permits issued by division or district engineers. The related work must meet the terms and conditions of the specified permit(s). If the discharge is dependent on portions of a larger project that require an individual permit, this NWP will not apply. [See 33 CFR 330.6(c) and (d)]

4.3 Cumulative Impacts

The cumulative impacts of an NWP generally depends on the number of times the permit is used on a national basis. However, in a specific watershed, division or district engineers may determine that the cumulative adverse effects of activities authorized by NWPs are more than minimal. Division and district engineers will conduct more detailed assessments for geographic areas that are determined to be potentially subject to more than minimal cumulative adverse effects. Division and district engineers have the authority to require individual permits where the cumulative adverse effects are more than minimal, or add conditions to the NWP either on a case-by-case or regional basis to ensure that the cumulative adverse effects are minimal. When division or district engineers determine that a geographic area is subject to more than minimal cumulative adverse effects due to the use of the NWPs, they will use the revocation and modification procedure at 33 CFR 330.5. In reaching the final decision, they will compile information on the cumulative adverse effects and supplement this document.

According to the National Agricultural Statistics Service (USDA 2006), as of 2005 there are 1,222 commercial production facilities for mollusks in the United States. Since this NWP authorizes only activities necessary for the continued operation of these facilities, and does not authorize the expansion of the project area, there will be no additional impacts to waters of the United States except for those impacts resulting from day-to-day operations during the five-year duration of this NWP. Compensatory mitigation is not normally required, since the NWP authorizes the continued operation of existing commercial shellfish activities and does not authorize the expansion of the project area for those activities. The numbers of these types of activities could increase or decrease over the five-year duration of this NWP, but we do not expect those numbers to change substantially since the NWP is limited to existing operations. However, the number of activities will increase when this NWP is used to authorize the subsequent continued operation of a commercial mollusk production facility that was initially authorized by other types of Department of the Army permits, such as individual permits or regional general permits. The numbers of activities may decrease if any of these operations change to cultivate aquatic species other than mollusks or go out of business. The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects within the scope of the NWP rather than request individual permits for projects which could result in greater adverse impacts to the aquatic environment.

5.0 Public Interest Review

5.1 Public Interest Review Factors (33 CFR 320.4(a)(1))

For each of the 20 public interest review factors, the extent of the Corps consideration of expected impacts resulting from the use of this NWP is discussed, as well as the reasonably foreseeable cumulative adverse effects that are expected to occur. The Corps decision process involves consideration of the benefits and detriments that may result from the

activities authorized by this NWP.

(a) Conservation. The activities authorized by this NWP will result in minor changes to the natural resource characteristics of the project area, since the NWP authorizes only the continued operation of existing commercial shellfish aquaculture activities. Mitigation may be required to minimize impacts to conservation values.

(b) Economics. Commercial shellfish aquaculture activities will have positive impacts on the local economy. These activities will generate jobs and revenue for local growers as well as revenue to supply companies that sell materials used for the continued operation of these activities. Commercial shellfish aquaculture activities supply seafood for restaurants and other consumers. The authorized aquaculture activities will also benefit the community by improving the local economic base, which is affected by employment, tax revenues, community services, and property values.

(c) Aesthetics. Commercial shellfish aquaculture activities may alter the visual character of some waters of the United States, but such changes will be negligible since the NWP authorizes only the continued operation of existing activities. The extent and perception of these changes will vary, depending on the size and configuration of the aquaculture activity, the nature of the surrounding area, and the public uses of the area. The use of the project area and the surrounding land may also alter local aesthetic values.

(d) General environmental concerns. Activities authorized by this NWP will affect general environmental concerns, such as water, air, noise, and land pollution. The authorized work will also affect the physical, chemical, and biological characteristics of the environment. The adverse effects of the activities authorized by this NWP on general environmental concerns will be minor. At moderate population densities, commercially produced shellfish populations may improve general environmental concerns, such as water quality, within navigable waters by removing suspended materials and plankton from the water column. Adverse effects to the chemical composition of the aquatic environment will be controlled by general condition 6, which states that the material used for construction must be free from toxic pollutants in toxic amounts. General condition 20 requires mitigation to minimize adverse effects to the aquatic environment through avoidance and minimization at the project site. Mitigation may be required by district engineers to ensure that the net adverse effects on the aquatic environment are minimal. Specific environmental concerns are addressed in other sections of this document.

(e) Wetlands. The commercial shellfish aquaculture activities authorized by this NWP may result in impacts to tidal wetlands. In many cases the impacts will be temporary since the NWP authorizes only on-going commercial aquaculture activities. Impacts to wetlands will be minor, since the NWP authorizes only the continued operation of existing commercial aquaculture activities.

Wetlands provide habitat, including foraging, nesting, spawning, rearing, and resting sites for aquatic and terrestrial species. The destruction of wetlands may alter natural drainage

patterns. Wetlands reduce erosion by stabilizing the substrate. Wetlands also act as storage areas for stormwater and flood waters. The loss of wetland vegetation will adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland vegetation also provides habitat for microorganisms that remove nutrients and pollutants from water. Wetlands, through the accumulation of organic matter, act as sinks for some nutrients and other chemical compounds, reducing the amounts of these substances in the water.

General condition 20 requires avoidance and minimization of impacts to waters of the United States, including wetlands, at the project site. Compensatory mitigation may be required by district engineers to ensure that the net adverse effects on the aquatic environment are minimal. Division engineers can regionally condition this NWP to restrict or prohibit the use of this NWP in high value tidal wetlands. District engineers will also exercise discretionary authority to require an individual permit if the wetlands to be filled are high value and the work will result in more than minimal adverse effects on the aquatic environment. District engineers can also add case-specific special conditions to the NWP authorization to provide protection to wetlands or require compensatory mitigation to offset losses of wetlands.

(f) Historic properties. General condition 18 states that in cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act have been satisfied.

(g) Fish and wildlife values. This NWP authorizes activities in tidal waters of the United States, which provide habitat to many species of fish and wildlife. Activities authorized by this NWP may alter the habitat characteristics of tidal waters, decreasing the quantity and quality of fish and wildlife habitat. Tidal waters, including tidal wetlands and vegetated shallows, provides food and habitat for many species, including foraging areas, resting areas, corridors for fish movement, and nesting and breeding grounds. Open waters provide habitat for fish and other aquatic organisms. Pre-construction notification is required if: (1) the project area is greater than 100 acres; or (2) there is any reconfiguration of the aquaculture activity, such as relocating existing operations into portions of the project area not previously used for aquaculture activities; or (3) there is a change in species being cultivated; or (4) there is a change in culture methods (e.g., from bottom culture to off-bottom culture); or (5) dredge harvesting, tilling, or harrowing is conducted in areas inhabited by submerged aquatic vegetation. The pre-construction notification requirements provides the district engineer with an opportunity to review those activities and assess potential impacts on fish and wildlife values and ensure that the authorized activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation may be required by district engineers to restore, enhance, establish, and/or preserve wetlands and other aquatic habitats to offset impacts to waters of the United States. These methods of compensatory mitigation will provide fish and wildlife habitat values.

General condition 2 will reduce adverse effects to fish and other aquatic species by

prohibiting activities that substantially disrupt the movement of indigenous aquatic species, unless the primary purpose of the activity is to impound water. Compliance with general conditions 3 and 5 will ensure that the authorized work has minimal adverse effects on spawning areas and shellfish beds, respectively. The authorized work cannot have more than minimal adverse effects on breeding areas for migratory , due to the requirements of general condition 4.

Consultation pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act will occur as necessary for proposed NWP activities that may adversely affect essential fish habitat. Consultation may occur on a case-by-case or programmatic basis. Division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in minimal adverse effects on essential fish habitat.

(h) Flood hazards. The activities authorized by this NWP will have little or no adverse effects on the flood-holding capacity of 100-year floodplains, since these activities occur in either open navigable waters or intertidal waters. Changes in the flood-holding capacity of 100-year floodplains may impact human health, safety, and welfare. To minimize these adverse effects, general condition 10 requires the activity to comply with applicable FEMA-approved state or local floodplain management requirements. The requirements of general condition 10 will help ensure that the activities authorized by this NWP will have minimal adverse effects on flood hazards. Compliance with general condition 9 will also reduce flood hazards. This general condition requires the permittee to maintain, to the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters, except under certain circumstances. Much of the land area within 100-year floodplains is upland, and outside of the Corps scope of review.

(i) Floodplain values. Activities authorized by this NWP will have negligible adverse effects on the flood-holding capacity of the floodplain, as well as other floodplain values, since it authorizes only existing commercial shellfish aquaculture activities. The fish and wildlife habitat values of floodplains may be adversely affected by support activities for the commercial shellfish activity, by modifying or eliminating areas used for nesting, foraging, resting, and reproduction. For those activities that require notification, district engineers will review the proposed work to ensure that those activities result in minimal adverse effects on floodplain values.

Compensatory mitigation may be required for activities authorized by this NWP, which will offset losses of waters of the United States and provide water quality functions and wildlife habitat. General condition 20 requires avoidance and minimization of impacts to waters of the United States to the maximum extent practicable at the project site, which will reduce losses of floodplain values. The mitigation requirements of general condition 20 will help ensure that the adverse effects of these activities on floodplain values are minimal. The requirements of general condition 10 will minimize adverse effects to the flood storage capacity of 100-year floodplains. Compliance with general condition 9 will also ensure that activities in 100-year floodplains will not cause more than minimal adverse effects on flood

storage and conveyance.

(j) Land use. Activities authorized by this NWP will have little or no adverse effect on land use, since it is limited to existing commercial shellfish aquaculture activities, and those activities usually occur in state-owned submerged lands. Since the primary responsibility for land use decisions is held by state, local, and Tribal governments, the Corps scope of review is limited to significant issues of overriding national importance, such as navigation and water quality (see 33 CFR 320.4(j)(2)).

(k) Navigation. Activities authorized by this NWP will not adversely affect navigation, because these activities must comply with general condition 1. Certain activities authorized by this NWP require pre-construction notification, which will allow district engineers to review those activities and determine if there will be any adverse effects on navigation.

(l) Shore erosion and accretion. The activities authorized by this NWP will have minor direct effects on shore erosion and accretion processes, since the NWP is limited to existing commercial shellfish aquaculture activities. These activities generally occur in tidal waters. However, NWP 13, regional general permits, or individual permits may be used to authorize bank stabilization projects associated with commercial shellfish aquaculture activities, which may have minor effects on shore erosion and accretion.

(m) Recreation. Activities authorized by this NWP are unlikely to change the recreational uses of the area, since the NWP authorizes only existing commercial shellfish aquaculture activities. Certain recreational activities, such as bird watching, hunting, and fishing would still be available in the area.

(n) Water supply and conservation. Activities authorized by this NWP will not adversely affect surface water and groundwater supplies. This NWP authorizes only existing commercial shellfish aquaculture activities, which usually occur in tidal waters. These activities will not increase demand for potable water in the region. Activities authorized by this NWP will not adversely affect the quality of water supplies, since they generally occur in marine and estuarine waters. Many causes of water pollution, such as discharges regulated under Section 402 of the Clean Water Act, are outside the Corps scope of review. Some water pollution concerns can be addressed through water quality management measures that may be required for activities authorized by this NWP. General condition 7 prohibits discharges in the vicinity of public water supply intakes.

(o) Water quality. Commercial shellfish aquaculture activities may have adverse effects on water quality. Large populations of the species raised through commercial shellfish aquaculture activities can increase in nutrients and other and pollutants in the water.

During commercial shellfish aquaculture operations, small amounts of oil and grease from construction equipment may be discharged into the waterway. Because most of the construction will occur during a relatively short period of time, the frequency and concentration of these discharges are not expected to have more than minimal adverse

effects on overall water quality.

This NWP requires water quality certification, since it authorizes discharges of dredged or fill material into waters of the United States. Most water quality concerns are addressed by the state or Tribal water quality certification agency. In accordance with general condition 21, the permittee may be required to develop and implement water quality management measures that minimizes the degradation of the downstream aquatic environment, including water quality. The district engineer may require water quality management measures to ensure that adverse effects to water quality are minimal.

(p) Energy needs. The activities authorized by this NWP will not result in a net increase in energy consumption in the area, because the NWP does not authorize the expansion of the project area. Therefore, consumption of electricity, natural gas, and petroleum products is unlikely to change.

(q) Safety. The activities authorized by this NWP will be subject to Federal, state, and local safety laws and regulations. Therefore, this NWP will not adversely affect the safety of the project area.

(r) Food and fiber production. Activities authorized by this NWP will normally increase food production, through the production of commercial molluscan shellfish species. These activities will have negligible adverse effects on fiber production. The activities authorized by this NWP will not adversely effect fiber production. These activities will not change the amount of available agricultural land in the nation. The loss of farmland is more appropriately addressed through the land use planning and zoning authority held by state and local governments.

(s) Mineral needs. Activities authorized by this NWP will have little or no adverse effects on demand for aggregates and stone, since these materials are usually not used for commercial shellfish aquaculture activities. Activities authorized by this NWP may increase the demand for other building materials, such as steel, aluminum, and copper, which are made from mineral ores.

(t) Considerations of property ownership. The NWP complies with 33 CFR 320.4(g), which states that an inherent aspect of property ownership is a right to reasonable private use. The NWP provides expedited DA authorization for commercial shellfish aquaculture activities, provided the activity complies with the terms and conditions of the NWP and results in minimal adverse effects on the aquatic environment.

5.2 Additional Public Interest Review Factors (33 CFR 320.4(a)(2))

5.2.1 Relative extent of the public and private need for the proposed structure or work

This NWP authorizes activities in waters of the United States, especially navigable waters, for existing commercial shellfish aquaculture activities as long as those activities have

minimal adverse effects on the aquatic environment, individually and cumulatively. These activities satisfy public and private needs for food and other products. The need for this NWP is based upon the large number of these activities that occur annually with minimal adverse effects on the aquatic environment.

5.2.2 Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work

Most situations in which there are unresolved conflicts concerning resource use arise when environmentally sensitive areas are involved (e.g., special aquatic sites, including wetlands) or where there are competing uses of a resource. The nature and scope of the activity, when planned and constructed in accordance with the terms and conditions of this NWP, reduce the likelihood of such conflict. In the event that there is a conflict, the NWP contains provisions that are capable of resolving the matter (see Section 1.2 of this document).

General condition 20 requires permittees to avoid and minimize adverse effects to waters of the United States to the maximum extent practicable on the project site. Consideration of off-site alternative locations is not required for activities that are authorized by general permits. General permits authorize activities that have minimal individual and cumulative adverse effects on the aquatic environment and overall public interest. District engineers will exercise discretionary authority and require an individual permit if the proposed work will result in more than minimal adverse environmental effects on the project site. The consideration of off-site alternatives can be required during the individual permit process.

5.2.3 The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited

The nature and scope of the work authorized by the NWP will most likely restrict the extent of the beneficial and detrimental effects to the area immediately surrounding the commercial shellfish aquaculture activity. Activities authorized by this NWP will have minimal adverse effects on the aquatic environment.

The terms, conditions, and provisions of the NWP were developed to ensure that individual and cumulative adverse environmental effects are minimal. Specifically, NWPs do not obviate the need for the permittee to obtain other Federal, state, or local authorizations required by law. The NWPs do not grant any property rights or exclusive privileges (see 33 CFR 330.4(b) for further information). Additional conditions, limitations, restrictions, and provisions for discretionary authority, as well as the ability to add activity-specific or regional conditions to this NWP, will provide further safeguards to the aquatic environment and the overall public interest. There are also provisions to allow suspension, modification, or revocation of the NWP.

6.0 Clean Water Act Section 404(b)(1) Guidelines Analysis

The 404(b)(1) compliance criteria for general permits are provided at 40 CFR 230.7.

6.1 Evaluation Process (40 CFR 230.7(b))

6.1.1 Alternatives (40 CFR 230.10(a))

General condition 20 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. The consideration of off-site alternatives is not directly applicable to general permits.

6.1.2 Prohibitions (40 CFR 230.10(b))

This NWP authorizes discharges of dredged or fill material into waters of the United States, which require water quality certification. Water quality certification requirements will be met in accordance with the procedures at 33 CFR 330.4(c).

No toxic discharges will be authorized by this NWP. General condition 6 states that the material must be free from toxic pollutants in toxic amounts.

This NWP does not authorize activities that jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of critical habitat. Reviews of preconstruction notifications, regional conditions, and local operating procedures for endangered species will ensure compliance with the Endangered Species Act. Refer to general condition 17 and to 33 CFR 330.4(f) for information and procedures.

This NWP will not authorize the violation of any requirement to protect any marine sanctuary. Refer to section 6.2.3(j)(1) of this document for further information.

6.1.3 Findings of Significant Degradation (40 CFR 230.10(c))

Potential impact analysis (Subparts C through F): The potential impact analysis specified in Subparts C through F is discussed in section 6.2.3 of this document. Mitigation required by the district engineer will ensure that the adverse effects on the aquatic environment are minimal.

Evaluation and testing (Subpart G): Because the terms and conditions of the NWP specify the types of discharges that are authorized, as well as those that are prohibited, individual evaluation and testing for the presence of contaminants will normally not be required. If a situation warrants, provisions of the NWP allow division or district engineers to further specify authorized or prohibited discharges and/or require testing.

Based upon Subparts B and G, after consideration of Subparts C through F, the discharges authorized by this NWP will not cause or contribute to significant degradation of waters of the United States.

6.1.4 Factual determinations (40 CFR 230.11)

The factual determinations required in 40 CFR 230.11 are discussed in section 6.2.3 of this document.

6.1.5 Appropriate and practicable steps to minimize potential adverse impacts (40 CFR 230.10(d))

As demonstrated by the information in this document, as well as the terms, conditions, and provisions of this NWP, actions to minimize adverse effects (Subpart H) have been thoroughly considered and incorporated into the NWP. General condition 20 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. Compensatory mitigation may be required by the district engineer to ensure that the net adverse effects on the aquatic environment are minimal.

6.2 Evaluation Process (40 CFR 230.7(b))

6.2.1 Description of permitted activities (40 CFR 230.7(b)(2))

As indicated by the text of this NWP in section 1.0 of this document, and the discussion of potential impacts in section 4.0, the activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization under a single general permit. Specifically, the purpose of the NWP is to authorize discharges of dredged or fill material for existing commercial shellfish aquaculture activities. The nature and scope of the impacts are controlled by the terms and conditions of the NWP.

The activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization by a general permit. The terms of the NWP authorize a specific category of activity (i.e., discharges of dredged or fill material for the continued operation of commercial shellfish aquaculture activities) in a specific category of waters (i.e., navigable waters of the United States). The restrictions imposed by the terms and conditions of this NWP will result in the authorization of activities that have similar impacts on the aquatic environment, namely the modification of aquatic habitats, such as estuarine and marine waters, through commercial shellfish aquaculture activities.

If a situation arises in which the activity requires further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

6.2.2 Cumulative effects (40 CFR 230.7(b)(3))

The cumulative effects, including the number of activities likely to be authorized under this NWP, are discussed in section 4.3 of this document. If a situation arises in which the proposed activity requires further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

6.2.3 Section 404(b)(1) Guidelines Impact Analysis, Subparts C through F

(a) Substrate: Discharges of dredged or fill material into waters of the United States will alter the substrate of those waters, usually replacing the aquatic area with dry land, and changing the physical, chemical, and biological characteristics of the substrate. The original substrate will be removed or covered by other material, such as sand or gravel. Temporary fills may be placed upon the substrate, but must be removed upon completion of the work (see general condition 13).

(b) Suspended particulates/turbidity: Depending on the method of operation, soil erosion and sediment control measures, equipment, composition of the bottom substrate, and wind and current conditions during construction, fill material placed in open waters will temporarily increase water turbidity. Pre-construction notification is required for certain activities, which will allow the district engineer to review those activities and ensure that adverse effects on the aquatic environment are minimal. Particulates will be resuspended in the water column during removal of temporary fills. The turbidity plume will normally be limited to the immediate vicinity of the disturbance and should dissipate shortly after each phase of the construction activity. General condition 12 requires the permittee to stabilize exposed soils and other fills, which will reduce turbidity. NWP activities cannot create turbidity plumes that smother important spawning areas downstream (see general condition 3).

(c) Water: Commercial shellfish aquaculture activities can affect some characteristics of water, such as water clarity, chemical content, dissolved gas concentrations, pH, and temperature. The operation of these activities can change the chemical and physical characteristics of the waterbody by introducing suspended or dissolved chemical compounds or sediments into the water. Changes in water quality can affect the species and quantities of organisms inhabiting the aquatic area. Water quality certification is required for activities authorized by this NWP that result in discharges of dredged or fill material into waters of the United States, which will ensure that the work does not violate applicable water quality standards. Permittees may be required to implement water quality management measures to ensure that the authorized work does not result in more than minimal degradation of water quality.

(d) Current patterns and water circulation: Activities authorized by this NWP may adversely affect the movement of water in the aquatic environment. Certain activities authorized by this NWP require pre-construction notification to the district engineer, which will help

ensure that adverse effects to current patterns and water circulation are minimal. General condition 9 requires the authorized activity to be designed to withstand expected high flows and to maintain the course, condition, capacity, and location of open waters to the maximum extent practicable. General condition 10 requires activities to comply with applicable FEMA-approved state or local floodplain management requirements, which will reduce adverse effects to surface water flows.

(e) Normal water level fluctuations: The activities authorized by this NWP will not adversely affect normal patterns of water level fluctuations due to tides and flooding, since it authorizes only existing commercial shellfish aquaculture activities. To ensure that the NWP does not authorize activities that adversely affect normal flooding patterns, general condition 10 requires NWP activities to comply with applicable FEMA-approved state or local floodplain management requirements. General condition 9 requires the permittee to maintain the pre-construction course, condition, capacity, and location of open waters, to the maximum extent practicable.

(f) Salinity gradients: The activities authorized by this NWP are unlikely to adversely affect salinity gradients, since it is limited to existing commercial shellfish aquaculture activities.

(g) Threatened and endangered species: The Corps believes that the procedures currently in place result in proper coordination under Section 7 of the Endangered Species Act (ESA) and ensure that activities authorized by this NWP will not jeopardize the continued existence or any listed threatened and endangered species or result in the destruction or adverse modification of critical habitat. The Corps also believes that current local procedures in Corps districts are effective in ensuring compliance with ESA.

Under general condition 17, no activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

Each activity authorized by an NWP is subject to general condition 17, which states that "[n]o activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species." In addition, general condition 17 explicitly states that the NWP does not authorize the taking of threatened or endangered species, which will ensure that permittees do not mistake the NWP authorization as a Federal authorization to take threatened or endangered species. General condition 17 also requires non-federal permittees to notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat. This general condition also states that, in such cases, non-federal permittees shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized.

Under the current Corps regulations (33 CFR 325.2(b)(5)), the district engineer must review all permit applications for potential impacts on threatened and endangered species or critical habitat. For the NWP program, this review occurs when the district engineer evaluates the pre-construction notification or request for verification. Based on the evaluation of all available information, the district engineer will initiate consultation with the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS), as appropriate, if he or she determines that the regulated activity may affect any threatened and endangered species or critical habitat. Consultation may occur during the NWP authorization process or the district engineer may exercise discretionary authority to require an individual permit for the proposed activity and initiate consultation through the individual permit process. If ESA consultation is conducted during the NWP authorization process without the district engineer exercising discretionary authority, then the applicant will be notified that he or she cannot proceed with the proposed activity until ESA consultation is complete. If the district engineer determines that the activity will have no effect on any threatened and endangered species or critical habitat, then the district engineer will notify the applicant that he or she may proceed under the NWP authorization.

Corps districts have, in most cases, established informal or formal procedures with local offices of the USFWS and NMFS, through which the agencies share information regarding threatened and endangered species and their critical habitat. This information helps district engineers determine if a proposed activity may affect endangered species or their critical habitat and, if necessary, initiate consultation. Corps districts may utilize maps or databases that identify locations of populations of threatened and endangered species and their critical habitat. Where necessary, regional conditions are added to NWPs to require notification for activities that occur in known locations of threatened and endangered species or critical habitat. For activities that require agency coordination during the pre-construction notification process, the USFWS and NMFS will review the proposed work for potential impacts to threatened and endangered species and their critical habitat. Any information provided by local maps and databases and any comments received during the pre-construction notification review process will be used by the district engineer to make a "no effect" or "may affect" decision.

Based on the safeguards discussed above, especially general condition 17 and the NWP regulations at 33 CFR 330.5(f), the Corps has determined that the activities authorized by this NWP will not jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of designated critical habitat. Although the Corps continues to believe that these procedures ensure compliance with ESA, the Corps has taken some steps to provide further assurance. Corps district offices have met with local representatives of the USFWS and NMFS to establish or modify existing procedures, where necessary, to ensure that the Corps has the latest information regarding the existence and location of any threatened or endangered species or their critical habitat. Corps districts can also establish, through local procedures or other means, additional safeguards that ensure compliance with ESA. Through formal consultation under Section 7 of the Endangered Species Act, or through other coordination with the USFWS and/or the NMFS, as appropriate, the Corps will establish procedures to ensure that the NWP will not

jeopardize any threatened and endangered species or result in the destruction or adverse modification of designated critical habitat. Such procedures may result in the development of regional conditions added to the NWP by the division engineer, or in special conditions to be added to an NWP authorization by the district engineer.

(h) Fish, crustaceans, molluscs, and other aquatic organisms in the food web. Certain activities authorized by this NWP, require notification to the district engineer, which will allow review of those activities to ensure that adverse effects to fish and other aquatic organisms in the food web are minimal. Fish and other motile animals will avoid the project site while aquaculture activities such as transplantation and harvesting are conducted. Sessile or slow-moving animals in the path of discharges and equipment may be destroyed. Some aquatic animals may be smothered by the placement of fill material. Motile animals will return to those areas that are temporarily impacted by the work and restored or allowed to revert back to pre-construction conditions. Shellfish populations will increase as a result of the activities authorized by this NWP.

Division and district engineers can place conditions on this NWP to prohibit discharges during important stages of the life cycles of certain aquatic organisms. Such time of year restrictions can prevent adverse effects to these aquatic organisms during reproduction and development periods. General conditions 3 and 5 address protection of spawning areas and shellfish beds, respectively. General condition 3 states that activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. In addition, general condition 3 also prohibits activities that result in the physical destruction of important spawning areas. General condition 5 prohibits activities in areas of concentrated shellfish populations. General condition 9 requires the maintenance of pre-construction course, condition, capacity, and location of open waters to the maximum extent practicable, which will help minimize adverse impacts to fish, shellfish, and other aquatic organisms in the food web.

(i) Other wildlife: Activities authorized by this NWP will result in negligible adverse effects on other wildlife associated with aquatic ecosystems, such as resident and transient fish, since the NWP authorizes only existing commercial shellfish aquaculture activities. This NWP does not authorize activities that jeopardize the continued existence of Federally-listed endangered and threatened species or result in the destruction or adverse modification of critical habitat. General condition 4 states that activities in breeding areas for migratory birds must be avoided to the maximum extent practicable.

(j) Special aquatic sites: The potential impacts to specific special aquatic sites are discussed below:

(1) Sanctuaries and refuges: The activities authorized by this NWP will have minimal adverse effects on waters of the United States within sanctuaries or refuges designated by Federal or state laws or local ordinances. District engineers will exercise discretionary authority and require individual permits for specific projects in waters of the United States in sanctuaries and refuges if those activities will result in more than minimal

adverse effects on the aquatic environment.

(2) Wetlands: The activities authorized by this NWP will have minimal adverse effects on wetlands. District engineers will review activities that require pre-construction notification to ensure that the adverse effects on the aquatic environment are minimal. Division engineers can regionally condition this NWP to restrict or prohibit its use in certain high value wetlands. See paragraph (e) of section 5.1 for a more detailed discussion of impacts to wetlands.

(3) Mud flats: The activities authorized by this NWP will have minimal adverse effects on mud flats, since the NWP authorizes only existing commercial shellfish aquaculture activities. This NWP does not authorize the expansion of the project area for those activities.

(4) Vegetated shallows: The activities authorized by this NWP will have minimal adverse effects on vegetated shallows. Pre-construction notification is required if there is dredge harvesting, tilling, or harrowing is conducted in areas inhabited by submerged aquatic vegetation. District engineers will review pre-construction notifications to determine if those activities will result in minimal adverse effects on the aquatic environment. If the vegetated shallows are high value and the proposed work will result in more than minimal adverse effects on the aquatic environment, the district engineer will exercise discretionary authority to require the project proponent to obtain an individual permit. The presence of suspension feeding bivalve mollusks in estuarine and marine waters has been shown to help improve the productivity of species of submerged aquatic vegetation in those waters (e.g., Peterson and Heck 2001).

(5) Coral reefs: The activities authorized by this NWP will have minimal adverse effects on coral reefs, since the NWP authorizes only existing commercial shellfish aquaculture activities.

(6) Riffle and pool complexes: The activities authorized by this NWP will have minimal adverse effects on riffle and pool complexes, since it is limited to existing commercial shellfish aquaculture activities. District engineers will review those activities that require pre-construction notification to determine if those activities will result in minimal adverse effects on the aquatic environment.

(k) Municipal and private water supplies: See paragraph (n) of section 5.1 for a discussion of potential impacts to water supplies.

(l) Recreational and commercial fisheries, including essential fish habitat: The activities authorized by this NWP will have minor adverse effects on waters of the United States that act as habitat for populations of economically important fish and shellfish species, since it authorizes only existing commercial shellfish aquaculture activities. Division and district engineers can condition this NWP to prohibit discharges during important life cycle stages, such as spawning or development periods, of economically valuable fish and shellfish.

Compliance with general conditions 3 and 5 will ensure that the authorized work does not adversely affect important spawning areas or concentrated shellfish populations. As discussed in paragraph (g) of section 5.1, there are procedures to help ensure that impacts to essential fish habitat are minimal, individually or cumulatively. For example, division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in minimal adverse effects on essential fish habitat.

(m) Water-related recreation: See paragraph (m) of section 5.1 above.

(n) Aesthetics: See paragraph (c) of section 5.1 above.

(o) Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar areas: This NWP can be used to authorize activities in parks, national and historical monuments, national seashores, wilderness areas, and research sites if there are existing commercial shellfish aquaculture activities in those areas, and those activities result in minimal adverse effects on the aquatic environment. Division engineers can regionally condition the NWP to prohibit its use in designated areas, such as national wildlife refuges or wilderness areas.

7.0 Determinations

7.1 Finding of No Significant Impact

Based on the information in this document, the Corps has determined that the issuance of this NWP will not have a significant impact on the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement is not required.

7.2 Public Interest Determination

In accordance with the requirements of 33 CFR 320.4, the Corps has determined, based on the information in this document, that the issuance of this NWP is not contrary to the public interest.

7.3 Section 404(b)(1) Guidelines Compliance

This NWP has been evaluated for compliance with the 404(b)(1) Guidelines, including Subparts C through G. Based on the information in this document, the Corps has determined that the discharges authorized by this NWP comply with the 404(b)(1) Guidelines, with the inclusion of appropriate and practicable conditions, including mitigation, necessary to minimize adverse effects on affected aquatic ecosystems. The activities authorized by this NWP will not result in significant degradation of the aquatic environment.

7.4 Section 176(c) of the Clean Air Act General Conformity Rule Review

This NWP has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities authorized by this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR 93.153. Any later indirect emissions are generally not within the Corps continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this NWP.

FOR THE COMMANDER

Dated: MAR - 1 2007

DON T. RILEY
Major General, U.S. Army
Director of Civil Works

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