US Army Corps
of Engineers
Fort Worth District

Mitigation Banking in the Fort Worth District

July 28, 2004

Mitigation Banking and the Section 404 Regulatory Program

The Clean Water Act (33 USC 1344 et seq.) was enacted to "restore and maintain the chemical, physical, and biological integrity of the Nations waters." Under Section 404 of the act, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the United States, including wetlands, through its Section 404 Regulatory Program (33 CFR Parts 320-331). While the USACE has primary responsibility for administering the Regulatory Program, other federal agencies, including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), and Natural Resources Conservation Service (NRCS) play important regulatory and advisory roles in the program. The NRCS also implements a regulatory program for wetlands under the Food Security Act. However, the Section 404 Regulatory Program is the primary federal tool for protecting wetlands and other aquatic resources in the United States.

Prior to issuing a Section 404 permit, the USACE must determine that a proposed ground-disturbing activity in waters of the United States would both comply with the Section 404(b)(1) Guidelines ("Guidelines for Specification of Disposal Sites for Dredged or Fill Material", 40 CFR Part 230) and not be contrary to the public interest. The 404(b)(1) guidelines contain the substantive criteria used by the USACE to evaluate a proposed discharge and include several important restrictions on the discharge of dredged or fill material into waters of the United States, one of which prohibits the authorization of a discharge unless appropriate and practicable steps have been taken to minimize, or mitigate, the adverse impact of the proposed discharge on the aquatic ecosystem. Mitigation is also a consideration within the public interest review process.

On February 6, 1990, the Department of the Army and EPA signed a memorandum of agreement (MOA) that provided guidance for determining the type and level of mitigation necessary to demonstrate compliance with the 404(b)(1) guidelines. The MOA describes mitigation as the sequential process of taking all appropriate and practicable steps to avoid adverse project impacts to the aquatic ecosystem that are not necessary, employing all appropriate and practicable measures to minimize those adverse impacts that cannot be reasonably avoided, and, finally, implementing appropriate and practicable measures to compensate for those adverse impacts that cannot be avoided or minimized. Compensatory mitigation is the replacement of the chemical, physical, and biological functions of wetlands and other aquatic resources that are lost or impaired as a result of USACE-authorized activities.

The 1990 mitigation MOA noted without providing further guidance that mitigation banking may be an acceptable form of compensatory mitigation under certain conditions. On November 28, 1995, the USACE issued detailed guidance, "Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks", that details how mitigation banks can be used to satisfy the mitigation requirements of the 404(b)(1) guidelines, as well as the wetland conservation provisions of the 1996 Farm Bill. Mitigation banking is addressed in other Regulatory Program guidance materials, most recently in Regulatory Guidance Letter 02-2 "Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899" dated December 24, 2002.

Mitigation banking is the restoration, enhancement, creation, and, in exceptional circumstances, preservation undertaken to compensate in advance for adverse impacts to the aquatic ecosystem. Mitigation banking may be appropriate when compensatory mitigation cannot be practicably achieved at the impact site or would not be as environmentally beneficial. The USACE and other federal agencies recognize the potential benefits of mitigation banking to the aquatic ecosystem, permit applicants, regulatory and natural resources agencies, and the general public. Mitigation banking can streamline the Section 404 permit process, provide additional compensatory mitigation opportunities, consolidate and enhance the ecological benefits of otherwise independent smaller mitigation projects, and utilize expert financing, planning, and construction resources that are not often available for smaller mitigation projects.

Thus, the involvement of the USACE and other federal agencies in mitigation banking stems from the important role mitigation banking plays as a form of compensatory mitigation and the fact that many wetland mitigation banks themselves require authorization under Section 404 for ground-disturbing activities in waters of the United States necessary for their construction. The USACE, EPA, FWS, NMFS, NRCS, and state agencies participate to various degrees in the design, implementation, and operation of mitigation banks, primarily through their roles as mitigation bank review team (MBRT) members and signatories to the mitigation banking agreement.

Status of Mitigation Banking in the Fort Worth District, USACE

The Fort Worth District, USACE, currently has seven mitigation banks in operation and several mitigation bank proposals that are being evaluated. Five of the seven operating banks are located in the Sabine River floodplain, four in Smith County and one in Upshur County, Texas. The 2,473-acre Anderson Tract Off-Site Mitigation Project (Anderson Tract) was the first mitigation bank approved in Texas and has been operating since 1995. It enhances and preserves high quality forested wetlands adjacent to FWS's Little Sandy National Wildlife Refuge and is now part of Texas Parks and Wildlife Department's Old Sabine Bottom Wildlife Management Area. The Anderson Tract provides off-site compensation for Texas Department of Transportation (TxDOT) construction activities in four of its east Texas districts.

The Hawkins Mitigation Bank, owned by R. Lacy, Inc., was approved in April 1998. It enhances and preserves 175 acres of forested wetlands near the community of Hawkins, just downstream of the Anderson Tract. Hawkins Bank credits that were made available to the general public have all been obligated.

The Byrd Tract Mitigation Bank, owned by Enron Oil and Gas Company, was approved in August 1998. It enhances and preserves approximately 483 acres of forested wetlands near Gladewater, in Smith County, Texas. Like the Hawkins bank, credits in the Byrd Tract bank will be used primarily by the owner but some are available to the general public.

The KLAMM Mitigation Bank, an entrepreneurial bank owned by KLAMM, Inc., was approved in July 1998. The KLAMM bank enhances and preserves approximately 1,251 acres of bottomland forested wetlands near the city of Big Sandy. KLAMM bank credits are available to the general public.

The Sabal Preserve Mitigation Bank, an entrepreneurial bank owned by Sabal Ventures, LLC, was approved in January 2004. The Sabal bank enhances and preserves approximately 827.6 acres of forested wetlands near Gladewater, Texas. Sabal bank credits are available to the general public.

The other two operating mitigation banks are located in the Trinity River watershed. The Trinity River Mitigation Bank, owned by Wetland Partners, was approved in June 2001. The Trinity River Mitigation Bank restores, enhances and preserves 1,380 acres of bottomland forested wetlands and other floodplain buffer areas and streams along the West Fork Trinity River in east Tarrant County. Trinity River Mitigation Bank credits are available to the general public.

The Big Woods on the Trinity Mitigation Bank, owned by Robert F. McFarlane, M.D., was approved in April 2002. The Big Woods on the Trinity Mitigation Bank enhances and preserves approximately 423.7 acres of bottomland hardwood and other wetlands west of Tennessee Colony in the floodplain of the Trinity River in Anderson County, Texas. Big Woods on the Trinity Mitigation Bank credits are available to the general public.

For further information about these banks, including point-of-contact information, please refer to Appendix A. The Fort Worth District is currently evaluating several additional banking proposals and expects to continue to receive additional proposals.

Current Issues in the Establishment and Use of Mitigation Banks

As discussed above, the USACE and other federal and state agencies play key roles in both the establishment and use of most mitigation banks. The USACE, for example, typically coordinates with a potential bank sponsor in the early phases of the mitigation bank project, evaluates the prospectus, issues a public notice, chairs the MBRT, approves the mitigation bank as a signatory to the banking agreement, evaluates any necessary Section 404 permit application, assures compliance with all terms of the banking agreement, including long-term monitoring and management of the bank, and determines on a permit-by-permit basis whether purchasing credits from the mitigation bank constitutes appropriate and practicable compensatory mitigation. The federal mitigation banking guidance provides the federal agencies with policy and direction critical to the mitigation bank development and approval process. For the prospective banker, the guidance addresses mitigation bank goals, site selection, technical feasibility, watershed-scale planning, and other important planning and design considerations. While the federal guidance has become a fundamental component of the mitigation bank approval process, the USACE recognizes the value of a process that is flexible, efficient, and expeditious and is striving to develop mitigation banking agreements that are strong, concise, and functional.

Over the last few years, the Fort Worth District has noticed that several mitigation banking issues are regularly taking prominence during the bank approval process. These issues, including the role of preservation in mitigation banking, valuation of mitigation credits, inclusion of uplands in wetland mitigation banks, consideration of in-kind mitigation and mitigation sequencing before using a mitigation bank, and the overall burden of the mitigation bank approval process itself, are discussed below.

1. Role of Preservation

The first two mitigation banks approved in Texas, the Anderson Tract and Blue Elbow Swamp, involved a large state agency enhancing the aquatic functions and values of two relatively large tracts of high-quality forested wetlands primarily by protecting them in perpetuity from activities that threatened these areas with the loss or substantial degradation of aquatic functions. The federal guidance states that for preservation to be appropriate as the sole basis for a mitigation bank, an area must “perform physical or biological functions, the preservation of which is important to the region” and be “under demonstrable threat of loss or substantial degradation due to human activities that might not otherwise be expected to be

restricted." Many believe that preservation is the equivalent of enhancement when it prevents or reduces the loss or degradation of valuable aquatic functions. Preventing the loss or degradation of valuable aquatic functions is superior to allowing that loss or degradation to occur then conducting enhancement activities that could require substantial amounts of money and time before the those aquatic functions are finally restored to their pre-impact extent and condition.

Even in situations where enhancement through preservation is appropriate, it is important to note that the amount of mitigation credit that can be generated by preservation may be less, on a per-acre basis, than the credit generated by restoration, enhancement, and creation activities. Thus, preservation-based mitigation banks may require the purchase of more credits to compensate for a given impact than banks based on restoration, enhancement, or creation, which could seriously impact the economic feasibility of the bank. In some cases, however, enhancement through preservation may be environmentally preferable to other forms of compensation, particularly creation, despite a higher credit purchase requirement.

2. Valuation of Credits

An often problematic issue during the mitigation bank approval process arises when a mitigation bank proponent values the credits in the prospective bank based almost exclusively on the credit valuation of previously approved banks, which may bear little similarity to the proposed bank. In fact, the value of mitigation bank credits will vary from bank to bank because the it is based on the unique set of site-specific and project-specific factors associated with each bank. The value assigned to the credits of a particular bank, as illustrated by the approved acre-credit ratio, does not create a de facto standard for any subsequent bank. While comparisons of the acre-credit ratios among existing and proposed mitigation banks may be instructive and help foster consistency among banks, each bank is unique and the valuation of its credits should reflect that variety.

3. Uplands and Mitigation Banking

A third issue that often arises during the mitigation bank approval process is the appropriateness of including "uplands" in mitigation banks. For purposes of this discussion, uplands are all non-waters of the United States, including bottomland forests, floodplains, and other areas that do not meet the definition of waters of the United States. In accordance with the federal mitigation banking guidance, uplands are typically given mitigation credit only to the degree that they would enhance the overall ecological functioning of the bank; upland areas in excess of that needed to enhance the ecological functioning of the bank may not be given any mitigation credit. While this is appropriate from the perspective of the aquatic ecosystem, this may lead to bank proponents maximizing the amount of pure wetlands and other waters at the expense of non-jurisdictional areas that could enhance the overall aquatic value of the bank, even to the extent of proposing to replace high-quality uplands with lower quality wetlands. While the resource agencies must be flexible and fair in recognizing the potential value of uplands to the aquatic ecosystem, mitigation bank proponents must carefully evaluate their projects from the perspective of the aquatic ecosystem and recognize that purpose of these mitigation banks is to replace lost and degraded aquatic functions. Prospective bankers considering alternative uses of uplands compatible with credited portions of a bank may discover recreational possibilities or the opportunity to develop upland mitigation projects that would serve other regulatory programs and be consistent with the goals of the mitigation bank.

4. Mitigation Issues

Several issues of special interest to the USACE and other federal agencies involve the use of established mitigation banks. As more banks become established over time, applicants are already requesting to purchase mitigation credits from a bank as the first and only means of project mitigation

without considering appropriate and practicable on-site (or near-site) compensation. The availability of mitigation bank credits does not obviate the need for mitigation sequencing or the importance of on-site, in-kind compensatory mitigation. On-site mitigation is strongly preferred by the regulatory agencies when it provides a practicable opportunity to compensate at the point of impact for important local aquatic functions that would otherwise be lost or degraded. In some cases, it may be appropriate and practicable to compensate for certain lost or impaired functions on-site, especially such typically site-specific functions as storm water retention and energy dissipation, while compensating for the remaining lost or impaired functions off-site, perhaps in a mitigation bank.

In-kind compensation is critical to replacing those specific aquatic functions that are lost or impaired by authorized activities. In the Fort Worth District, in-kind compensation often becomes an issue when a permit applicant requesting authorization to modify an urban stream proposes to replace aquatic functions such as flood control, water quality, and aquatic habitat by constructing a pond or emergent wetlands, which generally will not perform the same functions to the same extent. Other important in-kind compensation issues arise when open water would replace wetlands, emergent wetlands would replace forested wetlands, or non-tidal wetlands would replace tidal wetlands. Out-of-kind compensation is generally appropriate only when it would be both practicable and environmentally preferable to in-kind compensation. Thus, it is crucial to recognize that the specific aquatic functions that are enhanced, replaced, created, and/or preserved in a particular mitigation bank play a critical role in determining when the use of that mitigation bank would constitute appropriate and practicable compensatory mitigation.

A related mitigation bank use issue arises when an applicant construes that the mere existence of a mitigation bank in the vicinity of a proposed project ensures that the project will be permitted even if adverse impacts to the aquatic ecosystem can be further avoided or minimized. The 404(b)(1) guidelines and mitigation MOA specifically require permit applicants to avoid and minimize adverse project impacts to the maximum extent practicable prior to considering compensatory mitigation unless the USACE approves a compensation plan that would be more beneficial to the environment. Even for activities that would not require authorization by individual permit, the USACE may require, on a case-by-case basis, all appropriate and practicable compensation as a condition of Department of the Army authorization. Thus, the availability of a mitigation bank as an option for compensatory mitigation does not override the basic requirement that a ground-disturbing activity in waters of the United States comply with the 404(b)(1) guidelines and not be contrary to the public interest. Refer to the federal mitigation banking guidance and 1990 mitigation MOA for additional discussion concerning these mitigation issues.

5. Bank Approval Process

The mitigation bank approval process can be a time-consuming and expensive process due, in large part, to the variety of mitigation banking projects and the necessity of simultaneously protecting aquatic ecosystem and the interests of the prospective mitigation banker. The USACE has markedly improved the approval process over the last few years by issuing the federal banking guidance, incorporating additional flexibility, simplifying banking agreements, developing standard language for banking instruments, and developing local procedures. With the additional experience the USACE and other involved agencies expect to gain evaluating and approving future mitigation bank projects, the process will continue to improve. However, each proposed mitigation bank will continue to involve at least some of the issues discussed above and such issues as determining the appropriate service area, timing of credit availability, financial assurances, and project-specific contingencies.

Other Approaches to Mitigation and Wetland Protection and Enhancement

Another approach to providing compensatory mitigation is joint-project mitigation, which involves a one-time mitigation project that simultaneously provides compensation for multiple projects where off-site compensatory mitigation is appropriate. Unlike mitigation banking, joint-project mitigation does not provide compensation in advance of project impacts and does not require a formal mitigation banking-type approval process and written agreement, although this type of mitigation project would still require USACE approval and, potentially, authorization by Section 404 permit. Multiple, independent, and non-overlapping joint-project mitigation projects could conceivably be conducted over a period of time by a single landowner.

Yet another approach to compensatory mitigation is the in-lieu fee system. Under this system, a permittee could pay a fee to a trust fund in lieu of implementing specific on-site or off-site compensatory mitigation. The trust fund would in turn fund projects that restore, enhance, create, and/or preserve those aquatic functions lost or degraded as a result of activities authorized by Department of Army permit. An in-lieu fee system provides permit applicants with an additional compensatory mitigation option for relatively minor adverse impacts to the aquatic ecosystem, such as those authorized by general permits. Compensation for more substantial adverse impacts, such as those requiring authorization by individual permit, will normally be provided on site or through such off-site means as mitigation banks and joint-project mitigation.

While similar in several respects to mitigation banking, in-lieu fee-funded mitigation projects are normally not implemented in advance of the adverse impacts for which they are designed to compensate. In addition, in-lieu fees can provide otherwise unavailable funding for ongoing mitigation projects or fund future mitigation projects, whether specifically identified or not. As with purchasing credits from a mitigation bank, paying an in-lieu fee to provide compensatory mitigation is not necessarily appropriate compensation in all cases. Mitigation sequencing, the practicability of providing appropriate on-site, in-kind compensation, and the availability of other off-site and/or out-of-kind mitigation opportunities should normally be considered and compared to the relative benefits of paying an in-lieu fee.

The USACE and The Nature Conservancy have signed an agreement implementing a pilot in-lieu fee program in the Fort Worth District. The program provides for the establishment of a series of independent regional trust funds, the size and configuration of which will be determined after considering basic regional vegetation, watersheds, amount of Section 404 permit activity, availability of existing off-site mitigation opportunities (including mitigation banks), and other pertinent factors. Once a region is delineated, a trust fund established, and an appropriate fee schedule developed, in-lieu fee payments to the trust fund can be accepted, provided that in-lieu fee payment has been approved by the USACE. As implementation of this new and innovative program has only recently begun, periodic modifications to the program may be necessary to ensure its long-term success. However, the USACE is confident that this in-lieu fee system will provide an additional means of protecting the aquatic ecosystem that will mesh well with other forms of compensatory mitigation, including mitigation banking. For further information about this new program, refer to "Compensatory Mitigation by In-Lieu Fee in the Fort Worth District," which is available upon request from the Regulatory Branch (Fort Worth District) and on its Internet homepage.

Other opportunities exist for enhancing wetlands and other aquatic resources that do not provide for the sale of compensatory mitigation credits. These opportunities include programs and incentives typically sponsored by federal, state, and local governments, as well as private organizations. Such programs and incentives often require less time and fewer financial resources of the landowner, apply to a wider range of environmental resources, including non-jurisdictional bottomlands and other uplands, and may suit a particular landowner's management goals well. A few of the better known programs include the

North American Waterfowl Management Plan Joint Venture Projects, Partners for Wildlife Program, Wetlands Reserve Program, and the Private Lands Initiative. These and other programs are listed in "Wetlands Assistance Guide for Landowners", an excellent resource written by Ms. Julie Anderson, Texas Parks and Wildlife's State Wetland Planner.

The USACE may also be able to assist organizations with aquatic ecosystem restoration projects through various authorized programs. These programs allow the USACE to plan, design, and construct ecosystem restoration projects in conjunction with a local sponsor. A sponsor may be a local, county, regional, or state agency that meets USACE requirements, which include cost-sharing in the restoration projects. For specific information about these ecosystem restoration programs, contact the Fort Worth District's Programs and Project Management Division at (817) 886-1473.

There are still other approaches to enhancing aquatic resources that address a wide range of economic and environmental goals. Landowners who fully consider their alternatives early in the development of a land management plan will likely better serve both themselves and the environment.

Conclusion

Mitigation banking is likely to play an increasingly important role in the Section 404 Regulatory Program as a means of providing compensatory mitigation. The USACE and other federal and state agencies will continue to play an integral role in mitigation banking, working to improve the mitigation banking approval process, as well as the quantity and quality of mitigation banks. Increasing public awareness of the federal mitigation banking guidance, the development of local procedures, and recognition of alternatives to mitigation banking should benefit regulatory agencies, bank sponsors, and the general public.

The USACE is committed to protecting the aquatic environment through the Section 404 Regulatory Program. In this role, the USACE is an invaluable source of information and guidance to landowners and prospective mitigation bankers. Those looking for additional information on mitigation banking and the Regulatory Program should contact the appropriate USACE regulatory office and talk with the mitigation banking coordinator or a regulatory project manager. In Texas, contact the Fort Worth District at (817) 886-1731, the Galveston District at (409) 766-3930, the Tulsa District at (918) 669-7400, or the Albuquerque District's El Paso Regulatory Office at (915) 568-1359. On the Internet, visit the Fort Worth District at http://www.swf.usace.army.mil/pubdata/environ/Regulatory/index.asp, the Galveston District at http://www.swg.usace.army.mil/reg, the Tulsa District at http://www.swt.usace.army.mil/permits/permits.cfm, the Albuquerque at www.spa.usace.army.mil/reg/, or the National Regulatory Homepage at http://www.usace.army.mil/inet/functions/cw/cecwo/reg/ .

Suggested Reading

Department of the Army, Section 404 Permit Regulations (33 CFR Parts 320-331; 51 FR pages 41206-41260, November 13, 1986).

Guidelines for Specification of Disposal Sites for Dredged or Fill Material (40 CFR Part 230; 45 FR pages 85336-85357, December 24, 1980).

Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act Section 404 (b)(1) Guidelines (February 6, 1990).

EPA/ Department of the Army Memorandum to the Field on the Establishment and Use of Wetland Mitigation Banks in the Clean Water Act Section 404 Regulatory Program (August 23, 1993).

Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks (60 FR pages 58605-58614, November 28, 1995).

Wetlands Mitigation Banking Concepts, IWR Report 92-WMB-1. Institute for Water Resources, Water Resources Support Center, USACE, Alexandria, VA. July 1992.

Wetland Mitigation Banking: Resource Document, IWR Report 94-WMB-2. Institute for Water Resources, Water Resources Support Center, USACE, Alexandria, VA. January 1994

Expanding Opportunities for Successful Wetland Mitigation: The Private Credit Market Alternative, IWR Report 94-WMB-3. Institute for Water Resources, Water Resources Support Center, USACE, Alexandria, VA. January 1994.

Wetland Mitigation Banking, IWR Report 94-WMB-6. Institute for Water Resources, Water Resources Support Center, USACE, Alexandria, VA. February 1994.

Commercial Wetland Mitigation Credit Markets: Theory and Practice, IWR Report 95-WMB-7. Institute for Water Resources, Water Resources Support Center, USACE, Alexandria, VA. November 1995.

Wetlands Assistance Guide for Landowners. Texas Parks and Wildlife Department, Austin, TX. July 1995. For a copy of this guide, contact TPWD at (512) 389-4635.

APPENDIX A

Currently Operating Mitigation Banks in the Fort Worth District

Name: Anderson Tract Off-Site Mitigation Project
Owner: Texas Department of Transportation (TxDOT)
Location: Sabine River floodplain, approximately six miles northeast of the city of Lindale, in Smith County, Texas
Size: 2,446 acres
Established: October 27, 1994
Available to: TxDOT, not open for use by general public
Contact: Mr. Duncan Stewart, Texas Department of Transportation, Austin, Texas, (512) 416-3014

Name: Hawkins Mitigation Bank
Owner: R. Lacy, Inc.
Location: Sabine River floodplain, approximately 1.7 miles south of the city of Hawkins, in Smith County, Texas
Size: 175 acres
Established: March 31, 1998
Available to: All credits obligated
Contact: Mr. Mickey Melton, R. Lacy, Inc., Longview, Texas, (903) 758-8276

Name: Byrd Tract Mitigation Bank
Owner: Enron Oil and Gas Company
Location: Sabine River floodplain, approximately three miles southwest of the city of Gladewater, in Smith County, Texas
Size: 483 acres
Established: August 24, 1998
Available to: General public
Contact: Mr. Warren Davis, EOG, Tyler, Texas, (903) 509-7107

Name: KLAMM Mitigation Bank
Owner: KLAMM, Inc.
Location: Sabine River floodplain, approximately 1.5 miles south of the city of Big Sandy, in Smith County, Texas
Size: 1,251 acres
Established: July 15, 1998
Available to: General public
Contact: Mr. Larry Byrd, KLAMM, Inc., Gladewater, Texas (903) 845-4094

Name: Trinity River Mitigation Bank
Owner: Wetland Partners
Location: West Fork Trinity River Floodplain, in east Tarrant County, Texas
Size: 1,380 acres
Established: June 5, 2001
Available to: General public
Contact: Mr. Wallace Hall, Jr., Wetland Partners, Dallas, Texas, (214) 891-0920

Name: Big Woods on the Trinity Mitigation Bank
Owner: Robert F, McFarlane, M.D.
Location: Trinity River floodplain, approximately 9 miles west of Tennessee Colony in Anderson County, Texas
Size: 423.7 acres
Established: April 25, 2002
Available to: General public
Contact: Robert F. McFarlane, M.D., Tennessee Colony, Texas, (903) 928-2721

Name: Sabal Wetland Preserve Mitigation Bank
Owner: Sabal Ventures, LLC
Location: Sabine River floodplain, approximately 7 miles northwest of Gladewater in Upshur County, Texas
Size: 827.6 acres
Established: January 5, 2004
Available to: General public
Contact: Mr. Bruce Ogilivie, Sabal Ventures, Inc., Tyler, Texas, (903) 595-5295

Name: Steele Creek Mitigation Bank
Owner: SteelCreek Properties, Inc.
Location: Steele Creek floodplain, approximately 5 miles west of the city of Marquez, in Robertson County, Texas
Size: 557 acres
Established: June 8, 2004
Available to: General public
Contact: Mr. Larry Byrd, SteelCreek Properties, Inc., Gladewater, Texas (903) 845-4094

Name: West Mineola Mitigation Bank
Owner: Anadarko Exploration and Production Company, Inc.
Location: Sabine River floodplain, approximately 8 miles west of the city of Mineola, in Wood County, Texas
Size: 661 acres
Established: July 16, 2004
Available to: Private, not open to use by general public
Contact: Mr. Patrick Navratil, Anadarko Exploration and Production Company, Inc., The Woodlands, Texas (832) 636-2612

APPENDIX B

Mitigation Bank Review Team
U. S. Army Corps of Engineers, Fort Worth District

U.S. Army Corps of Engineers - Chair

Ken Laterza
District Mitigation Banking Coordinator
Regulatory Branch, CESWF-PER-R
U. S. Army Corps of Engineers
819 Taylor Street Room 3A37
Fort Worth, Texas 76102-0300
(817) 886-1735
Fax: (817) 886-6493

U.S. Fish and Wildlife Service

Arlington: Tom Cloud
Arlington Field Office
U. S. Fish and Wildlife Service
711 Stadium Dr., Suite 252
Arlington, TX 76011
(817) 277-1100
FAX: (817) 277-1129

Austin: Dawn Whitehead
Austin Field Office
U. S. Fish and Wildlife Service
10711 Burnet Road, Suite 200
Austin, Texas 78758
(512) 490-0057
FAX: (512) 490-0974

Corpus Christi: Pat Clements
Corpus Christi Field Office
U.S. Fish and Wildlife Service
TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412
(361) 994-9005
FAX: (361) 994-8262

Houston: Fred Werner
Houston Field Office
U.S. Fish and Wildlife Service
17629 El Camino Real, Suite 211
Houston, Texas 77058
(281) 286-8282
FAX: (281) 488-5882

U. S. Environmental Protection Agency

Norm Sears
Marine and Wetlands Section (6WQ-EM)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, Texas 75202
(214) 665-6680
FAX: (214) 665-6689

Texas Parks and Wildlife Department

Tom Heger
Resource Protection Division
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744
(512) 389-4639
FAX: (512) 389-8059

Texas Commission on Environmental Quality

Mark Fisher
Manager, Water Quality Assessment Section
Water Quality Division
Texas Commission on Environmental Quality
Mail Code 150
12100 Park 35 Circle
P.O. Box 13087
Austin, Texas 78711-3087
(512) 239-4586
FAX: (512) 239-4420

Railroad Commission of Texas

Leslie Savage
Water Quality Certifying Agent
Oil and Gas Division
Railroad Commission of Texas
1701 North Congress Avenue
P. O. Box 12967
Austin, Texas 78711-2967
(512) 463-7308
FAX: (512) 463-6780