

May 2001

# WETLANDS PROTECTION

## Assessments Needed to Determine Effectiveness of In- Lieu-Fee Mitigation



G A O

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United States General Accounting Office  
Washington, DC 20548

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May 4, 2001

### Congressional Requesters

Of an estimated 220 million acres of marshes, bogs, swamps, and other wetlands in the contiguous United States during colonial times, over half have disappeared, and some of the remaining wetlands have been degraded. This decrease is due, primarily, to agricultural activities and development. Pressure to use wetlands for such purposes continues, but in recent times wetlands have become valued for a variety of ecological functions they perform, including abating floods, maintaining water quality, and providing habitat for fish and wildlife. Recognizing the value of wetlands, in 1989, the administration set a national goal to protect against additional loss.

Developers whose projects adversely affect wetlands must, as prescribed in regulations and guidance issued by the Army Corps of Engineers (Corps) and Environmental Protection Agency (EPA) under the Clean Water Act, first avoid and then minimize adverse impacts to wetlands to the extent practicable.<sup>1</sup> In the event that adverse impacts are unavoidable, the developer is required to compensate by restoring a former wetland, enhancing a degraded wetland, creating a new wetland, or preserving an existing wetland.<sup>2</sup> Developers may perform their own compensatory mitigation, often on or near the development site, or they may pay third parties for mitigation, usually at locations away from the development site.

Mitigation by third parties has occurred under three types of arrangements in recent years: (1) "mitigation banks," often private for-profit entities, typically establish (restore, enhance, create, or preserve) wetlands under

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<sup>1</sup> Section 404 of the Clean Water Act authorizes the Corps to issue permits for the discharge of dredged or fill material into navigable waters of the United States, including most wetlands (33 U.S.C. 1344). As part of that decision, the Corps determines the level of mitigation required. Permit applicants, who include large and small individual landowners as well as commercial developers, are referred to in this report as developers.

<sup>2</sup> According to agency guidance, preservation may be used only in exceptional circumstances.

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agreements with the Corps and then sell credits for these wetlands to developers;<sup>3</sup> (2) developers pay fees to public entities or private nonprofit natural resources management organizations<sup>4</sup> that, usually under agreements with Corps district offices, use accumulated fees to establish wetlands (referred to in this report as in-lieu-fee arrangements); and (3) developers pay individuals or entities, which are neither mitigation banks nor considered by the Corps to be in-lieu-fee organizations, to perform mitigation (referred to in this report as ad hoc arrangements).

The Corps and EPA, in coordination with the Department of the Interior's Fish and Wildlife Service (FWS) and the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), work together to ensure that developers mitigate adverse impacts to wetlands and other waters of the United States. For example, the Corps must approve developers' plans, including mitigation efforts, when issuing permits required by section 404 of the Clean Water Act. EPA, in conjunction with the Corps, FWS, and NOAA, issued guidance setting standards for mitigation banks effective December 1995 and for in-lieu-fee mitigation effective October 2000.<sup>5</sup>

Since use of the in-lieu-fee mitigation option has increased over the last decade, you asked us to determine the extent to which (1) the in-lieu-fee option has been used to mitigate adverse impacts to wetlands, (2) the in-lieu-fee option has achieved its intended purpose of mitigating such impacts, and (3) in-lieu-fee organizations compete with mitigation banks for developers' mitigation business. In addition, this report addresses the use of ad hoc arrangements as a mitigation option. To answer your questions, we completed a two-phase telephone survey of officials from the Corps' 38 district regulatory offices. We also obtained from these officials specific data on the districts' in-lieu-fee and ad hoc arrangements.

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<sup>3</sup> A similar mitigation method, called conservation banks, is used by developers with the approval of Fish and Wildlife Service to compensate for adverse impacts to threatened or endangered species or critical habitat. Conservation banking is addressed in *Endangered Species Act: Fee-based Mitigation Arrangements* (GAO-01-287R, February 15, 2001).

<sup>4</sup> The Ohio Department of Natural Resources is an example of a public entity, and The Nature Conservancy is an example of a private nonprofit natural resources management organization.

<sup>5</sup> The Department of Agriculture's Natural Resources Conservation Service was a signatory to the 1995 mitigation banking guidance but not to the 2000 in-lieu-fee guidance. *Wetlands Overview: Problems With Acreage Data Persist* (GAO/RCED-98-150, July 1, 1998) contains additional information on federal agency involvement in wetlands programs.

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Some districts did not provide these data because, for example, they did not track the data or these data were not readily available. Further, we met with officials from the EPA, FWS, and NOAA. In addition, we visited Corps offices in the districts of Chicago, Illinois; Savannah, Georgia; and Vicksburg, Mississippi. We also visited in-lieu-fee organizations and mitigation banks in those areas.

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## Results in Brief

The Corps has established 63 in-lieu-fee arrangements since the first one was used in the late 1980s. These arrangements have been made in 17 of the 38 Corps regulatory districts, and officials from at least 8 other districts are planning to establish such arrangements in the future. Most of the arrangements were designed to use fees received from developers to restore, enhance, and/or preserve wetlands, with a few arrangements designed to allow wetlands to be created. Through fiscal year 2000, developers used the in-lieu-fee option to fulfill mitigation requirements for over 1,440 acres of adversely affected wetlands, and paid over \$64.2 million to in-lieu-fee organizations, according to districts that were able to provide data. Federal agencies and others agree that this option serves as a useful mitigation tool. Corps officials explained, for example, that by consolidating mitigation sites, in-lieu-fee arrangements provide developers with a less cumbersome, timelier mitigation option that benefits the environment and allows the Corps to operate more efficiently than when developers perform the mitigation themselves. At the same time, however, EPA, FWS, and NOAA officials and mitigation bankers expressed concerns about in-lieu-fee arrangements, including whether fees are being spent in a timely manner and whether the Corps is providing adequate monitoring and oversight of the mitigation projects. These and other concerns are addressed in the October 2000 in-lieu-fee guidance, which states, for example, that in-lieu-fee organizations should establish formal agreements that include plans for conducting mitigation activities and monitoring.

The extent to which the in-lieu-fee option has achieved its purpose of mitigating adverse impacts to wetlands is uncertain. While Corps officials in 11 of the 17 districts with the in-lieu-fee option told us that the number of wetland acres restored, enhanced, created, or preserved by in-lieu-fee organizations equaled or exceeded the number of wetland acres adversely affected, data submitted by over half of those districts did not support these claims. Also, while officials in 9 of the 17 districts said that the ecological functions and associated values (i.e., economic and social benefits) lost from the adversely affected wetlands were replaced at the same level or better through in-lieu-fee mitigation, officials in over half of

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those districts acknowledged that they have not tried to assess whether mitigation efforts have been ecologically successful. Further, lacking criteria for ecological success, some districts use acreage as a measure for success, and some assume success as soon as the developer pays a fee to an in-lieu-fee organization even if no mitigation has been performed. As a result, the Corps lacks assurances that in-lieu-fee mitigation has been effective. We are making a recommendation aimed at establishing criteria and developing and implementing procedures to determine ecological success.

Corps district officials in 9 of the 17 districts with the in-lieu-fee option told us that in-lieu-fee organizations and mitigation banks were competing with each other by providing similar mitigation services in the same geographic areas. In-lieu-fee organization and mitigation bank officials in the districts we visited agreed with the Corps' position. Corps officials also said that the potential for competition existed in another three districts. No potential for competition existed in 5 of the 17 districts either because no mitigation banks were available in the districts or because in-lieu-fee organizations and mitigation banks provided different services or served different geographic areas. Prior to the in-lieu-fee guidance, mitigation bank officials raised concerns that they bore greater costs and were at a disadvantage in competing with in-lieu-fee organizations. While the new guidance gives preference to mitigation banks, it also allows for flexibility according to officials in the Corps, EPA, FWS, and NOAA.

Our survey of Corps officials showed that 24 Corps districts allowed developers to use ad hoc arrangements to mitigate adverse impacts to wetlands. These arrangements typically were for one-time projects without a formal agreement between the Corps and the third party receiving the funds. Our survey also showed that oversight of mitigation efforts performed under ad hoc arrangements was lacking in almost half of the districts using such arrangements. In addition, Corps districts disagreed on whether responsibility for the ecological success of ad hoc mitigation rests with the ad hoc fund recipient or the developer. We are making a recommendation aimed at clarifying this responsibility, and at developing and implementing procedures for assessing ecological success.

EPA and the departments of Commerce and the Interior generally agreed with the information presented in the draft and our recommendations. The Department of Defense concurred with our recommendation concerning ad hoc arrangements but did not concur with our recommendation calling for ecological success criteria. Rather, Defense suggested that instead of establishing criteria to determine the ecological

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success of mitigation efforts, criteria should be established to determine “that wetlands functions have been adequately compensated,” and that the Corps, instead of EPA, should have the lead in establishing the criteria. We disagree. We continue to believe that establishment of ecological success criteria is not only possible, but essential to determine if the objectives of compensatory mitigation are being fulfilled and to measure whether progress is being made toward achieving the national goal of no net loss of wetlands. We also continue to believe that EPA should have the lead in implementing our recommendation because section 404(b) of the Clean Water Act authorizes EPA to issue such guidance.

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## Background

Wetlands are diverse, but they can generally be defined as transitional areas between open waters and dry land, such as swamps, marshes, bogs, and similar areas. Wetlands are typically characterized by the frequent or prolonged presence of water at or near the soil surface, by soils that form under flooded or saturated conditions, and by plants that are adapted to life in these types of soils. Figure 1 is an example of a type of wetland.

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**Figure 1: Bottomland Hardwood Wetland in Georgia**



Source: Army Corps of Engineers, Savannah District.

Federal authority over wetland development is exercised through section 404 of the Clean Water Act. The section 404 program requires that, unless exempted, anyone wanting to discharge dredged or fill material in navigable waters of the United States, which include most wetlands, obtain a permit from one of the 38 Corps district regulatory offices. This permitting process provides the Corps with a mechanism for enforcing mitigation efforts. Also, section 404 (b)(1) authorizes the Administrator of EPA, in conjunction with the Secretary of the Army, to develop guidelines the Corps uses in the permit process. Under these guidelines, developers must first avoid and then minimize adverse impacts to wetlands to the extent practicable and then compensate for any unavoidable impacts.



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The objective of mitigation is to compensate for adversely affected wetlands. In 1989, the Bush administration established the national goal of “no net loss” of wetlands. Subsequently, the Clinton administration expanded the goal to achieve a net increase of 100,000 acres per year by 2005. In addition, a 1990 memorandum of agreement between the Department of the Army and EPA, addressing mitigation under the Clean Water Act, states that the Corps will strive to achieve a goal of no overall net loss of wetland functions and values. Wetland functions include controlling floods and erosion, purifying water, and providing habitat for numerous bird and fish species. Wetland values are the economic and social benefits derived from wetland functions, including food, timber, improved water quality, and recreation. Agencies agree that it is difficult to measure the success of efforts to mitigate adverse impacts to functions and values, at least in part, because of variations across the country in wetlands.

Under mitigation banking guidance issued in 1995 and in-lieu-fee guidance issued in 2000, mitigation banks and in-lieu-fee organizations should have formal, written agreements with the Corps, developed in consultation with the other agencies, to provide frameworks for the mitigation banking and in-lieu-fee options. These agreements are to include financial assurances and provisions for long-term management and maintenance of mitigation projects. In addition, the 1995 and 2000 guidance clarifies that responsibility for ecological success of mitigation efforts should rest with the mitigation bank or in-lieu-fee organization. However, neither guidance provides ecological success measurements. The agencies plan to review the use of the in-lieu-fee guidance by the end of October 2001.

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## In-Lieu-Fee Mitigation Option Available in 17 of 38 Corps Districts

As of September 30, 2000, 17 of the 38 Corps districts had established in-lieu-fee arrangements, and officials from 8 additional districts informed us that they were planning to establish such arrangements. The 17 districts with an in-lieu-fee option had developed a total of 63 arrangements. Seven districts had established 1 arrangement, 9 districts had established between 2 and 5 arrangements, and 1 had established 27 arrangements. While the first arrangement was established in Vicksburg, Mississippi, in 1987, most were developed since January 1997. The arrangements have been designed predominantly to restore, enhance, and/or preserve wetlands, with some arrangements also allowing for the creation of

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wetlands.<sup>6</sup> Developers have used in-lieu-fee arrangements to mitigate adverse impacts for over 1,440 acres of wetlands involving hundreds of projects, often smaller than an acre. Fees collected by in-lieu-fee organizations total over \$64.2 million, with the individual arrangements involving total fees ranging from about \$1,200 to \$24.7 million. Acres adversely impacted and dollars collected are understated because some districts did not report data, sometimes because they did not track the data or it was not readily available. Figure 2 shows the number of in-lieu-fee arrangements in each Corps district. Appendix I provides information on the individual in-lieu-fee arrangements by district.

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<sup>6</sup> In addition, arrangements in 10 of the 17 districts are designed to allow for mitigating adverse impacts to streams, including 2 districts that use in-lieu-fee arrangements solely for this purpose. Stream impacts and mitigation of such impacts are often measured in linear feet instead of acres.

**Figure 2: Number of In-Lieu-Fee Arrangements by Corps District, as of September 30, 2000**



Source: Army Corps of Engineers districts.

Corps and EPA officials told us that they typically approve the use of in-lieu-fee arrangements as mitigation measures for minor impacts and when adversely affected acreage is relatively small. Officials explained that when developers make such arrangements, the Corps is able to operate more efficiently than when developers perform their own mitigation because the in-lieu-fee option results in fewer, more consolidated mitigation sites, thus reducing the Corps' oversight burden. In addition, Corps officials said that using the in-lieu-fee option often gives permittees

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a less cumbersome alternative to performing their own mitigation, which requires submittal of a plan and schedule detailing their mitigation effort. Further, other federal agencies and others agree that the in-lieu-fee option services as a useful mitigation tool.

EPA, FWS, and NOAA officials, as well as mitigation bank officials, however, expressed concern about the in-lieu-fee option. They questioned whether in-lieu-fees are being used in a timely manner and appropriately and whether adequate monitoring of mitigation efforts is taking place. These concerns are not unfounded. Corps officials from 11 of the 17 districts reported that they did not require in-lieu-fee organizations to spend or obligate fees received from developers within a specific time frame. In addition, three districts have some in-lieu-fee arrangements that have been in existence since 1997 or earlier and, as of September 2000, had not spent or obligated any funds that directly mitigated adverse impacts. In districts where in-lieu-fees have been spent, arrangements in three districts have used funds for activities, such as research and/or education, that do not directly mitigate adverse impacts. Appendix II, which summarizes Corps district responses to our survey questions, provides detailed information about in-lieu-fee arrangements.

In order to address concerns about the in-lieu-fee mitigation option, the Corps, EPA, FWS, and NOAA developed guidance that became effective in October 2000. Under the new guidance, in-lieu-fee organizations have a time frame for initiating physical and biological improvements of mitigation sites and are precluded from using fees for activities such as research and education. In addition, the Corps is required to track all uses of in-lieu-fee arrangements and to report those figures by public notice on an annual basis.

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## Effectiveness of In-Lieu-Fee Mitigation Is Uncertain

The effectiveness of in-lieu-fee mitigation is unclear. Information provided by Corps district officials during our telephone survey was not always consistent with written data provided by those districts. Corps officials in 11 of the 17 districts with the in-lieu-fee option stated that the number of wetland acres restored, enhanced, created, or preserved by the in-lieu-fee organizations equaled or exceeded the number of wetland acres adversely affected. However, our analysis of written data submitted by those 11 districts showed that the data from only 5 supported the statements. In-lieu-fee organizations in 3 of the 11 districts had not performed mitigation at a level that equaled or exceeded the adversely affected acreage. Another 3 of the 11 districts were not able to provide data on the number of wetland acres that had been restored, enhanced, created, or preserved

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by in-lieu-fee organizations in their areas. For the remaining 6 of the 17 districts, officials from 1 district stated that the restored, enhanced, created, or preserved acres had not equaled or exceeded the adversely impacted acres, and officials from 5 districts stated that the question was not applicable to their respective districts because the in-lieu-fee organizations had not started any projects. These five districts reported having 12 in-lieu-fee arrangements, including 3 that had been operating for less than a year and, consequently, had had little time to collect fees or initiate projects.

When asked about functions and values of wetlands, officials in 9 of the 17 districts reported that the functions and values lost from the adversely affected wetlands were replaced at the same level or better through the in-lieu-fee organizations' mitigation efforts. However, officials in five of those nine districts also stated that they had never taken steps to determine whether in-lieu-fee organizations' mitigation efforts have been ecologically successful, which calls into question their determinations about functions and values. Of the eight districts that did not report functions and values at the same level or better, one reported that the functions and values had not met or exceeded the functions and values of the adversely affected wetlands; two did not know whether the functions and values of the mitigated wetlands met or exceeded the functions and values of the impacted wetlands; and five reported that the in-lieu-fee organizations had not started any projects that could be assessed.

Seven districts have taken steps to determine whether in-lieu-fee organizations' mitigation efforts have been ecologically successful, and officials in these districts reported that they use a variety of techniques. While some districts use performance standards such as the percentage of vegetative survival, other districts review reports, visit mitigation sites, and/or use specific techniques such as the Wetland Rapid Assessment Procedure.<sup>7</sup> Officials in some of the districts that have not taken steps to determine the success of in-lieu-fee organizations' mitigation efforts assume that if the acreage requirement is met, then functions and values will follow suit. In addition, although most districts reported that they monitor the use of in-lieu-fees, several district officials also explained that their monitoring is limited by resource constraints. For example, officials in one district we visited explained that they receive monitoring reports

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<sup>7</sup> The Wetland Rapid Assessment Procedure, which is used in Florida, is one of many techniques for evaluating wetlands.

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from the in-lieu-fee organization but do not have time to review the reports. Furthermore, officials from several other districts told us that no significant monitoring efforts are needed because they consider in-lieu-fee mitigation to be a success as soon as the developer pays a fee to the in-lieu-fee organization, even if no mitigation has been performed, or because they use organizations that they trust will do adequate mitigation. NOAA officials said that using such organizations is not an adequate substitute for monitoring.

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## Recent Guidance May Affect Competition Between In-Lieu-Fee Organizations and Mitigation Banks in Districts With the In-Lieu-Fee Option

In-lieu-fee organizations have the potential to compete with mitigation banks for developers' mitigation business to the extent that organizations and banks provide similar mitigation services and serve the same geographic areas. In those areas with the potential for competition, some mitigation bank officials raised concerns about their ability to compete with in-lieu-fee organizations because, for example, in-lieu-fee organizations generally did not have requirements, such as securing financial assurances, that increased mitigation banks' operating costs. The October 2000 guidance not only established such requirements for in-lieu-fee organizations, but also generally gives preference to mitigation banks.

At the time of our survey, in-lieu-fee organizations and mitigation banks potentially could compete in 12 of the 17 Corps districts where in-lieu-fee mitigation was an option, according to information provided by Corps district officials. In-lieu-fee organizations had funded or planned to fund wetland restoration, enhancement, and preservation and/or other mitigation services in all 17 districts with the in-lieu-fee option. Mitigation banks provided restoration and other mitigation services similar to those provided by in-lieu-fee organizations in only 13 of the 17 districts, however, and mitigation banks served the same geographic area as in-lieu-fee organizations in only 12 of those 13 districts. In 3 of the 12 districts where in-lieu-fee organizations potentially could compete with mitigation banks, the in-lieu-fee organizations' service areas covered an entire state, and in 9 of the districts, the area of potential competition was limited to a watershed, county, or other geographic area. No potential for competition existed in the remaining five districts because no mitigation banks existed in one, banks and in-lieu-fee organizations did not provide the same services in one, banks had not begun marketing mitigation services in one, and banks and in-lieu-fee organizations served different geographic areas in two.

Of the 12 districts with the potential for competition, Corps district officials in 9 told us that in-lieu-fee organizations and mitigation banks had

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competed with each other, and officials in 3 said they had not competed. Corps officials' views on competition were corroborated by in-lieu-fee organization and mitigation bank officials in the districts we visited. For example, in the Chicago district, where 1 in-lieu-fee organization and 10 mitigation banks operate in the same six-county area and provide similar services, mitigation bank and in-lieu-fee organization officials agreed that they competed with each other. In the three districts where Corps officials said mitigation banks and in-lieu-fee organizations had not competed, two districts have policies that encourage the use of mitigation banks and, in the other district, competition is expected after the in-lieu-fee arrangements that were established in 2000 take hold.

Some mitigation bank officials have raised concerns about competing with in-lieu-fee organizations for several reasons. First, some bank officials have claimed that they are at greater economic risk than in-lieu-fee organizations because banks generally must invest money to establish wetlands before they can sell credits. In contrast, in-lieu-fee organizations often do not establish wetlands until they have collected sufficient fees from developers to cover their expenses. Second, some bank officials said that they have difficulty competing with in-lieu-fee organizations' prices. For example, top management representing two mitigation banks in Chicago said that, in the Chicago district, the in-lieu-fee organization's price was lower than the banks' prices. The fund administrator of the in-lieu-fee organization acknowledged competing with mitigation banks and said that the organization's price was lower than the prices of some banks and higher than the prices of others. Third, prior to the October 2000 in-lieu-fee guidance, some bank officials questioned whether in-lieu-fee organizations were being held to the same standards as banks.

The recent in-lieu-fee guidance gives preference to mitigation banks under certain circumstances. For example, when impacts that require mitigation are outside the service areas of mitigation banks and in-lieu-fee organizations, use of a mitigation bank is preferable to in-lieu-fee mitigation, unless using the bank is not practicable or environmentally desirable. While there is a preference for mitigation banks, the new guidance also allows for flexibility according to officials in the Corps, EPA, FWS, and NOAA.

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## Effectiveness of Ad Hoc Mitigation Unknown

Our survey showed that since January 1, 1996, 24 of the 38 Corps districts allowed developers to mitigate adverse impacts to wetlands through ad hoc arrangements. We found no definition of ad hoc arrangements in existing mitigation guidance. As explained earlier, ad hoc arrangements, for purposes of this report, involve mitigation payments from developers to third parties that are neither mitigation banks nor considered by the Corps to be in-lieu-fee organizations. For example, a district office that we visited allowed a developer to partly compensate for the adverse impact at a development site by paying a fee to a nearby landowner to preserve a wooded wetland by placing a restriction on the property to prevent future development. We were unable to determine the number of times ad hoc arrangements were used because not all districts routinely track the data. However, officials we surveyed in several districts told us that they used such arrangements infrequently.

Corps district officials did not consider ad hoc arrangements to be in-lieu-fee arrangements for several reasons. Most often they distinguished ad hoc from in-lieu-fee arrangements by the lack of a formal agreement between the Corps district and the ad hoc fund recipient. Officials in some districts also said that ad hoc fund recipients usually perform mitigation at a single site with funds received from one developer for one development project.<sup>8</sup> In contrast, in-lieu-fee organizations usually perform mitigation at one or more sites with funds consolidated from multiple developers for multiple development projects.

EPA and Corps headquarters officials, as well as Corps district officials, disagree as to whether ad hoc mitigation is covered by the October 2000 in-lieu-fee guidance. Corps headquarters officials said that ad hoc mitigation is not covered under the guidance. EPA headquarters officials disagreed and said that mitigation is covered by the guidance when a third party other than a mitigation bank performs the mitigation and responsibility for the ecological success is transferred to the fund recipient as a condition of the section 404 permit. However, Corps headquarters officials reported that most permits authorizing ad hoc mitigation arrangements do not transfer responsibility, and Corps officials in 17 of the 24 districts using ad hoc arrangements told us that they never required transfer of responsibility as a condition of section 404 permits. Further,

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<sup>8</sup> Some ad hoc arrangements involved state trust funds, such as those in Maryland and Pennsylvania, which receive payments from multiple developers that can be used for more than one project.



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Corps district officials disagree on whether ad hoc mitigation is covered by the 2000 guidance. Officials in 6 districts that use ad hoc arrangements said that ad hoc mitigation is covered by the guidance, while officials in 7 said it is not covered, and officials in 11 said that they did not know whether it is covered by the guidance.

Oversight of mitigation efforts performed under ad hoc arrangements was lacking in almost half of the 24 districts using such arrangements. Officials in seven districts said that they had not monitored either the mitigation efforts or use of funds made under ad hoc arrangements, and officials in three others did not know whether such monitoring had occurred. In addition, officials in eight districts said that they had never taken steps to determine whether mitigation efforts performed under ad hoc arrangements had been ecologically successful, and officials in two others did not know whether such steps had been taken. Officials in some districts gave reasons for the limited oversight. For example, officials in four districts said monitoring was unnecessary because developers make payments to organizations that the Corps was confident would use the payments to do adequate mitigation, such as The Nature Conservancy. Further, officials in some districts said that they had limited resources for oversight.

Responsibility for the ecological success of mitigation performed by ad hoc organizations is unclear. Of the 24 districts that used ad hoc arrangements, officials in 13 said ad hoc fund recipients were not liable for the failure of their mitigation efforts, while officials in 2 said they were, and officials in 9 said they did not know whether ad hoc recipients were liable. Officials in many of the districts who said that ad hoc fund recipients were not liable also said that developers were responsible for the mitigation efforts. However, federal regulations setting forth requirements for section 404 permits do not require permits to include performance standards for ecological success of mitigation efforts. Consequently, no procedures exist for ensuring the ecological success of ad hoc mitigation efforts.

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## Conclusions

In-lieu-fee arrangements have the potential to be an effective compensatory mitigation tool that benefits the environment and provides developers flexibility in meeting their mitigation requirements. It is not clear, however, whether such arrangements have, in practice, been an adequate method for mitigating adverse impacts to wetlands. Corps districts supplied us with contradictory information or were not able to provide us with data to support claims that acreage and/or functions and

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values of wetlands that had been restored, enhanced, created, or preserved equaled or exceeded those that had been lost through development. In addition, several districts have never taken steps to assess whether in-lieu-fee mitigation has adequately mitigated adverse impacts, and those that did make assessments used varying criteria. Similarly, oversight of ad hoc mitigation has been lacking. Projects, whether performed under in-lieu-fee arrangements or under ad hoc arrangements, must be assessed to determine whether they have been ecologically successful so that corrective action can be taken if necessary. The Corps lacks assurances that mitigation efforts under in-lieu-fee or ad hoc arrangements have been effective, sometimes relying instead on “good faith” on the part of the organizations performing the mitigation.

We commend the Corps, EPA, and other agencies for developing and implementing the October 2000 guidance, which provides a framework for in-lieu-fee mitigation. Without such a framework, congressional and agency decisionmakers would be hampered in their ability to make sound management decisions in providing continued stewardship of our nation’s resources. At the same time, the recent guidance does not go far enough either to bring consistency to how determinations of ecological success should be made or to establish appropriate monitoring and oversight activities. Agencies need adequate success criteria in order to measure whether progress is being made toward achieving the national goal of no net loss of the nation’s remaining wetlands. Where states play a significant role in decisions on compensatory mitigation, the agencies could coordinate with them in developing the criteria. Once the agencies establish success criteria for in-lieu-fee arrangements, extending those criteria to all compensatory mitigation options would provide the agencies the opportunity to assess mitigation success more broadly. Further, for purposes of accountability, responsibility for the success of mitigation efforts must be clearly assigned to either the developer or the party performing the mitigation.

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## Recommendations

To ensure that in-lieu-fee organizations adequately compensate for adverse impacts to wetlands, we recommend that the Administrator of EPA, in conjunction with the Secretaries of the Army, Commerce, and the Interior, establish criteria to determine the ecological success of mitigation efforts and develop and implement procedures for assessing success.

To better ensure the ecological success of mitigation efforts under ad hoc arrangements, we recommend that the Secretary of the Army instruct the Corps to establish procedures to clearly identify whether developers or

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recipients of funds are responsible for the ecological success of mitigation efforts and, using the same success criteria applicable to in-lieu-fee arrangements, to develop and implement procedures for assessing success.

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## Agency Comments

We provided the Department of Defense, EPA, and the departments of Commerce and the Interior with a draft of this report for review and comment. While all four agencies agreed with our recommendation concerning ad hoc arrangements, only EPA and Commerce agreed with our recommendation that EPA, in conjunction with the Secretaries of the Army, Commerce, and the Interior, establish ecological success criteria. In disagreeing with the recommendation, Defense suggested two changes. We disagree with both. First, Defense believes that the Corps, rather than EPA, should have the lead in implementing the recommendation. We continue to believe that EPA should have the lead in implementing our recommendation because section 404(b) of the Clean Water Act authorizes EPA to issue section 404 guidance. Second, Defense stated that, instead of establishing criteria to determine the ecological success of mitigation efforts, because the term “success” is too imprecise and subjective to be consistently and effectively applied, criteria should be established to determine “that wetlands functions have been adequately compensated.” We believe that Defense’s suggestion of adequate compensation is too narrow and does not address the overall national goal of no net loss of wetlands. We continue to believe that establishment of ecological success criteria is not only possible, but essential to determine whether progress is being made toward achieving that national goal through section 404 mitigation efforts. Regarding our recommendation calling for ecological success criteria, Interior stated that it did not agree that the federal agencies should establish national criteria. However, our recommendation does not call for national criteria. We agree with Interior’s comment that criteria are most appropriately developed at the local level, where experienced personnel can work together to develop criteria keyed to local ecosystems or watersheds. The comments of Defense, EPA, Commerce, and the Interior, and our responses to those comments, are included in appendixes III, IV, V, and VI, respectively.

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## Scope and Methodology

To obtain information on the extent to which the in-lieu-fee option has been used and been effective in mitigating adverse impacts to wetlands, and on the extent to which in-lieu-fee organizations compete with mitigation banks for developers' mitigation business, we conducted a two-phase telephone survey of Corps officials from the 38 district regulatory offices. The first phase of the telephone survey was conducted for all 38 Corps districts. We asked Corps officials to provide basic information such as whether their district provides the in-lieu-fee and mitigation banking options for developers, and if so, how many in-lieu-fee arrangements and mitigation banks exist in the district. We also asked Corps officials to provide us with copies of written in-lieu-fee agreements and any guidance concerning in-lieu-fee arrangements. We used the responses and documentation from the first phase to obtain an understanding of the extent to which in-lieu-fee arrangements were being used nationwide and to devise questions for the second phase of the survey.

The second phase of the telephone survey consisted of two versions: one for districts that have in-lieu-fee arrangements, and the other for districts that do not have such arrangements. During this second phase of the survey, we asked Corps officials to verify the number of in-lieu-fee arrangements and mitigation banks in the districts and to respond to questions concerning such topics as in-lieu-fee guidance, monitoring and enforcement, ecological success, competition between in-lieu-fee organizations and mitigation banks, and ad hoc arrangements.

In developing questions for our telephone survey, we conducted pretests of each version with two Corps district offices. During the pretest, we first asked Corps officials to answer the survey questions. After completing the survey questions, we interviewed the Corps officials to ensure that (1) the questions were clear, (2) the terms were precise, and (3) the survey appeared to be independent and unbiased. We also asked Corps districts to supply, in writing, information not suited for collection by telephone, such as the number of permits issued per district that used in-lieu-fees to satisfy mitigation requirements during fiscal years 1998–2000; the total dollar amounts received by in-lieu-fee organizations; and the number of acres that in-lieu-fee organizations restored, enhanced, created and/or preserved from the time that the in-lieu-fee arrangements were established through fiscal year 2000. Some districts did not provide all the information requested because, for example, the data were not tracked or not readily available. Further, we did not verify the information provided by Corps district officials; however, we corroborated the data with other sources to the extent possible.

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To better understand in-lieu-fee activities, the effectiveness of in-lieu-fee mitigation efforts, and competition between in-lieu-fee organizations and mitigation banks, we interviewed Corps officials and staff of in-lieu-fee organizations and mitigation banks, and we visited wetland sites in the Corps' districts of Chicago, Illinois; Savannah, Georgia; and Vicksburg, Mississippi. We judgmentally selected these districts because they had in-lieu-fee arrangements that were established in 1997 or earlier and had mitigation banks available as a mitigation option. For additional perspective, we also interviewed officials from The Nature Conservancy in Arlington, Virginia; the National Mitigation Banking Association; the Corps of Engineers' Engineer Research and Development Center in Vicksburg, Mississippi; a NOAA office in Charleston, South Carolina; and consulting firms in Savannah, Georgia, and Jackson, Mississippi. In addition, we met with a developer in Jackson, Mississippi, and with officials at a local FWS office in Athens, Georgia. Furthermore, we met with officials from Corps, EPA, FWS, and NOAA headquarters.

We conducted our work from May 2000 through April 2001 in accordance with generally accepted government auditing standards.

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As we agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 30 days from the date of this letter. We will then send copies to other interested parties and make copies available to others who request them.

If you or your staff have any questions about this report, please call me or Peg Reese at (202) 512-3841. Key contributors to this report are listed in appendix VII.

A handwritten signature in black ink that reads "Gary L. Jones". The signature is written in a cursive style with a large, stylized "G" and "J".

(Ms.) Gary L. Jones  
Director, Natural Resources and Environment

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*List of Requesters*

The Honorable Don Young  
Chairman

The Honorable James L. Oberstar  
Ranking Democratic Member  
Committee on Transportation and Infrastructure  
House of Representatives

The Honorable John J. Duncan, Jr.  
Chairman

The Honorable Peter A. DeFazio  
Ranking Democratic Member  
Subcommittee on Water Resources and the Environment  
Committee on Transportation and Infrastructure  
House of Representatives

The Honorable Sherwood L. Boehlert  
House of Representatives

The Honorable Robert A. Borski  
House of Representatives

# Appendix I: Select Characteristics of In-Lieu-Fee Arrangements, by Corps District Office

We identified 17 Corps district offices that have established in-lieu-fee arrangements as a mitigation option for developers whose activities will adversely affect wetlands. The districts have established a total of 63 in-lieu-fee arrangements, ranging from 1 to 27 arrangements per district. Table 1 lists the in-lieu-fee arrangements by district, as well as selected characteristics of each arrangement. Some districts did not provide the information we requested because, for example, the data were not tracked or were not readily available. The October 2000 in-lieu-fee guidance, if properly implemented, requires the Corps to track all uses of in-lieu-fee arrangements and report those figures by public notice on an annual basis.

Arrangement/ organization name	Effective date <sup>a</sup>	Type of organization	Dollars received	Percentage of dollars obligated/spent			Number of wetland acres		
				That directly mitigate adverse impacts	That do not directly mitigate adverse impacts	Total	Adversely impacted	Required to be mitigated	Actually mitigated
<b>Alaska</b>									
The Conservation Fund	May-98	Nonprofit	8,000	0	2	2	4.6	4.9	0
The Great Land Trust	Jul-98	Nonprofit	887,249	1	2	3	82.4	82.4	0
Southeast Alaska Land Trust	Sep-98	Nonprofit	74,000	0	2	2	7.6	7.6	0
Kachemak Heritage Land Trust	Mar-99	Nonprofit	51,994	0	2	2	14.8	10.0	0
<b>Buffalo</b>									
Lake Metroparks	May-97	Public	477,384	44	2	46	16.7	16.7	<sup>b</sup>
The Nature Conservancy, Central and Western New York Chapter	May-97	Nonprofit	84,734	100	0	100	6.9	6.9	<sup>b</sup>
Portage Land Association Conservation Education	Jun-97	Nonprofit	5,000	0	0	0	0.6	0.6	<sup>b</sup>
The Western New York Land Conservancy, Inc.	Jun-97	Nonprofit	73,000	77	2	79	4.7	4.7	<sup>b</sup>
Cleveland Metroparks	Jul-97	Public	1,073,250	37	2	39	50.6	50.6	<sup>b</sup>
<b>Buffalo (cont.)</b>									

**Appendix I: Select Characteristics of In-Lieu-Fee Arrangements, by Corps District Office**

Arrangement/ organization name	Effective date <sup>a</sup>	Type of organization	Dollars received	Percentage of dollars obligated/spent			Number of wetland acres		
				That directly mitigate adverse impacts	That do not directly mitigate adverse impacts	Total	Adversely impacted	Required to be mitigated	Actually mitigated
The Nature Conservancy, Ohio Chapter	Aug-97	Nonprofit	b	b	b	b	b	b	b
Geauga Park District	Oct-97	Public	72,885	95	5	100	2.1	2.1	b
Willoughby Natural Areas Conservancy, Inc.	Oct-97	Nonprofit	b	b	b	b	b	b	b
Tinkers Creek Land Conservancy, Inc.	Nov-97	Nonprofit	0	0	0	0	0	0	b
Save-the-County Land Trust, Inc.	Nov-97	Nonprofit	75,000	95	5	100	2.0	2.0	b
Wood County Park District	Nov-97	Public	45,700	44	2	46	4.4	4.4	b
Metro Parks, Serving Summit County	Nov-97	Public	238,941	27	1	28	7.0	7.0	b
Town of Brighton	Jan-98	Public	27,840	0	0	0	0.6	0.6	b
Park District Foundation of Allen County	Feb-98	Public	b	b	b	b	b	b	b
Portage County Park District	Mar-98	Public	45,120	0	0	0	1.4	1.4	b
Metropolitan Park District of the Toledo Area	Mar-98	Public	81,005	0	0	0	3.5	3.5	b
Chagrin River Land Conservancy	May-98	Nonprofit	71,030	67	3	70	2.0	2.0	b
Ohio Department of Natural Resources, Division of Natural Areas and Preserves	Jun-98	Public	106,450	17	1	18	3.6	3.6	b
Natural Areas Stewardship, Inc.	Aug-98	Nonprofit	b	b	b	b	b	b	b
Hancock Park District	Dec-98	Public	45,045	0	9	9	3.4	7.3	b
The Audubon Society of Greater Cleveland	Jan-99	Nonprofit	b	b	b	b	b	b	b



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				That directly mitigate adverse impacts	That do not directly mitigate adverse impacts	Total	Adversely impacted	Required to be mitigated	Actually mitigated
<b>Buffalo (cont.)</b>									
Hudson Land Conservancy, Inc.	Feb-99	Nonprofit	193,500	70	17	87	5.0	5.0	<sup>b</sup>
Johnny Appleseed Metropolitan Park District	Sep-99	Public	12,150	0	0	0	1.0	1.0	<sup>b</sup>
Medina County Park District	Sep-99	Public	78,375	0	0	0	1.5	1.5	<sup>b</sup>
Grand River Partners, Inc.	Jan-00	Nonprofit	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>
West Creek Preservation Committee	Apr-00	Nonprofit	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>
The Cleveland Museum of Natural History	May-00	Nonprofit	0	0	0	0	0	0	<sup>b</sup>
<b>Charleston</b>									
Waccamaw and Pee Dee River Basins/Historic Ricefields Association	Sep-00	Nonprofit	1,167	45	55	100	1.5	1.5	<sup>0c</sup>
<b>Chicago</b>									
Wetlands Restoration Fund/Corporation for Open Lands	Jun-97	Nonprofit	2,822,929	74	8	82	41.5	62.3	129.5
<b>Fort Worth</b>									
The Nature Conservancy of Texas	Nov-98	Nonprofit	469,922	17	1	18	2.7 <sup>d</sup>	2.7	<sup>0c</sup>
<b>Galveston</b>									
Galveston Bay Foundation	Apr-00	Nonprofit	0 <sup>e</sup>	0	0	0	0	0	0
Armand Bayou Nature Center	May-00	Nonprofit	0 <sup>e</sup>	0	0	0	0	0	0
Katy Prairie Conservancy	Jul-00	Nonprofit	0 <sup>e</sup>	0	0	0	0	0	0
The Nature Conservancy of Texas	Aug-00	Nonprofit	0 <sup>e</sup>	0	0	0	0	0	0

**Appendix I: Select Characteristics of In-Lieu-Fee Arrangements, by Corps District Office**

Arrangement/ organization name	Effective date <sup>a</sup>	Type of organization	Dollars received	Percentage of dollars obligated/spent			Number of wetland acres		
				That directly mitigate adverse impacts	That do not directly mitigate adverse impacts	Total	Adversely impacted	Required to be mitigated	Actually mitigated
<b>Huntington</b>									
Lake Choctaw/Ohio Wetlands Foundation	Aug-98	Nonprofit	176,000	55	45	100	7.2	10.8	11.0
Singer Lake/The Cleveland Museum of Natural History	Jul-99	Nonprofit	300,000	100	0	100	24.9	36.4	58.2
<b>Jacksonville</b>									
Florida Keys Environmental Restoration Trust Fund/Florida Audubon Society	Jun-98	Nonprofit	293,048	11	12	23	<sup>b</sup>	<sup>b</sup>	0
Hole-in-the-Donut/Dade County Department of Environmental Resources Management	Jul-92	Public	24,700,000	61	8	69	857.5	1,286.3	1,204 <sup>f</sup>
Unit 11 of the Indian Trail Improvement District/Palm Beach County Department of Environmental Resources Management	Not final	Public	10,169,967	55	0	55	<sup>b</sup>	1,057.1	919.3
<b>Kansas City</b>									
Stream Stewardship Trust Fund/Missouri Conservation Heritage Foundation	Jul-99	Nonprofit	131,555	0	0	0	2.8 <sup>g</sup>	2.8	0 <sup>c</sup>

**Appendix I: Select Characteristics of In-Lieu-Fee Arrangements, by Corps District Office**

Arrangement/ organization name	Effective date <sup>a</sup>	Type of organization	Dollars received	Percentage of dollars obligated/spent			Number of wetland acres		
				That directly mitigate adverse impacts	That do not directly mitigate adverse impacts	Total	Adversely impacted	Required to be mitigated	Actually mitigated
<b>Los Angeles</b>									
Santa Monica Mountains/Santa Monica Mountains Conservancy	Dec-98	Nonprofit	b	b	b	b	b	b	b
Ventura River Watershed/Ojai Valley Land Conservancy	Jan-99	Nonprofit	b	b	b	b	b	b	b
Santa Margarita Arundo Control Fund/Mission Resource Conservation District	Feb-99	Public	b	b	b	b	b	b	b
Calleguas Creek Watershed/ California Coastal Conservancy	Not final	Public	b	b	b	b	b	b	b
Santa Ana River Watershed	b	b	b	b	b	b	b	b	b
<b>Louisville</b>									
Stream Corridor Restoration Fund/Northern Kentucky University Foundation and Environmental Resource Management Center	Aug-99	Nonprofit	974,550	2	2	4	h	h	h
Louisville and Jefferson County Metropolitan Sewer District	Jul-00	Public	0	0	0	0	0	0	0
<b>Norfolk</b>									
Virginia Wetlands Restoration Trust Fund/The Nature Conservancy of Virginia	Aug-95	Nonprofit	4,120,000	84	2	86	85.0	170 – 850 <sup>i</sup>	1,499.0

**Appendix I: Select Characteristics of In-Lieu-Fee Arrangements, by Corps District Office**

Arrangement/ organization name	Effective date <sup>a</sup>	Type of organization	Dollars received	Percentage of dollars obligated/spent			Number of wetland acres		
				That directly mitigate adverse impacts	That do not directly mitigate adverse impacts	Total	Adversely impacted	Required to be mitigated	Actually mitigated
<b>Sacramento</b>									
Tulloch Lake/ Tridam and The Nature Conservancy	Jun-99	Nonprofit	33,000	0	0	0	b	b	b
Washoe Story Conservation District	Jan-00	Nonprofit	b	b	b	b	b	b	b
The Nature Conservancy	Apr-00	Nonprofit	88,000	b	b	100	2.0	2.0	2.0
<b>Savannah</b>									
Georgia Wetlands Trust Fund/Georgia Land Trust Service Center	Jul-97	Nonprofit	407,967	0	7	7	28.3	117.9 <sup>j</sup>	0 <sup>c</sup>
<b>Vicksburg</b>									
The Nature Conservancy of Louisiana	Jan-92	Nonprofit	b	b	b	b	b	365.5	365.5
Delta Land Trust	Jul-93	Nonprofit	b	b	b	b	b	271.0	271.0
Delta Wildlife Foundation	Oct-94	Nonprofit	7,931	0	0	0	25.3	25.3	0
Arkansas Highway and Transportation Department	May-96	Public	b	b	b	b	86.7	161.8	161.8
<b>Walla Walla</b>									
Burlington Northern/Ducks Unlimited	Jun-97	Nonprofit	166,000	100	0	100	2.0	2.0	2.0
North Hill/The Nature Conservancy	Feb-00	Nonprofit	140,000	0	0	0	3.0	4.0	0 <sup>c</sup>
<b>Wilmington</b>									
Wetland Restoration Program/North Carolina Department of Environment and Natural Resources	Nov-98	Public	15,442,655	b	b	10	45.2 <sup>k</sup>	90.4 <sup>k</sup>	0 <sup>c</sup>

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**Appendix I: Select Characteristics of In-Lieu-Fee Arrangements, by Corps District Office**

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<sup>a</sup>This is the date of the formal arrangement as reported by the Corps districts and verified, to the extent possible, with written arrangements provided by the districts. It is possible that some arrangements were in effect under general permits prior to the effective date. Arrangements with the effective date listed as “not final” have collected money although no written arrangement has been finalized.

<sup>b</sup>This information was not reported by the district because, for example, the data were not tracked or were not readily available.

<sup>c</sup>Mitigation was not performed because no projects had been started.

<sup>d</sup>The in-lieu-fee organization received fees for stream and open waters mitigation: a total of 8,780 linear feet of streams was adversely impacted, and 4,970 linear feet are required to have mitigation performed; a total of 1.4 acres of open waters was adversely impacted and 1.2 acres are required to have mitigation performed.

<sup>e</sup>The in-lieu-fee arrangements are relatively new, and no money had been collected or obligated/spent.

<sup>f</sup>In addition to the 1,204 acres for which mitigation was performed, Jacksonville district officials reported that the in-lieu-fee funds have assisted or will assist in the acquisition of approximately 180 acres, in the restoration of approximately 150 acres, in the enhancement of approximately 52,000 acres through exotic vegetation removal, and in the management or monitoring of 15,800 acres.

<sup>g</sup>The in-lieu-fee arrangement is solely for stream mitigation: a total of 2.8 acres of streams was adversely impacted and 2.8 acres are required to have mitigation performed.

<sup>h</sup>The in-lieu-fee arrangement is solely for stream mitigation: a total of 7,975 linear feet of streams was adversely impacted, 12,000 linear feet are required to have mitigation performed, and a mitigation effort is in progress.

<sup>i</sup>The number of wetland acres required to have mitigation performed equals either 170 restored acres or 850 preserved acres.

<sup>j</sup>While a total of 117.9 acres are required to have mitigation performed, the district limits the amount of mitigation that can be satisfied using in-lieu-fee arrangements to no more than 50% of that total.

<sup>k</sup>The in-lieu-fee arrangement received fees for mitigation of adverse impacts to streams: a total of 73,596 linear feet of streams was adversely impacted, and 73,596 linear feet are required to have mitigation performed.

Source: Prepared by GAO using data provided by Corps districts.

# Appendix II: Results of Telephone Survey of the Army Corps of Engineers Officials in District Offices With the In-Lieu-Fee Option

## GAO Interview of US Army Corps of Engineers Districts Wetland In-Lieu-Fee Mitigation (Phase II)

As you know, there are several ways to mitigate for lost wetlands, including mitigation by the permittee, use of mitigation banks or in-lieu-fee arrangements, and donations to other third parties. You told us in your response to our July 17 letter that there were \_\_\_ in-lieu-fee arrangement(s) and \_\_\_ mitigation banks in your District at that time.

Are these numbers correct as of September 30, 2000?

\_\_\_ Yes (*Go to Question 1*)

\_\_\_ No. Then could you provide me the correct number of in-lieu-fee arrangements and mitigation banks as of September 30, 2000?

**Note: Respondents' answers to open-ended questions were coded into response categories. Response categories for open-ended questions, and the percentage of responses in each category are presented as tables, e.g., responses to Question 1.**

1. What information does your Office give permit applicants regarding mitigation options?

Percent	Number	Response Categories
59%	10	Discuss mitigation options with the applicant
35%	6	Provide applicants with a list of mitigation options
6%	1	Let applicant devise their own plan and then Corps approves

2. Has your District had any instances in which a permittee has made a donation to a third party to mitigate for lost wetlands where you did not consider the third party to be an in-lieu-fee sponsor?

71% (12) Yes (*Go to Question 3*)

29% (5) No (*Go to Question 4*)

**Appendix II: Results of Telephone Survey of  
the Army Corps of Engineers Officials in  
District Offices With the In-Lieu-Fee Option**

**3. What differentiates these third-party arrangements from in-lieu-fee arrangements?**

Percent	Number	Response Categories
58%	7	No written agreement for third parties
42%	5	Third party payment helps fund a specific single project
33%	4	Third party payments happened before the in-lieu-fee arrangement existed
8%	1	No aggregation of funds for third parties
8%	1	Third party fund is not publicly available
8%	1	Third party payments happened outside the service area of the in-lieu-fee arrangement
8%	1	Third party payment was proposed by permittee
8%	1	No other option was available

**For the rest of the interview, I will be focusing primarily on in-lieu-fee arrangements. I would like to begin by asking a few general questions about the purpose and use of these arrangements in your District.**

**4. First, could you tell me your Office's definition of in-lieu-fee arrangements?**

Percent	Number	Response
76%	13	Fees paid to a third party
65%	11	A mitigation option
29%	5	Mitigation takes place in the future or usually in the future
18%	3	No definition
12%	2	Less formal than mitigation banks
6%	1	A tool in sequencing process
6%	1	An umbrella agreement

**5. Are there any state laws that affect in-lieu-fee arrangements in your District?**

- 6% (1) Yes
- 88% (15) No
- 6% (1) Uncertain

**Appendix II: Results of Telephone Survey of  
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District Offices With the In-Lieu-Fee Option**

**6. What is the purpose of in-lieu-fee arrangements as viewed by your District?**

Percent	Number	Response
76%	13	To provide an additional mitigation option
53%	9	To mitigate for smaller areas
24%	4	To mitigate in a more environmentally beneficial way
18%	3	To provide individuals with a cheaper option than mitigation banks
18%	3	To replace functions and values lost
6%	1	To mitigate more efficiently
6%	1	To permit more efficiently
6%	1	To improve relationships between environmental groups and the Corps
6%	1	To focus on the challenges of stream mitigation
6%	1	To provide a simple mitigation option

The next few questions ask you to compare your District's purpose of in-lieu-fee arrangements to that of other agencies.

**7. In your opinion, does your District's purpose of in-lieu-fee arrangements differ significantly from the purpose as viewed by the Environmental Protection Agency?**

- 12% (2) Yes (Go to Question 8)
- 53% (9) No (Go to Question 9)
- 35% (6) Uncertain (Go to Question 9)

**8. How is the purpose different?**

Percent	Number	Response Categories
50%	1	EPA thinks in-lieu-fee mitigation should be in-kind, on-site
50%	1	EPA thinks in-lieu-fee mitigation relies too heavily on preservation
50%	1	EPA is solely interested in water quality
50%	1	EPA thinks there should be no net loss of acreage



**Appendix II: Results of Telephone Survey of  
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**9. How about as viewed by the Fish and Wildlife Service?**

- 12% (2) Yes (*Go to Question 10*)
- 59% (10) No (*Go to Question 11*)
- 29% (5) Uncertain (*Go to Question 11*)

**10. How is the purpose different?**

Percent	Number	Response Categories
100%	2	FWS concentrates mitigation efforts on species and habitat benefits
50%	1	FWS prefers managed areas as opposed to "build and walk-away" areas
50%	1	FWS prefers creation and restoration

**11. How about as viewed by the National Marine Fisheries Service?**

- 0% Yes (*Go to Question 12*)
- 29% (5) No (*Go to Question 13*)
- 35% (6) Uncertain (*Go to Question 13*)
- 35% (6) Not Applicable (*Go to Question 13*)

**12. How is the purpose different?**

(Note: No respondent was asked this question, because no one answered 'Yes' to Question 11.)

**13. In your opinion, is your District's purpose of in-lieu-fee arrangements different from the purpose of mitigation banks?**

- 24% (4) Yes (*Go to Question 14*)
- 71% (12) No (*Go to Question 15*)
- 6% (1) Not Applicable/No Mitigation Banks (*Go to Question 15*)

**14. How is the purpose different?**

Percent	Number	Response Categories
25%	1	Mitigation banks' purpose includes making profit, in-lieu-fee organizations' purpose is solely to improve environment
25%	1	In-lieu-fee arrangements protect water quality while mitigation banks protect habitat
25%	1	In-lieu-fee arrangements are for smaller scale projects while mitigation banks are for larger scale projects
25%	1	In-lieu-fee arrangements mitigate after impacts while mitigation banks mitigate before impacts
25%	1	In-lieu-fee arrangements are less expensive than mitigation banks

**Appendix II: Results of Telephone Survey of  
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District Offices With the In-Lieu-Fee Option**

**15. For what types of federal permits are in-lieu-fees used to satisfy mitigation requirements?**

100% (17) Section 404 of the Clean Water Act  
29% (5) Section 10 of the Rivers and Harbors Act

**16. Have in-lieu-fees been used in your District to satisfy mitigation required as a result of Section 404 or other permitting violations?**

71% (12) Yes  
29% (5) No

**17. Which of the following types of mitigation efforts are funded by in-lieu-fee arrangements in your District?**

Yes	No	Response Categories
35% (6)	65% (11)	Creation of wetlands
76% (13)	24% (4)	Restoration of wetlands
71% (12)	29% (5)	Enhancement of wetlands
71% (12)	29% (5)	Preservation of wetlands
41% (7)	59% (10)	Upland buffers
12% (2)	88% (15)	Riparian corridors
59% (10)	41% (7)	Stream restoration
12% (2)	88% (15)	Other
6% (1)	94% (16)	Not applicable because no projects yet

**18. Two additional activities that are sometimes funded with in-lieu-fees are research and education.**

**In your District, have any in-lieu-fees been used for research?**

12% (2) Yes  
88% (15) No

**How about education?**

12% (2) Yes  
88% (15) No

**Any other activities you can think of?**

6% (1) Yes  
94% (16) No

**Appendix II: Results of Telephone Survey of  
the Army Corps of Engineers Officials in  
District Offices With the In-Lieu-Fee Option**

Now I would like to ask some questions about in-lieu-fee guidance.

19. The first question is about the in-lieu-fee section of the Corps guidance that became effective on December 29, 1995. As you know, that guidance generally pertained to the establishment, use, and operation of mitigation banks. How did the in-lieu-fee section in that guidance help you hold in-lieu-fee sponsors accountable for achieving their intended purpose?

Percent	Number	Response Categories
47%	8	(Respondent gave an explanation of the districts' current practices)
35%	6	Wasn't addressed
29%	5	Don't know if it did
18%	3	Generally followed MB guidance
6%	1	Provided a framework
6%	1	Not applicable because mitigation type is preservation

20. Did Corps Headquarters, your Division Office, or other federal agencies provide any other guidance to help you hold in-lieu-fee sponsors accountable for achieving their intended purpose? For example, any written guidance or guidance received during teleconferences.

- 41% (7) Yes (Go to Question 21)
- 53% (9) No (Go to Question 22)
- 6% (1) Don't Know (Go to Question 22)

21. Can you briefly tell me what guidance was provided and how it helped you hold in-lieu-fee sponsors accountable for achieving their intended purpose?

Percent	Number	Response Categories
29%	2	Told to choose sponsors they trust
14%	1	Told that they are responsible for making sure the in-lieu-fee arrangement has enough money
14%	1	Told not to have a preference for in-lieu-fee arrangements
14%	1	Told to keep in-lieu-fee arrangements simple
14%	1	Told not to get involved with setting fees
14%	1	Told to keep in-lieu-fee arrangements informal
14%	1	Told that mitigation needs to replace functions
14%	1	Told to keep money in a separate account

**Appendix II: Results of Telephone Survey of  
the Army Corps of Engineers Officials in  
District Offices With the In-Lieu-Fee Option**

**22. Did any guidance developed by Corps Hq., your Division Office, your District, or other federal agencies provide performance standards for measuring the success of in-lieu-fee arrangements' mitigation efforts?**

35% (6) Yes (Go to Question 23)  
65% (11) No (Go to Question 24)

**23. What performance standards and/or measurement tools were addressed in the guidance?**

Percent	Number	Response Categories
33%	2	Success criteria
17%	1	Baseline information
17%	1	Site specific plans
17%	1	Reference site information
17%	1	Charleston method
17%	1	Best professional judgement
17%	1	Mitigation guidelines and requirements
17%	1	Monitoring information

**24. Do you believe that federal guidance on in-lieu-fee mitigation is needed?**

71% (12) Yes (Go to Question 25)  
29% (5) No (Go to Question 26)

**Appendix II: Results of Telephone Survey of  
the Army Corps of Engineers Officials in  
District Offices With the In-Lieu-Fee Option**

**25. What should the federal guidance address?**

Percent	Number	Response Categories
25%	3	Provide a general framework with flexibility
25%	3	Provide pricing information
25%	3	Provide information on written agreements
25%	3	Legitimize the use of in-lieu-fee arrangements
17%	2	Encourage the use of in-lieu-fee arrangements for small projects
17%	2	Standardize the approach of in-lieu-fee arrangements
17%	2	Provide administrative fee information
8%	1	Require formal agreements
8%	1	Monitoring requirements
8%	1	Competition with mitigation banks
8%	1	Provide information on appropriate ratios
8%	1	Require that money be spent on activities that directly mitigate adverse impacts
8%	1	Provide information on best practices
8%	1	Explain the goal of funds (net gain)
8%	1	Require interagency coordination
8%	1	Provide information on performance standards
8%	1	Require cooperative approval of projects

**26. Would you briefly explain why you believe federal guidance is not needed?**

Percent	Number	Response Categories
80%	4	Doing well without guidance
60%	3	Don't want additional burdens/would be too cumbersome
40%	2	Don't want the flexibility of the program removed
20%	1	Existing system is adequate

**Appendix II: Results of Telephone Survey of  
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**27. In your opinion, are national or regional performance standards for measuring the success of mitigation efforts feasible?**

- 18% (3) Yes, for national (*Go to Question 29*)
- 29% (5) Yes, for regional (*Go to Question 29*)
- 35% (6) Perhaps for regional (*Go to Question 29*)
- 82% (14) No for national (*Go to Question 28*)
- 35% (6) No for regional (*Go to Question 28*)

**28. In your opinion, why aren't national or regional performance standards feasible?**

Percent	Number	Response Categories
79%	11	Too much variability among ecosystems
43%	6	Not workable
7%	1	Not necessary
7%	1	Would complicate the process

**29. Are you familiar with the in-lieu-fee guidance developed by the EPA and currently under consideration by the Department of the Army?**

- 6% (1) Familiar with guidance: surveyed before guidance signed (*Go to Question 30*)
- 47% (8) Familiar with guidance: surveyed after guidance signed (*Go to Question 30*)
- 12% (2) Not familiar with guidance: surveyed before guidance signed (*Go to Question 32*)
- 35% (6) Not familiar with guidance: surveyed after guidance signed (*Go to Question 32*)

**Appendix II: Results of Telephone Survey of  
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**30. Would the in-lieu-fee guidance developed by EPA change the way you establish and operate in-lieu-fee arrangements?**

22% (2) No  
 11% (1) No comment  
 67% (6) Yes **Could you tell me briefly how?**

Percent	Number	Response Categories
17%	1	Add checks and balances
17%	1	Increases paperwork
17%	1	Formalizes the planning process
17%	1	Will establish a review team
17%	1	Corps will approve projects
17%	1	Set time for completion and success
17%	1	Include more information on the in-lieu-fee sponsor
17%	1	Decreases flexibility
17%	1	Increases bureaucracy
17%	1	Closing out the in-lieu-fee program
17%	1	May not continue with the in-lieu-fee program

**31. Would it change the way you hold in-lieu-fee sponsors accountable for achieving their intended purpose?**

22% (2) No  
 11% (1) No comment  
 67% (6) Yes **Could you please tell me how?**

Percent	Number	Response Categories
33%	2	Make sponsor responsible for failures
17%	1	Provide public notice and accept comments
17%	1	Will have a review team
17%	1	Corps will approve projects
17%	1	Will no longer have in-lieu-fee sponsors
17%	1	May not continue with the in-lieu-fee program

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**Appendix II: Results of Telephone Survey of  
the Army Corps of Engineers Officials in  
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Now I'll ask some questions about your Office's involvement in the design of the in-lieu-fee arrangements in your District.

**32. Does your Office require written agreements between your District and the in-lieu-fee sponsor?**

94% (16) Yes  
6% (1) No

**33. Does your Office approve the specific mitigation projects funded by the in-lieu-fee sponsor, does the sponsor approve its own mitigation projects, or is it some combination of the two?**

65% (11) Office approves projects  
0 Sponsor chooses projects  
35% (6) Combination of the two

**34. Does your Office require that in-lieu-fee mitigation take place in the same watershed as the lost wetland?**

35% (6) Yes  
65% (11) No

**35. Does your Office require that in-lieu-fee mitigation be in-kind?**

29% (5) Yes  
71% (12) No

**36. Does your Office get involved with setting fees charged by the in-lieu-fee sponsors?**

29% (5) Yes (*Go to Question 37*)  
71% (12) No (*Go to Question 38*)



**Appendix II: Results of Telephone Survey of  
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**37. In helping set in-lieu-fee amounts, does your Office do any of the following? I will read a list and you can answer yes or no.**

Yes	No	Not Applicable (no active mitigation banks)	Not Applicable (no stream mitigation banks)	Response Categories
100% (5)	0			Make an effort to ensure that fees adequately cover sponsor costs.
60% (3)	40% (2)			Take into consideration activities that are not "on the ground."
80% (4)	20% (1)			Take into consideration temporal loss.
60% (3)	40% (2)			Take into consideration the risk of failure.
40% (2)	20% (1)	20% (1)	20% (1)	Take into consideration the cost of credits charged by mitigation banks.
100% (5)	0			Are there any other things your office considers when helping set in-lieu fee amounts?

**38. Does your District limit the amount of funds an in-lieu-fee sponsor can charge for administrative expenses?**

- 59% (10) Yes (Go to Question 39)
- 12% (2) Yes, in part (Go to Question 39)
- 29% (5) No (Go to Question 40)

**39. What is the limit on the amount of funds that an in-lieu-fee sponsor can charge for administrative expenses?**

Percent	Number	Response Categories
33%	4	1-5%
17%	2	6-10%
8%	1	11-15%
8%	1	No administrative fees at all
8%	1	No salaries allowed, but land survey costs are unlimited
25%	3	Other

**Appendix II: Results of Telephone Survey of  
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**40. Does your District require that in-lieu-fee sponsors spend or obligate fees received from permittees within a specific timeframe?**

35% (6) Yes (*Go to Question 41*)  
65% (11) No (*Go to Question 42*)

**41. What is the timeframe within which in-lieu-fee sponsors must spend or obligate fees received from permittees?**

Percent	Number	Response Categories
50%	3	3 years
17%	1	Have construction completed 1 year after construction starts
17%	1	Monitor success for 3-5 years
17%	1	2-3 years
17%	1	Projects must be identified with 1 year of receipt of payment and construction completed within 2 years after construction starts.

**42. Does your District have established mitigation ratios for permittees using in-lieu-fees?**

24% (4) Yes, specified ratios (*Go to Question 43*)  
53% (9) Yes, case by case (*Go to Question 44*)  
24% (4) No (*Go to Question 44*)

**43. What are the ratios?**

Ratio	Percent/Number	Response Categories
1:1 or 2:1	1	Creation
3:1	1	
1.5:1	1	Restoration
2:1	2	
4:1	1	Enhancement
varies	1	
10:1	2	Preservation
2:1	1	
8:1 or 10:1	1	
2:1	1	Stream restoration
1.5:1	1	Emergent wetlands

**44. Given that you do not use ratios, how does your District determine the acres required to mitigate for lost wetlands?**

Districts generally reiterated that they determine acres required on a case-by-case basis or by using a debit/credit methodology.

**Appendix II: Results of Telephone Survey of  
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**45. We know that some Districts use standard operating procedures to determine credits for impacted and mitigated wetlands. Does your District use any standard procedures?**

35% (6) Yes  
65% (11) No

**That covers the questions I had about your District Office's involvement in the design of in-lieu-fee arrangements. Now I would like to ask some questions about monitoring and enforcement.**

**46. Does Corps Hq. or your Division Office require your Office to monitor the use of in-lieu-fees?**

29% (5) Yes  
65% (11) No  
6% (1) No, unless the in-lieu-fee arrangement is chosen as part of the required percentage to meet the general monitoring requirement

**47. Do you have the authority to monitor and enforce in-lieu-fee sponsor's mitigation efforts?**

88% (15) Yes  
0 No  
6% (1) Yes for monitoring; no for enforcement  
6% (1) Don't know

**48. Does your Office monitor the use of in-lieu-fees received under each arrangement?**

82% (14) Yes (*Go to Question 49*)  
6% (1) No (*Go to Question 50*)  
12% (2) Not applicable (*Go to Question 50*)

**49. Which of the following techniques does your Office use to monitor the use of in-lieu-fees? Does your Office:**

Yes	No	Yes for restoration and No for preservation	Response Categories
86% (12)	7% (1)	7% (1)	Require monitoring reports from in-lieu-fee sponsors
57% (8)	36% (5)	7% (1)	Require any other types of reports
100% (14)	0		Visit the in-lieu-fee sponsor
100% (14)	0		Visit in-lieu-fee mitigation projects
57% (8)	43% (6)		Use any other techniques

**Appendix II: Results of Telephone Survey of  
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**50. Does your Office try to determine whether in-lieu-fee sponsors have used the in-lieu-fees to adequately mitigate for the lost wetlands?**

- 6% (1) Not applicable
- 6% (1) No
- 88% (15) Yes **How do you do that?**

Percent	Number	Response Categories
60%	9	Review monitoring reports
33%	5	Review accounting reports
27%	4	Visit sites
20%	3	Up-front approval of projects
7%	1	Through a general awareness of projects with high visibility
7%	1	Determining if acreage lost equaled amount preserved/enhanced, etc.
7%	1	Monitor the acreage purchased

**51. Are the in-lieu-fee sponsors liable for failure of their mitigation efforts?**

- 65% (11) Yes
- 18% (3) No
- 6% (1) Yes and not applicable for acquisition projects
- 6% (1) No and not applicable for acquisition projects
- 6% (1) Not applicable because no projects

**Appendix II: Results of Telephone Survey of  
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**52. Does your District have enforcement procedures in place?**

- 24% (4) No
- 6% (1) No and not applicable for acquisition projects
- 6% (1) Yes and not applicable for acquisition projects **Briefly, describe them.**
- 65% (11) Yes **Briefly, could you describe them?**

Percent	Number	Response Categories
50%	6	Same procedure as other options/any other permit
42%	5	Procedures in agreement
8%	1	Use protective covenants
8%	1	Discuss a fix
8%	1	Procedures in permit
8%	1	Corrective action if plan not met
8%	1	In-lieu-fee sponsor is a co-signer of the permit

**53. Has your District attempted to take any enforcement actions against in-lieu-fee sponsors in fiscal years 1998 through 2000?**

- 0 Yes
- 100% (17) No

**Appendix II: Results of Telephone Survey of  
the Army Corps of Engineers Officials in  
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**Now I have some questions about the ecological success of in-lieu-fee sponsors' mitigation efforts in your District.**

**54. I'm going to start by asking you how your district defines ecological success of mitigation efforts.**

Percent	Number	Response Categories
47%	8	Meets success criteria
29%	5	Restores functions
18%	3	Look at the relative ecological value as compared to other wetlands
12%	2	Restores values
12%	2	Meets acreage requirement
6%	1	Don't evaluate ecological success
6%	1	Don't have a method to evaluate ecological success
6%	1	Look at value received for the money spent
6%	1	Look at baseline data
6%	1	Elimination of exotic species of flora and fauna

**55. Have you ever taken steps to determine whether in-lieu-fee sponsors' mitigation efforts have been ecologically successful?**

- 41% (7) Yes (*Go to Question 56*)
- 35% (6) No (*Go to Question 57*)
- 24% (4) Not applicable (*Go to Question 57*)

**Appendix II: Results of Telephone Survey of  
the Army Corps of Engineers Officials in  
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**56. What performance standards and measurement tools does your office use to measure the ecological success of in-lieu-fee sponsors' mitigation efforts?**

Percent	Number	Response Categories
57%	4	Specific techniques/performance standards
29%	2	Visit sites
14%	1	Review reports
14%	1	Wetland Rapid Assessment Procedure
14%	1	Charleston method
14%	1	Vegetation, 50% survival
14%	1	Hydrology
14%	1	Not applicable for acquisition

**57. Has Corps Headquarters, your Division, or your Office taken any steps to improve analytical techniques for measuring ecological success?**

6% (1) Not applicable (*Go to Question 58*)

35% (6) No (*Go to Question 58*)

59% (10) Yes **Please Explain**

Percent	Number	Response Categories
70%	7	Hydrogeomorphic Approach development
10%	1	Swink and Wildhelm
10%	1	Local debit/credit methodology
10%	1	Local training
10%	1	Local performance standards
10%	1	Created interagency task force

**Appendix II: Results of Telephone Survey of  
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**58. What methodology does your Office use to determine ecological success? For example, does your Office compare the acres of wetlands lost with the acres mitigated by the in-lieu-fee sponsor, compare the functions and values of wetlands lost through permitting activities with the functions and values of the wetlands mitigated by the in-lieu-fee sponsor, or anything else?**

Percent	Number	Response Categories
47%	8	Both acres and functions and values
24%	4	Acres/feet
24%	4	Functions and values
6%	1	Neither acres nor functions and values
6%	1	Best professional judgment

**59. For each of the arrangements in your District, did the number of wetland acres mitigated by the in-lieu-fee sponsor meet or exceed the number of wetland acres lost?**

- 65% (11) Yes
- 6% (1) No
- 29% (5) Not applicable

**60. For each of the arrangements in your District, did the functions and values of wetlands mitigated by the in-lieu-fee sponsor meet or exceed the functions and values of the wetlands lost?**

- 59% (10) Yes
- 6% (1) No
- 6% (1) Don't know
- 29% (5) Not applicable



**Appendix II: Results of Telephone Survey of  
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**61. What factors contributed to the ecological success or failure of the in-lieu-fee arrangement's mitigation efforts?**

Percent	Number	Response Categories
29%	5	Not applicable because no projects
18%	3	Competent, professional staff doing the work
12%	2	Corps involvement
12%	2	Takes too long
12%	2	Being flexible
6%	1	Getting adequate money for projects
6%	1	Well researched projects
6%	1	Well designed projects
6%	1	Real need for the projects
6%	1	Set goals and work towards them
6%	1	Input from resource agencies
6%	1	Making sure developers pay the fees
6%	1	Reporting requirements
6%	1	Having local control
6%	1	Sponsor is non-profit
6%	1	Lack of bureaucracy
6%	1	Not government sponsored
6%	1	Hydrology, soils, and seed sources in place
6%	1	Characteristics of the site
6%	1	Preservation, by default, is successful
6%	1	Increases in the price of land
6%	1	Specific, measurable, and attainable goals, target functions, site selection criteria, and water modeling.

**Appendix II: Results of Telephone Survey of  
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Now I would like to ask you a few questions regarding the relationship between each in-lieu-fee arrangement and the mitigation banks in your District.

**62. What is the service area for (in-lieu-fee arrangement name)?**

Number of In-Lieu-Fee Arrangements	Response Categories
4	States
9	Counties
13	Watersheds
2	River Basin
1	Town
13	Other

Note: The sum does not add to 63 in-lieu-fee arrangements because we randomly sampled 6 of the Buffalo District's 27 in-lieu-fee arrangements.

**63. Does the service area covered by any in-lieu-fee arrangement in your District overlap with the service area of any mitigation bank?**

- 71% (12) Yes (Go to Question 64)
- 12% (2) No (Go to Question 65)
- 18% (3) Not applicable (Go to Question 65)

**64. Do the in-lieu-fee arrangements supplement or substitute for the mitigation banks?**

- 17% (2) Supplement
- 6% (1) Substitute
- 53% (9) Both

**65. In your opinion, do mitigation banks and in-lieu-fee arrangements compete with each other?**

- 53% (9) Yes
- 18% (3) No
- 12% (2) Not applicable because no overlapping service areas
- 6% (1) Not applicable because no mitigation banks
- 6% (1) Not applicable because no stream mitigation banks
- 6% (1) Not applicable because mitigation banks have not started selling credits

**Appendix II: Results of Telephone Survey of  
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Next I have an opinion question for you.

**66. I will make statements to which I would like you to respond to what extent you agree with the statement. Please tell me if you strongly agree, generally agree, are uncertain, generally disagree, or strongly disagree.**

Strongly Agree	Generally Agree	Uncertain	Generally Disagree	Strongly Disagree	Statement
56% (9)	25% (4)	13% (2)	0	6% (1)	Permittee payments to in-lieu-fee sponsors are sufficient to cover the cost of replacing lost wetlands.
18% (3)	12% (2)	6% (1)	35% (6)	29% (5)	In-lieu-fee sponsors rely heavily on preservation for mitigation.
24% (4)	41% (7)	6% (1)	29% (5)	0	Mitigation by in-lieu-fee sponsors is generally in-kind.
41% (7)	41% (7)	6% (1)	12% (2)	0	Mitigation by in-lieu-fee sponsors takes place in the same watershed.
65% (11)	18% (3)	0	12% (2)	6% (1)	Mitigation by in-lieu-fee sponsors occurs after wetlands are lost.
6% (1)	24% (4)	6% (1)	24% (4)	29% (5)	Mitigation by in-lieu-fee sponsors runs behind schedule.
71% (12)	18% (3)	6% (1)	0	6% (1)	In-lieu-fee arrangements include adequate monitoring requirements.
35% (6)	47% (8)	12% (2)	0	6% (1)	In-lieu-fee arrangements include financial assurances to ensure long-term success. (e.g. insurance, escrow accounts)
6% (1)	0	12% (2)	29% (5)	53% (9)	In-lieu-fee arrangements cannot be effectively enforced in the event of failure.

Note: Responses that do not add to 17 districts are because either the question was not applicable to districts or district officials opted not to comment.

Okay, I have just a couple of final questions.

**67. In your opinion, have the June 5, 2000, revisions to the Nationwide Permit rules encouraged, discouraged, or had no effect on the use of in-lieu-fee arrangements in your District?**

41% (7) Encouraged  
12% (2) Discouraged  
47% (8) No effect

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**Appendix II: Results of Telephone Survey of  
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**68. In your opinion, have the June 5, 2000, revisions to the Nationwide Permit rules encouraged, discouraged, or had no effect on the use of mitigation banks in your District?**

**35% (6)** Encouraged  
**12% (2)** Discouraged  
**35% (6)** No effect  
**12% (2)** Don't know  
**6% (1)** Not applicable

**That completes our survey. Do you have any additional comments or observations about in-lieu-fees?**

10 districts provided additional comments

**Thank you for your time. We appreciate your help.**

# Appendix III: Comments From the Department of Defense



DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
WASHINGTON, D.C. 20314-1000

REPLY TO  
ATTENTION OF:

17 APR 2001

CEIR

Mr. Gary L. Jones  
Director, Natural Resources and Environment  
U.S. General Accounting Office  
Washington, D.C. 20548.

Dear Mr. Jones:

This is the Department of Defense (DoD) response to the GAO draft report, 'Wetlands Protection: Assessments Needed to Determine Effectiveness of In-Lieu-Fee Mitigation, March 30, 2001 (GAO Code 141440/OSD Case 3068).

The DoD has received and reviewed the subject report. Detailed comments on the final report recommendations are included in the enclosure. The DoD appreciates the opportunity to comment on the final report.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Templeton".

John E. Templeton  
Chief, Internal Review Office

Encl

GAO DRAFT REPORT DATED AUGUST 11, 2000  
(GAO CODE 141440) OSD CASE 3068

"WETLANDS PROTECTION: ASSESSMENTS NEEDED  
TO DETERMINE EFFECTIVENESS OF IN-LIEU-FEE  
MITIGATION"

DEPARTMENT OF DEFENSE COMMENTS  
TO THE GAO RECOMMENDATION

**RECOMMENDATION 1:** The GAO recommended that the Army instruct the Corps of Engineers districts to establish procedures to clearly identify whether developers or recipients of funds are responsible for the ecological success of mitigation efforts and, using the same success criteria applicable to in-lieu-fee arrangements, to develop and implement procedures for assessing success.. (p. 15/Draft Report)

**DOD RESPONSE:** We concur that the Corps needs to do a better job of identifying in permits the party responsible for complying with any mitigation conditions contained therein. Compliance requirements, both short term and long term should indicate who is responsible. Permit conditions currently do not always provide this degree of specificity. The Army will continue with its research and development efforts as indicated above, and will develop guidance before 31 Dec 2001 for Corps Districts concerning mitigation conditions in permits.

**Additional Comments**

1. The report characterizes compensatory mitigation in a manner that may confuse readers. It states that "developers may perform their own compensatory mitigation...", or "they may pay third parties for mitigation..." The report goes on to clarify third party mitigation as bank, in-lieu fee arrangements or ad hoc arrangements. The potential confusion begins with the concept of payment. Often developers may pay a consultant to construct the mitigation project, whether on-site, adjacent, or off-site. Under the report's distinction, this latter project-specific off-site mitigation might be interpreted as an ad hoc arrangement. The Corps is not sure what GAO intends.

2. The report states that the Corps lacks assurances that in-lieu fee mitigation has been effective. Based on that finding, the report recommends that Corps establish criteria and develop and implement procedures to determine ecological success. This recommendation represents a very big step, a step much larger than assurance of compensatory mitigation compliance. Identification of ecological success appropriate for specific compensatory mitigation projects would at a minimum require development of explicit watershed or regionally based ecosystem/aquatic resources plans. While such information could be beneficial, the value added to the environment may be minimal in many permit decisions, if not most, especially compared

See comment 1.

See comment 2.

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See comment 3.

to simply assuring that appropriate mitigation site hydrology is achieved (through attention to site planning and mitigation design parameters) and attendant long-term vegetative and wildlife management procedures provided.

3. Substantial data are provided whether in text or in the tables. However, lack of context renders some reporting potentially meaningless or perhaps even distorted. For example, page 9, paragraph 2 indicates that "three districts have used funds for activities, such as research and/or education which do not directly mitigate adverse impacts." The reader might interpret that some portion of adversely affected wetlands is not replaced because the funds were expended on no replacement activities. However, the Corps Institute for Water Resources Report on In-Lieu Fee Arrangements (November 1999) identifies at least one District in-lieu fee arrangement that had implemented the required compensatory mitigation (actually the in-lieu-fee administrator provided more than required), but some funds were also spent for activities such as research. Thus, the programmatic requirement for no overall net loss of wetlands was met, and ostensibly the state of wetland science was also improved. From a resource management perspective, as long as the mitigation provided meets the compensatory need, excess funds belong to the in-lieu-fee administrators to expend they as see fit.

See comment 4.

4. The report does not describe how different requirements for institutional arrangements can affect Corps the roles and responsibility for an in lieu fee arrangement. Documents establishing in-lieu fees vary in form to meet the needs of the of implementing institutions. Typically arrangements between the Corps and a non-government organization may be described and implemented through an agreement, perhaps in the form of a letter of agreement. In-lieu fee arrangements based on government programs may require more supporting elements, and more formal arrangements, such as a Memorandum of Agreement. Some of the governmentally based arrangements may be dependent on state or other governmental statutes or rules. A few in-lieu-fee arrangements are based on Programmatic General Permits developed by the Corps. In these instances, the in-lieu fee arrangements may be specified as the primary or only source of mitigation in the standard operating procedures or other documents for the general permit.

See comment 5.

#### Specific Comments

Page 3, Results in Brief, paragraph 1. Is the information provided regarding adversely affected acres and dollars collected for the period defined (FY 1998 through 2000). If so, then the new information provided by Jacksonville District (forwarded by GAO to the agencies by email on 9 April) is not appropriate to be included, since much of the mitigation effected is likely prior to FY 1998. A second question that needs to be addressed is why is only FY 1998-2000 tabulated? Why are not all years included? Is there another point to be made that relates to that time frame?

Page 4, paragraph 1, makes the statement: "GAO makes a recommendation aimed at establishing criteria and developing and implementing procedures to determine ecological success." The

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Page 3

See comment 6.

term "ecological success" occurs through out the report as a goal or determination to be made. The term needs to be defined, because its meaning seems to change with a change in context. If the GAO report means by ecological success the development of a "wetland" as defined by and delineated by Corps methodologies, then the premise and intent of the statements dealing with "ecological success" in the report are understandable. In fact, measurable criteria can be developed in terms that are useful and meaningful. If however, the meaning is more towards the view of exact replication of natural systems then the meaning is in the "eye of the beholder" and all practicable implications for measuring effectiveness will subject to debate. For there to be benefit to the environment the key is in assuring implementation of practices that have predictable outcomes. The scientific and professional disciplines associated with wetlands management are not in possession of sufficient information to make a definitive statement about ecological "wetland success."

See comment 7.

Pages 9 & 10, Effectiveness of In-Lieu Fee Mitigation is Uncertain, para. 1. Several of the in-lieu fee arrangements have been finalized only in the last year. To the extent that modest amounts of funds have been collected and given the short time that has past to finalize the arrangements, these factors should be identified to extent possible. For example, in paragraph 2, last sentence: is there any information available regarding how long the 5 reported ILFs that have not started any projects have been in existence and how much money has been collected.

See comment 8.

Page. 11, "Recent Guidance May Affect...In-Lieu Fee Option." Local agency rules and/or in-lieu fee structure and protocol may result in constraints in terms of use of compensatory mitigation options that override other decisions. Thus context for this finding regarding competition with banks may be lacking, to some extent, since varying institutional arrangements that involve varying non-Federal government roles and responsibilities are not acknowledged in this report.

See comment 9.

Page . 13, Effectiveness of Ad Hoc Mitigation Unknown, paragraph 1., Footnote 8, describes state trust funds as ad hoc arrangements, e.g., Maryland and Pennsylvania. In these instances, states have established formal programs, and working arrangements for the use of funds have been developed as part of Programmatic General Permits (PG). Compensatory mitigation protocol may be described in PGP Standard Operating Procedures. As such these are hardly ad hoc.

See comment 10.

Page 15, paragraph 1, We recommend the paragraph be revised as follows: "To ensure that in-lieu-fee organizations adequately compensate for adverse impacts to wetlands, we recommend that the Secretary of the Army, in consultation with the Administrator of EPA, and the Secretaries of Commerce and the Interior, establish criteria to determine that wetlands functions have been adequately compensated and develop and implement procedures for assessing success." This recommendation reflects that the Secretary of the Army clearly has the authority and responsibility under Section 404(a) of the CWA regarding compensatory mitigation GAO

Note: The department inadvertently inserted the acronym "GAO" in this sentence.



Draft Report, "Wetlands Protection: Assessments Needed to Determine Effectiveness of In-Lieu-Fee Mitigation  
Page 4

See comment 11.

decisions. This recommendation also reflects the Corps concern that the term, "success" is too imprecise and subjective to be consistently and effectively applied.

Page 17. Scope and methodology, para. 2. This report appears to concentrate (as per discussion with Corps officials involved with in-lieu fee arrangements developed prior to 1997) on arrangements developed prior to 1997. These arrangements would appear to have been in business for sufficient time to allow adequate review and evaluation of program implementation. However, development of in-lieu fee arrangements appears to have increased rapidly since 1997. Perspectives of Corps officials in those districts with newer arrangements may provide additional insight in terms of motivation and structure of those arrangements. For example, the St. Louis District related to GAO that their district had implemented an additional In-lieu-fee agreement after 1997. Their view is that the more recent arrangement better reflects the need for these types of mitigation options. However, the district was informed that GAO would not accept information concerning that newer arrangement as it was only looking at the older arrangements. Some discussion of the impact of newer arrangements and the thoughts that went into shaping those arrangements would seem to be appropriate, not with standing the need to look at those that have had time to mature.

See comment 12.

Page 17. Scope and methodology, para. 2. It is not clear if implementing agreements were examined as part of this study. The extent to which practice (or implementation) is the product of following specified protocol versus lack of specified protocol could be help in identification of problems that need to be addressed.

**Comments on Recommendations**

See comment 13.

Page 15. 2 full paragraph. GAO recommended that the Administrator of EPA, in conjunction with the Army and other Federal resource agencies, develop criteria to determine ecological success of mitigation projects. We non-concur with this recommendation. As indicated earlier, the Secretary of the Army, through the Corps of Engineers should lead the effort to identify criteria for the evaluation of mitigation projects. As also previously indicated, GAO has not defined "ecological success" to the extent necessary that criteria could be developed. Enforcing the conditions of Corps permits to ensure the "success" of required mitigation projects requires that the conditions contain defined measurable criteria. While we agree such measurable criteria should be in mitigation conditions, "ecological success" is not a term that lends itself to the development of such criteria. The definition of what might constitute ecological success varies from expert to expert, and case by case. The Army continues to support research into methodologies, such as the Corps Water Ways Experiment Stations development of the Hydrogeomorphic Method for the evaluation of wetlands functions, as tools for describing impacts and mitigation. Such methods would provide a, practicable rationale for developing the measurable criteria that GAO may be recommending.

## GAO Comments

1. Defense stated that developers' payments to a consultant to construct off-site mitigation projects may be interpreted as ad hoc arrangements. We agree that confusion exists about ad hoc mitigation, as illustrated in our discussions on the disagreement about whether such arrangements are covered by the October 2000 in-lieu-fee guidance and whether or not ad hoc fund recipients are responsible for the ecological success of mitigation efforts. We revised our report to reiterate that ad hoc arrangements, for purposes of this report, involve mitigation payments from developers to third parties that are neither mitigation banks nor considered by Corps districts to be in-lieu-fee arrangements. We also added that we found no definition of ad hoc arrangements in mitigation guidance. Clarification of in-lieu-fee and ad hoc arrangements is an issue that could be discussed when the agencies hold a stakeholder forum in the summer of 2001 and when the agencies review the use of the guidance by the end of October 2001.
2. We agree that establishing criteria and developing and implementing procedures to determine the ecological success of in-lieu-fee mitigation is a big step that entails more than assuring mitigation compliance. Our report notes that it is difficult to measure the success of efforts to mitigate losses to functions and values because, at least in part, of variations in wetlands across the country. However, like the Environmental Protection Agency, Fish and Wildlife Service, and National Oceanic and Atmospheric Administration, we believe that scientifically sound criteria is essential to determine if the objectives of compensatory mitigation are being fulfilled. We also believe that such criteria is essential to measure whether progress is being made toward achieving the national goal of no net loss of the nation's wetlands through section 404 mitigation efforts, and that the federal agencies need to work together to establish the criteria.
3. Defense stated that lack of context renders some of our report potentially meaningless or distorted. We disagree. In particular, we do not believe that the example cited by Defense illustrates the lack of context. Our intent in reporting that arrangements in three districts used in-lieu-fees for research and/or education was to illustrate situations where funds were used for purposes that do not directly mitigate adverse impacts. Other agencies have raised concerns about such uses. We did not imply that the districts did not achieve the goal of no net loss of wetlands because they allowed funds to be used for such purposes. In fact, data collected during our survey shows that arrangements in two of the districts that reported using funds for

research and/or education also reported that the number of wetland acres for which mitigation had been performed had equaled or exceeded the number of acres lost through development. Moreover, we disagree with Defense's position that as long as the mitigation provided meets the compensatory need, excess funds belong to the in-lieu-fee administrators to expend as they see fit. This position contradicts the October 2000 in-lieu-fee guidance that states that in-lieu-fee funds should not be used to finance nonmitigation programs and priorities, such as research and education.

4. Defense stated that our report does not describe how different requirements for institutional arrangements can affect the Corps' roles and responsibilities for in-lieu-fee arrangements. During our audit work we identified instances where in-lieu-fee arrangements were based on Programmatic General Permits developed by the Corps. However, our report does not focus on specific details of individual in-lieu-fee agreements or the relationships between Corps districts and individual arrangements. Rather, our report provides a broad overview of the in-lieu-fee program across the country. In addition, the October 2000 in-lieu-fee guidance should cause agreements between Corps districts and in-lieu-fee organizations to be more consistent.
5. We revised the report to show that the information regarding adversely affected acres and dollars collected covered the periods from the time each in-lieu-fee arrangement was established through fiscal year 2000.
6. While we did not define the term "ecological success," our recommendation calls for the agencies to establish criteria to determine ecological success. Defense also stated that the scientific and professional disciplines associated with wetlands management do not possess sufficient information to make a definitive statement about ecological success. While recognizing that assessing wetland functions and values is difficult, we believe that it is possible to establish scientific criteria to determine ecological success. EPA, FWS, and NOAA officials told us during our audit work that assessing ecological success is possible. In fact, NOAA officials said that there are many existing methodologies from which agencies can draw to establish criteria for ecological success. Further, the Corps' Engineer Research and Development Center has developed information, such as Hydrogeomorphic Approach data that can be used to assess functions of some regional wetlands, that may be useful for establishing criteria.

7. We revised the report to show that some of the arrangements in the five districts that have not started any projects have been operating only a short period of time and, consequently, have had little time to collect fees and initiate projects.
8. Defense stated that local agency rules and/or in-lieu-fee structure and protocol may result in constraints in terms of use of compensatory mitigation options that override other decisions and could affect competition between in-lieu-fee organizations and mitigation banks. As explained in our response to Defense comment 4, our report provides a broad overview of the in-lieu-fee program rather than specific details about individual arrangements. Moreover, during our audit work, none of the districts that reported no competition between in-lieu-fee organizations and mitigation banks said that local rules and/or in-lieu-fee structures or protocols had constrained competition.
9. We revised the footnote to show that state trust funds, such as those in Pennsylvania and Maryland, are included as ad hoc arrangements in our report. Corps districts reported to us those instances where developers were allowed to compensate for adverse impacts to existing wetlands by paying third parties that are neither mitigation banks nor considered by the districts to be in-lieu-fee arrangements. As explained in our report, ad hoc fund recipients usually do not have a formal agreement with the Corps and typically perform mitigation at a single site with funds received from one developer for one development project. However, ad hoc arrangements identified by Corps districts also include state trust funds, which receive payments from multiple developers that can be used for more than one project.
10. Defense suggested that we change our first recommendation to give the lead to the Corps instead of EPA and to have the federal agencies develop criteria to determine “that wetlands functions have been adequately compensated” instead of criteria to determine the ecological success of mitigation efforts. We disagree and did not revise our recommendation. While we recognize that the Secretary of the Army clearly has authority and responsibility under section 404(a) of the Clean Water Act regarding compensatory mitigation, section 404(b) authorizes the Administrator of EPA, in conjunction with the Secretary, to issue section 404 guidance. Also, we did not change the recommendation regarding the type of criteria because we continue to believe that development of criteria for ecological success is not only possible, but essential.

11. Defense stated that our report appears to concentrate on in-lieu-fee arrangements developed prior to 1997. While we choose to make site visits to districts with arrangements developed in 1997 or earlier because in-lieu-fee organizations in those districts had had more time to develop projects than those in districts with more recent arrangements, our report provides information about all in-lieu-fee arrangements established through fiscal year 2000. We did not include the in-lieu-fee arrangement in St. Louis in our report because, according to a Corps St. Louis District official, it was not established until October 2000, which was after fiscal year 2000 ended.
12. As explained in the Scope and Methodology section of our report, we used implementing agreements to obtain an understanding of the extent to which in-lieu-fee arrangements were being used nationwide and to devise questions for the second phase of our survey. We did not report the extent to which in-lieu-fee arrangements followed their implementing agreements because many, if not all, agreements should change substantially to comply with the protocol in the October 2000 in-lieu-fee guidance.
13. Defense did not concur with our first recommendation. We disagree. See comments 6 and 10.

# Appendix IV: Comments From the Environmental Protection Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

APR 16 2001

OFFICE OF  
WATER

Ms. Gary L. Jones  
Director  
Natural Resources and Environment  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Ms. Jones:

Thank you for the opportunity to review the draft General Accounting Office (GAO) report entitled *Wetlands Protection: Assessments Needed to Determine Effectiveness of In-Lieu-Fee Mitigation*. As the Environmental Protection Agency's (EPA) Director of the Office of Wetlands, Oceans, and Watersheds and signatory to the interagency in-lieu-fee guidance, I am pleased to provide comments on your draft report. The requesters' charge to your office concerns the extent to which (1) in-lieu-fee arrangements have been used to mitigate authorized impacts under Section 404 of the Clean Water Act (CWA), (2) in-lieu-fee arrangements have achieved the intended purpose of mitigating impacts, and (3) in-lieu-fee sponsors compete with mitigation banks. Your staff has done an excellent job analyzing a suite of complex issues that are associated with in-lieu-fee compensatory mitigation. EPA concurs with the your recommendations regarding improving the accountability of the use of in-lieu-fee mitigation.

Your study represents a comprehensive analysis of the state of in-lieu-fee mitigation. As a result of your survey of 38 Army Corps of Engineers Districts and several in-lieu-fee providers, you concluded that there is a lack of assurance that in-lieu-fee providers are completing mitigation projects and if completed, that mitigation is resulting in ecological replacement of wetlands. You concluded that there needs to be "adequate success criteria" to effectively measure the ecological success of in-lieu-fee mitigation in order to ensure that the national goal of no overall net loss of wetlands is being achieved, and that these "success criteria" be applied to all forms of compensatory mitigation. You also concluded that the October 2000 interagency guidance addresses major concerns with in-lieu-fee effectiveness. EPA strongly concurs with your conclusions and with your two recommendations that there needs to be ecological criteria to determine the success of in-lieu-fee mitigation, as well as direction to Corps Districts to ensure accountability for completing required mitigation.

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See comment 1.

EPA supports your first recommendation that the Administrator of EPA, in conjunction with the Secretaries of Army, Interior, and Commerce, establish criteria to determine the ecological success of compensatory mitigation and develop and implement procedures for assessing success. While there is important debate concerning the nature and measurement of ecological success, the bottom line is that scientifically sound and practicable measurement is essential to determine if the objectives of compensatory mitigation are being fulfilled. The recommendation endorses the development of such criteria for compensatory mitigation, recognizing that measuring specific ecological performance objectives will naturally vary with the wetland type being restored and the functional replacement being sought. The development of ecological success criteria would lead to objective ways to ensure that compensatory mitigation is replacing the functions and values of wetlands impacted through development activities. It would also benefit permit applicants, mitigation bankers, and in-lieu-fee sponsors by identifying predictable and fair methods for assessing success and ensuring that ecological goals are met. A useful addition to this recommendation would be: "In recognition of the significant role that many States play in decisions on wetlands restoration and compensatory mitigation, and the close working relationship between EPA and the States in administering the CWA, we recommend that EPA also coordinate with States in developing these criteria."

See comment 2.

EPA also supports the second recommendation that instructs the Secretary of the Army to direct Corps Districts to establish procedures that identify who is responsible for the ecological success of "ad hoc" mitigation projects. In addition, the second recommendation states that the Secretary of the Army should develop and implement procedures for assessing ad hoc mitigation success based on the ecological criteria that is developed for in-lieu-fee mitigation. Consistent with the discussion presented in your report, we assume that the recommendation reflects your intent to have the same ecological standards and procedures developed in the first recommendation be applied to assess success for what you term "ad hoc" mitigation, and not for separate criteria to be developed. It would be beneficial to clarify this point.

We note that both the guidance on mitigation banking [Section II(C)(4)] and in-lieu-fee arrangements [Section IV(A)(2)] hold that the party accepting funds for mitigation accept responsibility for the ecological success. In-lieu-fee mitigation, as defined in the federal guidance, is where "funds are provided to an in-lieu-fee sponsor instead of either completing mitigation or purchasing credits from a mitigation bank approved under the Banking Guidance." This definition includes all forms of non-mitigation banking compensatory mitigation performed by a third party legally responsible for mitigation success, including something considered "ad hoc" mitigation. If the liability for success does not transfer to the third party, then it remains with the permittee (additional discussion with Corps and EPA field components is anticipated, and this issue would be worth raising in that context). Therefore, we concur that the Secretary of the Army should ensure that the responsibility for "ad hoc" mitigation is clearly established and that mitigation success criteria are uniformly applied to all forms of mitigation.

We look forward to working with our federal partners to improve the effectiveness of compensatory mitigation and specifically to address the recommendations in your report. As you are aware, the National Academy of Sciences (NAS) is completing a study on the effectiveness of compensatory mitigation which is scheduled to be released in May 2001. The agencies are


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**Appendix IV: Comments From the  
Environmental Protection Agency**

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planning to hold a stakeholder forum this summer to discuss your recommendations and the NAS study recommendations. We have provided editorial comments under a separate cover. Thank you again for the opportunity to provide comments on the draft report. If you have any questions, please feel free to contact me, or have your staff contact Lisa Morales of our Wetlands and Aquatic Resources Regulatory Branch at 202/260-6013.

Sincerely,



Robert H. Wayland, III  
Director, Office of Wetlands, Oceans,  
and Watersheds

Attachment

cc: Arlene Bragg, EPA  
Vicki Green, EPA



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## GAO Comments

1. EPA stated that a useful addition to our first recommendation would be to recognize the significant role that many states play in decisions on wetlands restoration and compensatory mitigation and the close working relationship between EPA and the states in administering the Clean Water Act. EPA also suggested that we recommend coordination with states in developing ecological success criteria. We did not change our recommendation. However, coordination with states in developing ecological success criteria is an EPA prerogative that our recommendation does nothing to preclude. We revised our conclusions to state that where states play a significant role in decisions on compensatory mitigation, the agencies could coordinate with them in developing ecological success criteria.
2. We agree that the same ecological success criteria applicable to in-lieu-fee arrangements should be used to assess ad hoc arrangements' mitigation efforts, as stated in our second recommendation. Also, we believe that procedures should be developed and implemented to assess the ecological success of ad hoc arrangements' mitigation efforts. However, the procedures should allow the Corps flexibility in assessing the success of ad hoc mitigation efforts, taking into consideration such factors as available resources as well as potential environmental impacts.

# Appendix V: Comments From the Department of Commerce



**THE SECRETARY OF COMMERCE**  
Washington, D.C. 20230

APR 20 2001

Ms. Gary L. Jones  
Director, Natural Resources and Environment  
United States General Accounting Office  
Washington, D.C. 20548

Dear Ms. Jones:

Thank you for the opportunity to review and comment on the General Accounting Office draft report entitled, "Wetlands Protection: Assessments Needed to Determine Effectiveness of In-Lieu-Fee Mitigation," "GAO-01-325." I am pleased to enclose the National Oceanic and Atmospheric Administration's comments on the draft report.

These comments were prepared in accordance with the Office of Management and Budget Circular A-50.

Warm regards,

A handwritten signature in black ink, appearing to read "Donald L. Evans".

Donald L. Evans

Enclosure

U.S. DEPARTMENT OF COMMERCE  
COMMENTS ON DRAFT GAO REPORT ENTITLED

"Wetland Protection:  
Assessments Needed to Determine Effectiveness of  
In-Lieu-Fee-Mitigation"

GAO-01-325

May 2001

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) COMMENTS ON THE  
DRAFT GAO REPORT ENTITLED "Wetlands Protection: Assessments Needed to  
Determine Effectiveness of In-Lieu-Fee-Mitigation"  
(GAO-01-325)

**GENERAL COMMENTS:** NOAA commends the GAO for their work in evaluating the complex issues associated with in-lieu-fee mitigation. The conclusions in the report will be very helpful in assessing the implementation of the October 2000 Federal guidance on in-lieu-fee mitigation, and the need for revisions to that and other guidance on mitigation. The discussion of ad hoc mitigation is particularly valuable, as it is exactly these types of arrangements that prompted NOAA to raise concerns about in-lieu-fee mitigation in 1998.

**RECOMMENDATION 1:** To ensure that in-lieu-fee organizations adequately compensate for adverse impacts to wetlands, we recommend that the Administrator of the Environmental Protection Agency (EPA), in conjunction with the Secretaries of the Army, Commerce, and the Interior, establish criteria to determine ecological success of mitigation efforts and develop and implement procedures for assessing success.

**NOAA RESPONSE:** NOAA concurs with this recommendation. NOAA has assigned staff in the Office of Habitat Conservation, National Marine Fisheries Service, to work with EPA and the other agencies in developing the recommended guidance.

**RECOMMENDATION 2:** To better assess the ecological success of mitigation efforts under ad hoc arrangements, we recommend that the Secretary of the Army instruct the Corps Districts to establish procedures to clearly identify whether developers or recipients of funds are responsible for the ecological success of mitigation efforts and, using the same success criteria applicable to in-lieu-fee arrangements, to develop and implement procedures for assessing success.

**NOAA RESPONSE:** NOAA concurs that the party responsible for mitigation success should be clearly identified in all mitigation arrangements, particularly for ad hoc arrangements. However, rather than developing relevant procedures on a District-by-District basis, NOAA believes that these procedures should be developed by Corps Headquarters so that a consistent approach is taken throughout the country. Furthermore, NOAA believes that Corps Headquarters should resolve the widespread confusion about the applicability of the in-lieu-fee guidance by issuing guidance explicitly stating that ad-hoc mitigation is covered by the in-lieu-fee guidance, regardless of what arrangements are made regarding who is responsible for mitigation success. The success of in-lieu-fee mitigation depends on a consistent application of the standards of good planning and accountability in the Federal in-lieu-fee guidance.

See comment 1.

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**GAO Comment**

1. Comments provided by Commerce for NOAA stated that NOAA concurs with our two recommendations. The comments also stated that rather than developing procedures for assessing the ecological success of ad hoc mitigation on a district-by-district basis, NOAA believes that Corps headquarters should develop the procedures so that a consistent approach is taken throughout the country. We clarified our recommendation to have the Secretary of the Army direct the Corps, instead of its districts, to establish procedures to clearly identify whether developers or recipients of funds are responsible for the ecological success of mitigation efforts. In addition, Commerce stated that Corps headquarters should resolve widespread confusion about the applicability of the in-lieu-fee guidance by explicitly stating that ad hoc mitigation is covered by the in-lieu-fee guidance. Because, as noted in our report, EPA and Corps headquarters officials disagree as to whether ad hoc mitigation is covered by the October 2000 guidance, we agree that there should be clarification. This is an issue that should be discussed when the agencies hold a stakeholder forum in the summer of 2001 and considered when the agencies review the use of the guidance by the end of October 2001.

# Appendix VI: Comments From the Department of the Interior



## United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, D.C. 20240

APR 16 2001

Ms. Gary L. Jones  
Director, Natural Resources and Environment  
U.S. General Accounting Office  
441 G Street, N.W.  
Washington, D.C. 20548

Dear Ms. Jones:

The Department has reviewed the draft report entitled Wetlands Protection: Assessments Needed to Determine the Effectiveness of In-Lieu-Fee Mitigation (GAO-01-325, code 141440). The draft report describes the existing in-lieu-fee mitigation programs in operation around the Nation, and makes recommendations concerning ways to improve such programs. While we agree in general with the findings of the report, we disagree with one of the recommendations. Our comments on the findings and recommendations are outlined below.

The report is very thorough in characterizing the in-lieu-fee mitigation programs in operation around the country, and in highlighting some of the problems regarding the implementation of in-lieu-fee mitigation programs to date. The report serves to confirm a number of long-standing concerns the Fish and Wildlife Service has had with in-lieu-fee mitigation programs, particularly the timeliness of mitigation efforts, ecological success and appropriateness of mitigation efforts, and assignment of responsibility for mitigation success.

The interagency guidance on in-lieu-fee mitigation issued jointly by the Department of the Army, the Environmental Protection Agency, the National Marine Fisheries Service, and the Fish and Wildlife Service in October 2000, discusses the above issues in some detail, and establishes a comprehensive outline for the Federal agencies to use in the review, establishment, administration, and monitoring of in-lieu-fee mitigation programs. The Service believes that full implementation of this guidance would prevent or rectify many of the problems with in-lieu-fee mitigation programs identified in the report. The guidance is explicitly applicable to all existing and proposed in-lieu-fee mitigation programs.

The conclusions section of the report states it is unclear to what extent in-lieu-fee mitigation programs have adequately compensated for adverse wetland impacts. The report documents that in many cases the Corps of Engineers has not undertaken the oversight efforts needed to verify the effectiveness of in-lieu-fee programs. We strongly support the General Accounting Office conclusion that the Corps must assess in-lieu-fee programs (including ad hoc arrangements) to determine whether these mitigation efforts have been ecologically successful in replacing

See comment 1.

Ms. Gary L. Jones

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See comment 2.

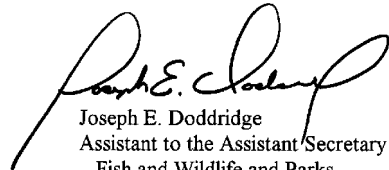
permitted wetland losses. In addition, the Service believes that the Corps should suspend the use of any in-lieu-fee programs found to be in noncompliance with the October 2000 guidance until such time that corrective measures are enacted.

See comment 3.

With regard to the report's recommendations, the Department does not agree that the Federal agencies should establish national criteria to determine the ecological success of mitigation efforts. Establishing national standards would be infeasible given the diversity of wetland types across the country. We do not believe that it is practical to attempt to compose a set of mitigation success standards that must necessarily encompass wetland systems as inherently different, for example, as the playa lakes found in the southwestern U.S. and the wooded wetlands found in the eastern U.S. The Department believes that such standards are most appropriately developed at the local level, where experienced personnel from the agencies may work together to develop mitigation success standards that are keyed into the local ecosystems. The October 2000 in-lieu-fee guidance states that monitoring plans and success standards must be developed for each proposed in-lieu-fee program, and that these standards will be reviewed and approved by the cooperating agencies. The Department supports the development of these standards as outlined in the guidance.

We appreciate the opportunity to review this draft report, and we hope that our comments will be helpful in preparing the final report.

Sincerely,



Joseph E. Doddridge  
Assistant to the Assistant Secretary for  
Fish and Wildlife and Parks

## GAO Comments

1. Interior stated that full implementation of the October 2000 in-lieu-fee guidance would prevent or rectify many of the problems with in-lieu-fee mitigation programs identified in our report. We agree that full implementation of the guidance may rectify some of the problems we identified. For example, the guidance sets time frames for mitigation efforts and states that in-lieu-fee funds should be used for replacing wetlands functions and values. However, full implementation of the guidance does not address the problems that our recommendations are intended to correct. That is, the guidance does not establish criteria for ecological success and does not clearly establish responsibility for mitigation success performed by ad hoc organizations.
2. Interior said that the Corps should suspend the use of any in-lieu-fee programs found to be in noncompliance with the October 2000 guidance until such time that corrective measures are enacted. We did not develop information on this issue as part of our audit work. However, suspension might be an option that agencies could discuss at the stakeholder forum in the summer of 2001 and when the agencies review the use of the guidance by the end of October 2001.
3. Interior stated that, with regard to our recommendations, it does not agree that federal agencies should establish national criteria to determine the ecological success of mitigation efforts. Our recommendation does not call for national criteria. In fact, our survey showed that over 80 percent of the Corps districts with in-lieu-fee arrangements said that national performance standards for measuring the success of mitigation efforts were not feasible. In addition, we agree that establishing national standards would be infeasible given the diversity of wetland types across the country. Further, we believe that criteria are most appropriately developed at the local level where experienced agency personnel may work together to develop success criteria that are keyed to local ecosystems or watersheds.



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# Appendix VII: GAO Contacts and Staff Acknowledgments

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## GAO Contacts

Gary L. Jones (202) 512-3841  
Peg Reese (202) 512-9695

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## Staff Acknowledgments

In addition to those named above, Nancy J. Eslick, June M. Foster, Byron S. Galloway, Lynn M. Musser, and Barbara L. Patterson made key contributions to this report.



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