

# STATE OF LOUISIANA

**Department of Natural Resources  
Louisiana Coastal Resources Program**  
Baton Rouge, Louisiana

March 2004



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**LEGISLATIVE AUDITOR**

**DIRECTOR OF PERFORMANCE AUDIT**

**David K. Greer, CPA, CFE**

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March 3, 2004

The Honorable Don Hines,  
President of the Senate  
The Honorable Joe R. Salter,  
Speaker of the House of Representatives

Dear Senator Hines and Representative Salter:

This report provides the results of our performance audit of the Louisiana Coastal Resources Program administered by the Department of Natural Resources. This audit was conducted under the provisions of Title 24 of the Louisiana Revised Statutes of 1950, as amended.

This performance audit report contains our findings, conclusions, and recommendations. It also includes three matters for legislative consideration. I hope this report will benefit you in your legislative decision-making process.

Sincerely,

A handwritten signature in black ink, appearing to read "Grover C. Austin". The signature is fluid and cursive, with a large initial "G".

Grover C. Austin, CPA  
First Assistant Legislative Auditor

GCA/dl

[DNRLCRP04]



# Office of Legislative Auditor

## Department of Natural Resources Louisiana Coastal Resources Program

### Executive Summary

The Department of Natural Resources' Coastal Management Division is responsible for implementing the Louisiana Coastal Resources Program. The policies of the program strive to balance conservation and resource use, resolve user conflicts, encourage coastal zone recreational values, and determine the future course of coastal development and conservation. The results of this performance audit of the Louisiana Coastal Resources Program are as follows:

#### **Management and Oversight of the Louisiana Coastal Resources Program** *(See pages 13 through 26 of the report.)*

- The Department lacks sufficient management controls to ensure that:
  - The Department's permit database contains current and complete information.
  - The Department conducts regular monitoring of all individual mitigation projects and evaluates their success.
  - The Department employs all available enforcement tools.
  - The Department conducts formal monitoring of all mitigation banks and areas to evaluate their performance.
- Neither the Department nor the St. James Parish Government has used the mitigation contributions to implement mitigation projects. Delays in the decision-making process and insufficient funds have caused difficulties in developing and implementing suitable projects. However, the Department has made significant progress over the last few years.
- The Department coordinates its coastal management responsibilities with its coastal restoration responsibilities when permitted activities are located near restoration projects.

#### **Completeness and Accuracy of Performance Data** *(See pages 27 through 31 of the report.)*

- The Louisiana Coastal Resources Program performance indicators are valid because they are relevant to the program's mission, goal, and objective and they are linked to a major function of the program.
- The performance data do not present a complete and accurate evaluation of state wetland mitigation policy because the indicators are not always clearly portrayed and did not always contain complete data. Also, the indicator values were not always calculated in a consistent manner.



# Introduction

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## Audit Initiation and Objectives

We conducted this performance audit under the provisions of Title 24 of the Louisiana Revised Statutes of 1950, as amended. In accordance with these statutes, the Legislative Auditor scheduled a performance audit of the Department of Natural Resources for the 2004 fiscal year. The audit was approved by the Legislative Audit Advisory Council on July 30, 2003.

We focused this performance audit on the Louisiana Coastal Resources Program administered by the Coastal Management Division of the Department of Natural Resources. The audit objectives were as follows:

- 1. Is the Department of Natural Resources providing effective management and oversight of the Louisiana Coastal Resources Program that ensures that damages to the coastal zone caused by permitted activities are mitigated?**
- 2. Do the Department of Natural Resources' Louisiana Coastal Resources Program performance data present a complete and accurate evaluation of state wetland mitigation policy?**

Appendix A contains a summary of our audit scope and methodology.

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## Overview of the Louisiana Coastal Resources Program

**History of Wetland Loss.** According to the Department of Natural Resources (the Department), Louisiana currently experiences 80% of the United States' coastal wetland loss at an average rate of 25 to 35 square miles per year. At this rate, an area the size of a football field is lost every 30 to 45 minutes. The causes of wetland loss are complex and vary across the state. Natural causes include compaction and sinking, saltwater intrusion that kills vegetation, hurricane and storm damage, wind and wave erosion, lack of sedimentation, and other processes. Man-induced losses occur from dredging and spoil disposal, draining and filling of lands, levee building, canal digging, mineral extraction, agricultural practices, and industrial and urban expansion. If recent loss rates continue into the future, despite current restoration efforts, it is estimated that by the year 2050 coastal Louisiana will lose more than 630,000 additional acres of coastal marshes, swamps, and islands.<sup>1</sup>



**Figure 1: Dead cypress trees near the Houma Navigation Channel.**

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<sup>1</sup> Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority. 1998. *Coast 2050: Toward a Sustainable Coastal Louisiana*. Department of Natural Resources. Baton Rouge, LA. 161 pages.



Along with the loss of acreage goes the loss of the various functions and values associated with the wetlands. Wetlands not only provide recreation, such as sport fishing and hunting, photography, bird watching, and nature studies, but also ecological benefits, such as hurricane protection, water quality improvement, flood peak reduction, and resource production. If this trend of wetland loss in Louisiana continues, it is estimated that it could cost in excess of \$37 billion from lost public use value over the next 50 years.

**Legal Authority.** The federal Coastal Zone Management Act of 1972 provides for protecting, restoring, and responsibly developing the nation's important and diverse coastal communities and resources. The act also encourages states to develop and implement management programs to achieve the wise use of the land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic, and esthetic values as well as the needs for compatible economic development [16 USCS 1452(2)].

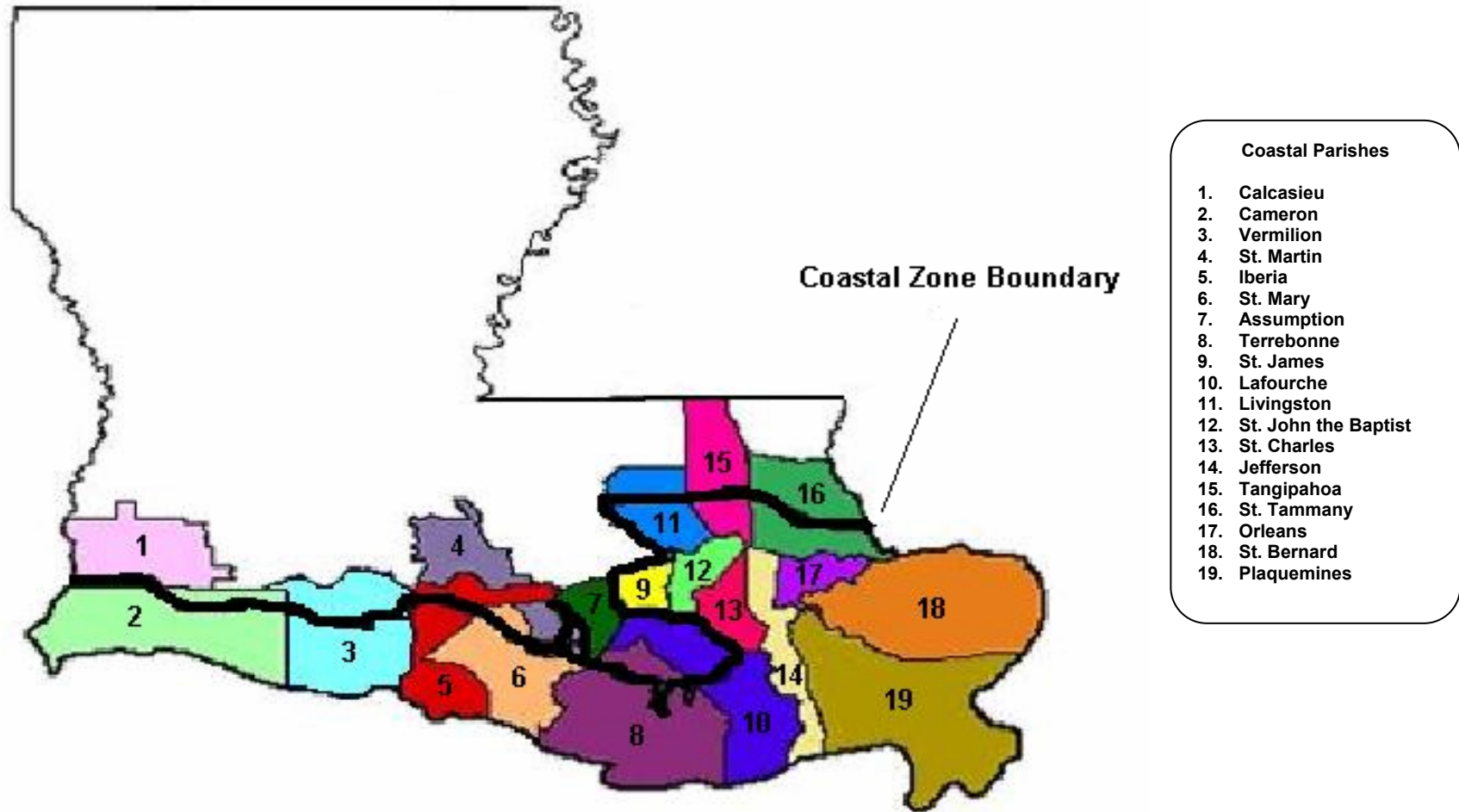
The Louisiana State and Local Coastal Resources Management Act was adopted in 1978 to regulate the developmental activities that affect wetland loss. The resulting Louisiana Coastal Resources Program became a federally-approved coastal zone management program in 1980. In 1989, the Louisiana Legislature passed Act 6 of the Second Extraordinary Session, and a subsequent constitutional amendment, which in part created the Coastal Management Division within the Office of Coastal Restoration and Management of the Louisiana Department of Natural Resources. The Coastal Management Division was charged with implementing the Louisiana Coastal Resources Program. The policies of the program strive to balance conservation and resources, resolve user conflicts, encourage coastal zone recreational values, and determine the future course of coastal development and conservation.

Under authority of the Louisiana State and Local Coastal Resources Management Act of 1978, the Coastal Management Division regulates development activities and manages the resources of the coastal zone. Covering 8.5 million acres, the coastal zone, located in all or part of 19 southern parishes, includes large open bays and lakes, barrier islands, and natural levee forests. The marshes, swamps, and bottomland hardwoods that sprawl from the Gulf of Mexico comprise 41% of the continental U.S. coastal wetlands. Exhibit 1 on the following page identifies the 19 parishes of the coastal zone.

R.S. 49:214.23 defines the coastal zone as the coastal waters and adjacent shorelands within the boundaries of the coastal zone established in R.S. 49:214.24 . . . and uses of which have a direct and significant impact on coastal waters.

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**Exhibit 1**  
**Louisiana Coastal Zone Map**



**Source:** Prepared by legislative auditor's staff using a map obtained from [www.dnr.state.la.us](http://www.dnr.state.la.us).

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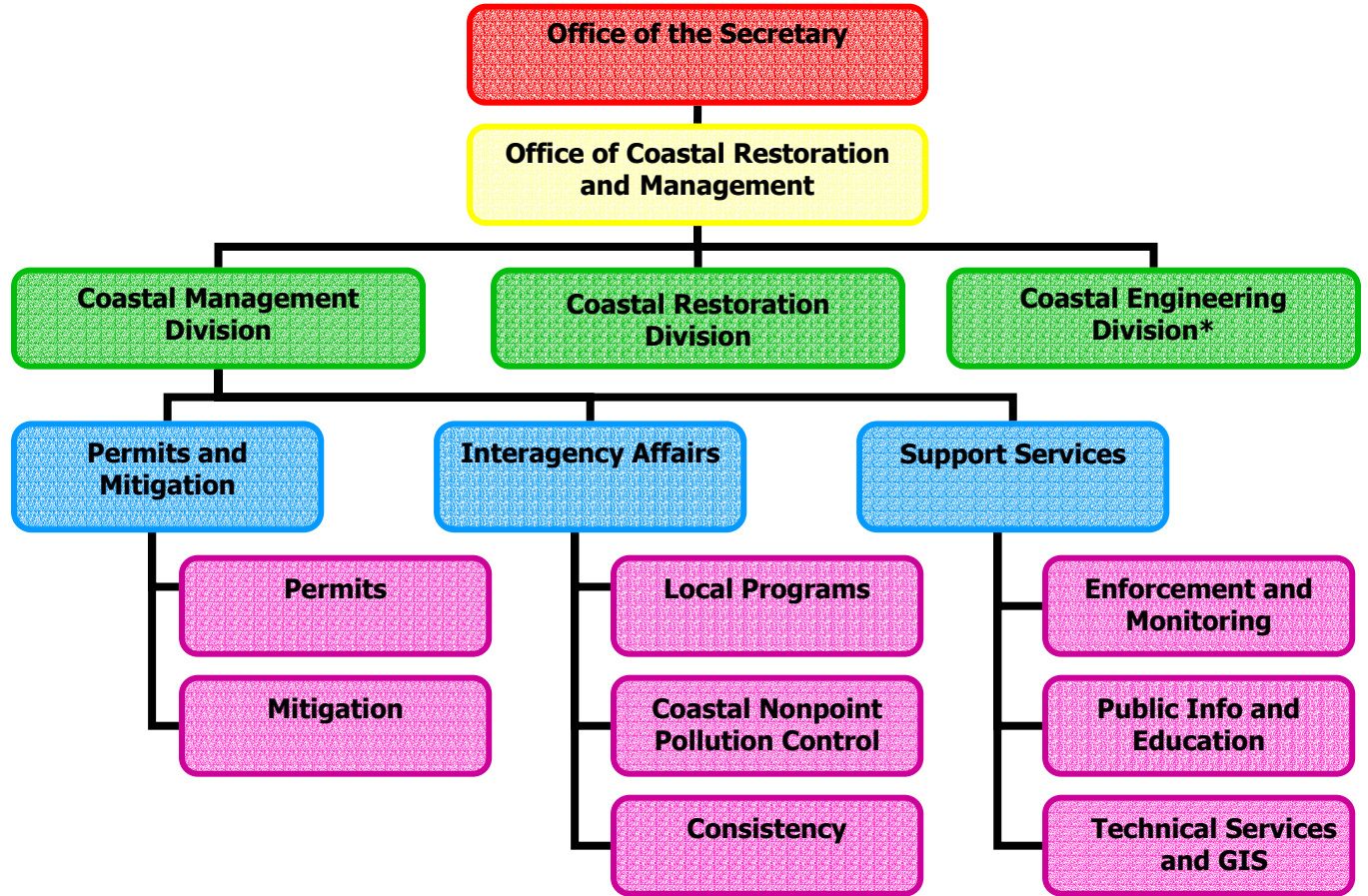
## Organizational Structure of the Coastal Management Division

The main function of the Coastal Management Division is the regulation of uses in the coastal zone, especially those uses that have a direct and significant impact on coastal waters. Such uses include projects that affect more than one water body, those involving state-owned lands or federal funds, oil and gas activities, and other uses that may significantly affect interests of regional, state, or national concern. The Coastal Management Division administers the Coastal Use Permit Program to issue permits for these and other development projects located in the coastal zone. The coastal use permit is the basic regulatory tool used by the Coastal Management Division for activities that may increase the loss of wetlands and aquatic resources, such as dredging and filling, bulkhead construction, and shoreline maintenance. The Coastal Management Division carries out its activities through three programs that are further divided into eight sections, as shown in Exhibit 2 on the following page. Exhibit 3 on page 6 presents the Coastal Management Division's revenues and expenditures and the number of positions for fiscal year 2003.

R.S. 49:214.34(A) exempts certain types of activities from permitting requirements, such as those that are located five feet above mean sea level; those that occur within fast lands; certain agricultural, forestry, and aquaculture activities; normal maintenance and repair of existing structures; and construction of a residence or camp.

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**Exhibit 2**  
**Organizational Structure of the Coastal Management Division**



**Note:** \*The Coastal Engineering Division was created in September 2003.

**Source:** Prepared by legislative auditor's staff using information provided by the Department of Natural Resources.

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<b>Exhibit 3</b>	
<b>Coastal Management Division Revenues and Expenditures and Staffing Information Fiscal Year 2003</b>	
<b>REVENUES</b>	
Interagency Transfers	\$46,932
Self-generated Revenue	1,304
Statutory Dedications	923,034
Federal Funds	5,644,968
<b>Total Revenues</b>	<b>\$6,616,238</b>
<b>EXPENDITURES</b>	
Personal Services	\$2,243,375
Travel	12,742
Operating Services	89,667
Supplies	47,335
Professional Services	36
Other Charges*	3,347,644
Interagency Transfers	765,039
Acquisitions	110,402
<b>Total Expenditures</b>	<b>\$6,616,240</b>
<b>POSITIONS</b>	<b>39</b>
<p>*According to the Department's accounting staff, the Department received a one-time appropriation from the National Oceanic and Atmospheric Administration for the Coastal Impact Assistance Program. The Department allocated these funds to the ten local coastal programs.</p> <p><b>Note:</b> The difference in total revenues and total expenditures is due to rounding.</p> <p><b>Source:</b> Prepared by legislative auditor's staff using information provided by the Department of Natural Resources.</p>	

The **Permits Section** reviews and approves applications for coastal use permits. Coastal use permits may be classified as residential or non-residential and general or individual. The Permits Section issues general permits for 17 standard activities and individual permits for all other activities. General permits usually require a five-day agency notice, while individual permits require a 25-day public notice. Appendix B contains a list of the 17 standard activities for which the Coastal Management Division issues general permits. Appendix C flowcharts the coastal use permit application process as described below.

During the review process, the **Enforcement and Monitoring Section** inspects the proposed project site to determine the types of habitats, such as marshes, swamps, or bottomland hardwoods, which may be impacted by the project. The Permits Section works with the applicant to avoid or minimize any impacts. However, if impacts are unavoidable, the **Mitigation Section** coordinates with the Permits Section to quantify the ecological values [calculated as average annual habitat units (AAHUs)] that would be lost as a result of the permitted activity and notifies the Permits Section that a proposal for compensatory mitigation is required. According to the Louisiana Administrative Code, the Mitigation Section must ensure that the mitigation proposal is sufficient, properly located, and accomplished by the most desirable available/practicable option. The Permits Section forwards a copy of the proposal to other relevant state and federal agencies for their comments and recommendations. The Permits Section works with the permit applicant to ensure that the mitigation proposal fulfills the requirements of these other agencies.

R.S. 49:214.41(A)(2) defines compensatory mitigation as replacement, substitution, enhancement, or protection of ecological values to offset anticipated losses of those values caused by a permitted activity.

Once a permit has been issued, the Enforcement and Monitoring Section monitors the project for compliance with permit conditions, including mitigation. This section also ensures that any unauthorized projects in the coastal zone are investigated and action is taken to bring them into compliance with the Louisiana Coastal Resources Program. The Enforcement and Monitoring Section has field offices located in Houma, Lafayette, Lake Charles, and New Orleans to facilitate the monitoring and investigation of projects.

The **Local Programs Section** provides research, current data, impact studies, technical assistance, and general information to local coastal programs. State law authorizes the local coastal programs to issue permits for projects of local concern. R.S. 49:214.25(A)(2) defines the types of uses that are of local concern. Currently, ten parishes administer local coastal programs. They are as follows:

1. Calcasieu
2. Cameron
3. Jefferson
4. Lafourche
5. Orleans
6. Plaquemines
7. St. Bernard
8. St. James
9. St. Tammany
10. Terrebonne

Local coastal programs are pending in St. Charles and St. John the Baptist parishes.

The **Coastal Nonpoint Pollution Control Section** builds on the existing coastal management and nonpoint pollution programs to reduce and prevent coastal water quality problems. The **Consistency Section** reviews the activities of governmental agencies for compliance with the policies, goals, and objectives of the Louisiana Coastal Resources Program. The **Public Information and Education Section** informs and educates the general public, business, and industry about the Coastal Management Division's programs, policies, and functions. The **Technical Services and Geographic Information Systems Section** maintains the machinery and equipment and provides expertise and support for the office computers, as well as the GIS computer systems, databases, web pages, and aerial photographs.

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## Compensatory Mitigation Options

State law defines compensatory mitigation as the replacement, substitution, enhancement, or protection of ecological values to offset anticipated losses of those values caused by a permitted activity. According to the Department, the Coastal Management Division requires compensatory mitigation for adverse impacts to the following five types of vegetated wetlands:

1. Bottomland hardwoods
2. Swamps
3. Marshes
4. Submerged aquatics
5. Scrub/Shrub (on an as-needed basis only)



Figure 2: Bottomland hardwoods



Figure 3: Swamp



**Figure 4: Fresh marsh**



**Figure 5: Intermediate marsh**



**Figure 6: Brackish marsh**



**Figure 7: Saline marsh**



**Figure 8: Submerged aquatics**



**Figure 9: Scrub/shrub**

Compensation for losses to these vegetated wetlands may be accomplished by creation, restoration (re-establishment or rehabilitation), enhancement, and/or preservation, according to federal guidance issued by the U.S. Army Corps of Engineers.<sup>2</sup> Creation and re-establishment result in a gain in wetland acres, whereas rehabilitation, enhancement, and preservation do not. Restoration projects provide the greatest potential for success in terms of functional compensation.

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<sup>2</sup> Regulatory Guidance Letter No. 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*, December 24, 2002.



Permit applicants generally have three options for fulfilling their compensatory mitigation obligations:

1. Implement an individual mitigation project at or near the project site
2. Purchase credits through a mitigation bank or area
3. Make a contribution to the affected parish or to the Wetlands Conservation and Restoration Fund

**Individual Mitigation Project.** Administrative rules require that compensatory mitigation be located at the project site and on the affected landowner's property, if possible. However, the affected landowner has the option of waiving compensatory mitigation on his property, provided that the mitigation proposal is acceptable and sufficient, according to R.S. 49:214.41(E). This mitigation option is not chosen very often because of high project cost and maintenance requirements. In addition, the Department has more monitoring requirements for this option.

**Mitigation Banks and Areas.** The Louisiana Administrative Code [LAC 43:I.700] defines mitigation bank as an area where wetlands have been created, restored, protected, and/or enhanced to produce ecological values that are measured in credits. Permit applicants purchase these credits in fulfillment of their compensatory mitigation obligations. The bank sponsor is responsible for the operation and maintenance, and therefore ecological success, of the mitigation bank. Mitigation areas are similar to banks except that credits are sold to permit applicants *before* the bank sponsor implements measures to produce ecological values.

Mitigation banks and areas both require approval of the Mitigation Bank Review Team (MBRT) before selling credits. The MBRT is composed of representatives from the following state and federal agencies:

1. Louisiana Department of Natural Resources
2. Louisiana Department of Wildlife and Fisheries
3. National Marine Fisheries Services
4. U.S. Army Corps of Engineers
5. U.S. Environmental Protection Agency
6. U.S. Fish and Wildlife Service

There is one mitigation bank and seven mitigation areas in the coastal zone that the Coastal Management Division allows permit applicants to use to fulfill their compensatory mitigation obligations. Appendix C contains a list of the approved bank and areas.

**Monetary Contributions.** A monetary contribution, whether to the affected parish or to the Coastal Mitigation Account, is an acceptable compensatory mitigation option if the proposed project would directly impact less than ten acres [LAC 43:I.724(J)(5)(f)]. However, according to R.S. 49:214.42(D), contributions to the Coastal Mitigation Account within the Wetlands Conservation and Restoration Fund can only be made if the permit applicant is unable to provide mitigation through an individual mitigation project or through a mitigation bank located within the coastal zone.

Payments can also be made to the affected parish; however, the parish must present a plan for the use of the funds, including an estimate of the total cost of the plan, to the Department. The parish must begin implementing the plan within 45 days of receipt of the funds. Failure to complete a specific mitigation project within six months may result in a forfeiture of the funds to the Wetlands Conservation and Restoration Fund. Although all 19 coastal parishes are authorized to receive contributions for compensatory mitigation, only the St. James Parish Government has established a local trust fund for the receipt of such funds.

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## Louisiana Coastal Resources Program Performance Data

The mission of the Department of Natural Resources' Office of Coastal Restoration and Management is to serve as the leader for the development, implementation, operation, maintenance, and monitoring of coastal restoration plans and projects. The office coordinates with various federal and state task forces, other federal and state agencies, the Governor's Office of Coastal Activities, the public, the Louisiana Legislature, and the Louisiana Congressional Delegation on matters relating to conservation, restoration, enhancement, management, and permitting of Louisiana's coastal wetlands. The goal of the office is to conserve coastal wetlands by carrying out the no net loss policies of the Louisiana State and Local Coastal Resources Management Act of 1978 and the Coastal Wetlands Conservation Plan and to preserve, enhance, restore, and protect Louisiana's coastal wetlands. Exhibit 4 below presents the objective and performance indicators that relate specifically to the Louisiana Coastal Restoration Program.

<b>Exhibit 4</b> <b>Louisiana Coastal Resources Program Performance Data</b> <b>Fiscal Year 2003</b>	
Objective	Performance Indicators
To ensure that the loss of wetlands resulting from activities regulated by the program will be offset by actions which compensate 100% for their loss.	Percentage of disturbed acreage mitigated by full compensation of loss (key)
	Acres of wetlands disturbed/mitigated (supporting)
	Acres of wetland disturbed per mitigated activity (supporting)
	Number of permit applications received (supporting)
<b>Source:</b> Prepared by legislative auditor's staff using the fiscal year 2003 Executive Budget.	

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## Louisiana Coastal Wetlands Conservation Plan

The Department of Natural Resources is required to submit biannual reports to three federal government agencies in accordance with the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) of 1990. The act provides for a reduction in the state's cost share of restoration activities (from 25% to 15%) upon successful implementation of an approved conservation plan. The Department led the development of the Louisiana Coastal Wetlands

Conservation Plan, which was approved in December 1997. Federal approval and oversight responsibilities relative to the plan are shared by the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency, and the U.S. Army Corps of Engineers. Every six months the Department submits a report to each of the federal partners summarizing the accomplishments it has made toward achieving the federal goal of no net loss of wetlands from developmental activities. Some of the issues addressed in the biannual reports are:

- Efforts to ensure that permitted activities are properly evaluated and mitigated
- Efforts to ensure that losses associated with unpermitted/unreported activities are offset
- Efforts to fund state-constructed wetland restoration projects
- Impacts to wetland habitats from permitted activities
- Gains of wetland habitats from mitigation
- Permits issued by the local coastal programs

Each of the federal partners reviews the report and prepares an evaluation on the implementation of the state's plan. The partners submit their evaluations to the U.S. Congress in accordance with Section 304(h)(2) of the CWPPRA.

# Management and Oversight of the Louisiana Coastal Resources Program

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## **Is the Department of Natural Resources providing effective management and oversight of the Louisiana Coastal Resources Program that ensures that damages caused by permitted activities in the coastal zone are mitigated?**

The Department of Natural Resources' management and oversight of the Louisiana Coastal Resources Program does not always ensure that damages caused by permitted activities in the coastal zone are mitigated. The Department has not provided the following:

- Current and complete information in its coastal use permit database
- Regular monitoring of all individual mitigation projects and evaluation of their success
- Employment of all available enforcement tools
- Formal monitoring of all mitigation banks and areas to evaluate their performance

Also, Department staff said that contributions to the Wetlands Conservation and Restoration Fund do not cover the costs of mitigation. In addition, legislative restrictions have been placed on permittees for contributing to the fund to fulfill their compensatory mitigation obligations. As a result, the Department has not yet used the monies in the fund to implement any mitigation projects, but has made significant progress over the last few years in developing suitable projects. The St. James Parish local coastal program also has not used its trust fund monies because it has had difficulty in obtaining approval for mitigation projects.

Conversely, the Department does coordinate its coastal management responsibilities with its coastal restoration responsibilities when permitted activities are located near restoration projects. As a result, the Department appears to be providing reasonable assurance that permitted activities do not adversely impact restoration projects.

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## **Better Maintenance of the Coastal Use Permit Database Could Improve the Department's Monitoring and Reporting Efforts**

The Department of Natural Resources did not always enter all vital information into its coastal use permit database. As a result, the Department cannot ensure that all damages to the coastal zone have been restored through mitigation or that performance data are complete and accurate.

The Department's coding procedures require that all relevant information, such as whether compensatory mitigation is required, the type of habitat impacted by the permitted activity, and the number of average annual habitat units impacted, is entered into the coastal

use permit database during the permit application process. This information should be updated when changes occur. However, we found that some vital information was not entered into the database at all.

We obtained records from the Department's permit database for fiscal years 2001 through 2003 to determine the number of permits issued during these years, associated impacts to vegetated wetlands, mitigation types, and monitoring efforts. However, we were unable to make this determination because the database did not contain permit and mitigation information for those permit applications that were transferred to the local coastal programs for processing. The Department does not have formal written policies and procedures in place that provide for the collection and entry of the local data or for the formal review of the data entry.

The Department may not be providing reasonable assurance that mitigation is conducted for all permitted activities that cause damages to the coastal zone because of these data deficiencies. Also, because the Department relies on its permit database for gathering performance data, it cannot ensure that the information it submits to the legislature and to the federal agencies overseeing the Louisiana Coastal Wetlands Conservation Plan is complete and accurate.

**Recommendation 1:** The Department of Natural Resources should develop and implement formal written policies and procedures requiring the collection and entry into the coastal use permit database of permit and mitigation information for those coastal use permits authorized by the local coastal programs. The policies and procedures should ensure that staff are trained to properly enter and maintain data and that external reports are based on complete and accurate information.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

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## **Improvements in Monitoring Efforts Could Further the Department's Ability to Replace Lost Wetlands**

The Department of Natural Resources did not always monitor projects on a regular basis or evaluate project effectiveness. As a result, the Department may not be ensuring that wetlands lost as a result of permitted activities have been restored.

R.S. 49:214.26(B)(3) authorizes the Department to conduct systematic monitoring and surveillance of permitted activities to ensure compliance with permit conditions. Also, guidance issued by the U.S. Army Corps of Engineers<sup>1</sup> suggests that mitigation plans must contain written performance standards for determining whether mitigation is achieving planned goals. Plans must also contain monitoring schedules of at least five to ten years.

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<sup>1</sup> Regulatory Guidance Letter No. 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*, December 24, 2002.

The Department's Enforcement and Monitoring Section staff said that they monitor individual mitigation projects during and after construction by conducting on-site inspections, flyovers, and drive-bys. If maintenance is required, the staff tries to inspect the projects one year, three years, or five years after completion, although the Department does not have specific time frames for monitoring. If maintenance is not required, the staff inspects the projects upon completion to determine whether they were implemented according to permit conditions. Information such as monitoring requirements and follow-up dates is entered into the Department's monitoring database, and reports are generated on a quarterly basis to notify the Enforcement and Monitoring Section staff when inspections are due. Inspections are documented on "follow-up reports" which are placed in the permit files, and the monitoring database is updated as necessary. However, we found that the Department did not always monitor individual mitigation projects on a regular basis and did not always evaluate the success of the projects. Also, the monitoring database did not contain complete and accurate information for every permitted activity requiring compensatory mitigation.

In our review of 37 sampled permits, we found that 25 mitigation projects required monitoring (68%). However, we could not find evidence in the permit files that three projects had been monitored (12% of 25). Two additional projects had not achieved success at the time of monitoring (8% of 25) and were classified as "major noncompliance" by the Department. However, we could not find evidence in the permit files of any subsequent monitoring to determine whether the projects had ever achieved success. One of these projects was not listed in the monitoring database, and the other had been closed out, which means that the Enforcement and Monitoring Section staff will *not* be notified when a follow-up inspection is due.

We also found in our file review that 19 of the 25 sampled permits requiring monitoring (76%) contained success criteria in their mitigation plans. However, only four of these were evaluated based on these criteria (22% of 19). According to Department staff, the Department should be evaluating individual mitigation projects according to success criteria if those criteria are provided for in the mitigation plans.

In addition, we learned through a survey of the ten local coastal programs that at least two programs have authorized permittees to implement individual mitigation projects. Only the St. James Parish local coastal program, however, has a process in place to ensure regular monitoring of these projects. The St. James program conducts on-site inspections, flyovers, and drive-bys on an annual basis and documents its monitoring results on a monitoring report form. The Jefferson Parish local coastal program conducts flyovers only and does not conduct monitoring on a regular basis.

The Enforcement and Monitoring Section staff may upon request assist the local coastal programs with their monitoring of individual mitigation projects located in their respective parishes; however, the Department does not maintain local monitoring information in its database or in its permit files. Therefore, the Department cannot be certain that individual mitigation projects authorized by the local coastal programs have been monitored for compliance with permit conditions.

The Department's inconsistent monitoring process results from a lack of written policies and procedures that provide for regular monitoring schedules, success criteria, or the evaluation of projects based on these criteria. The Department also does not have any guidelines governing the maintenance of the monitoring database to ensure that all individual mitigation projects, whether authorized by the Department or the local coastal programs, are entered in the database. In addition, the Enforcement and Monitoring Section staff said that they cannot effectively monitor projects with their current level of funding or staffing. For example, they rarely monitor projects taking place in open waters, such as the installation of oil and gas pipelines, because of the time required. Without effective monitoring, the Department cannot be certain that the ecological values projected to be gained from mitigation will be realized. Therefore, the Department cannot ensure that it has met state and federal legislative intent of balancing restoration with economic development in the coastal zone or that it has achieved the goals of the Louisiana Coastal Wetlands Conservation Plan.

**Recommendation 2:** The Department of Natural Resources should develop and implement formal written policies and procedures requiring specific monitoring periods for individual mitigation projects to give sufficient time to determine whether the projects are functioning as intended. The Department should also require mitigation plans to contain success criteria and the evaluation of mitigation projects based on these criteria.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

**Recommendation 3:** The Department of Natural Resources should develop and implement formal written policies and procedures requiring that all individual mitigation projects, whether authorized by the Department or by the local coastal programs, are entered into its monitoring database, along with monitoring schedules and appropriate success criteria.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

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## **Stiffer Enforcement Actions Could Deter Violations**

While state law requires the Department of Natural Resources to properly enforce the provisions of the Louisiana Coastal Resources Program, there are no state regulations or Department policies and procedures governing enforcement. Thus, the Department does not always exercise all of its enforcement authority. As a result, the Department's current enforcement efforts may not effectively deter individuals and businesses from violating the provisions of the program.

R.S. 49:214:36(A) requires the Department to implement a field surveillance program to ensure proper enforcement of the Louisiana Coastal Resources Program. As such, the Department has the authority to take the following actions when violations occur:

- Issue cease and desist orders
- Seek relief through the civil court system
- Suspend, revoke, or modify coastal use permits
- Assess costs of abatement or mitigation of damages and penalties

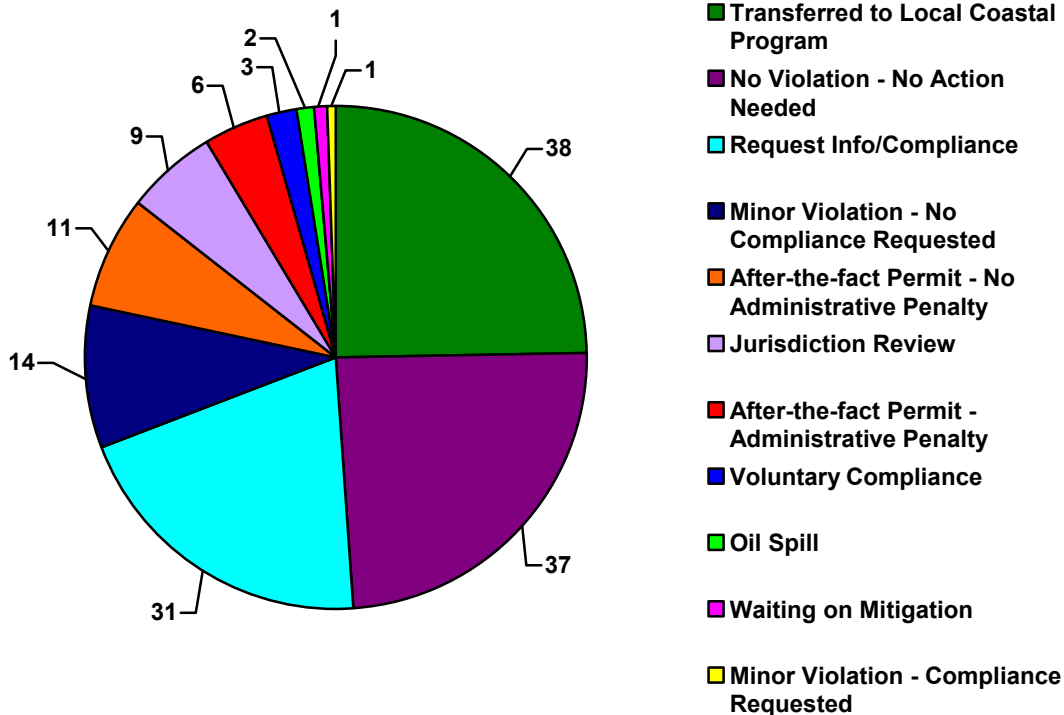
During fiscal years 2001 through 2003, the Department opened 153 enforcement files, but assessed administrative penalties totaling \$6,476 in only six (4%) cases. The Department did not issue any cease and desist orders, take legal action, or suspend, revoke or modify permits in any of the remaining 147 (96%) cases. The Department's enforcement database did not contain the date the Department was notified of a potential violation for an additional 65 files. Therefore, we could not determine whether these files were opened during fiscal years 2001 through 2003. Exhibit 5 on the following page presents the types and numbers of enforcement actions during the time frame we reviewed.



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**Exhibit 5**
**Types and Numbers of Enforcement Actions  
Fiscal Years 2001, 2002, and 2003**


**Source:** Prepared by legislative auditor's staff using data provided by the Department of Natural Resources.

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According to R.S. 49:316(A), cease and desist orders require the approval of the Department Secretary. There are no administrative rules or agency policies and procedures delegating this authority to the Enforcement and Monitoring Section staff. The staff said that they usually do not request cease and desist orders because the activities in violation are usually completed by the time approval is obtained. Department administration said, however, that cease and desist orders can be issued promptly when warranted.

The Enforcement and Monitoring Section staff has sent enforcement files to the Legal Section for review, but the Department has never filed suit. The staff has never suspended or revoked a permit based on a violation of the Louisiana Coastal Resources Program because these actions require the approval of the Department secretary. The staff has, however, modified permits to include any activities conducted by permittees that were outside the scope of their original permits.

The Enforcement and Monitoring Section staff has issued after-the-fact permits to individuals or businesses conducting unpermitted activities in the coastal zone. As stated previously, in six of the 153 enforcement cases opened during fiscal years 2001 through 2003 (4%), the staff assessed an administrative penalty along with issuing an after-the-fact permit. Penalties can range from \$50 to \$12,000 and are generally based on the amount of dredge or fill in violation. In some cases, however, the staff does not assess a penalty. For example, if the penalty would be less than \$250, the staff usually requests that the violator restore the damages rather than issue an after-the-fact permit and assess a penalty because the cost of issuing the permit is greater than \$250. Also, if no dredging or filling is involved, the staff usually issues an after-the-fact permit without assessing a penalty. During fiscal years 2001 through 2003, the staff issued 11 after-the-fact permits without assessing administrative penalties (7% of 153). State law does not consider the extent of the damage to the coastal zone in the calculation of fines and penalties for activities that do not involve dredging or filling and does not authorize the Department to assess fines and penalties in situations where a coastal use permit is not warranted.

In general, the Enforcement and Monitoring Section staff relies on the cooperation of the individual or business committing the violation to enforce the provisions of the Louisiana Coastal Resources Program. The staff requested compliance in at least four of the 153 enforcement cases opened during fiscal years 2001 through 2003 (3%). In these cases, the staff sends letters to the violators requesting compliance and may coordinate its efforts with federal agencies such as the U.S. Army Corps of Engineers. However, if a violator does not comply with the Department's request, the staff may take no further action.

The Department requires that any permit applicant having four or more open enforcement files must post a surety bond before receiving any subsequent permits, in accordance with state regulations [LAC 43:I.723(C)(9)(a)(iv)]. The Enforcement and Monitoring Section staff periodically submits a list of these repeat offenders to the Permits Section staff for review. However, the Permits Section staff does not use this list in its permit decision process. R.S. 49:214.30(C) does not clearly state that the coastal management program's rules require the Department to consider an applicant's compliance history during the permit process.

In our review of the enforcement database for fiscal years 2001, 2002, and 2003, we found that the Department issued subsequent permits to three repeat offenders having open enforcement files. None of the subsequent permits would have required a surety bond. However, one of the repeat offenders received 20 permits despite having two open enforcement files.

**Recommendation 4:** The Department of Natural Resources should employ the enforcement tools available under R.S. 49:214:36(A). For example, the Department should actively use fines to deter individuals and businesses from violating the provisions of the Louisiana Coastal Resources Program.

**Management's Response:** The Department's management agrees with this recommendation and indicates that it uses the assessment of fines as one of several tools for

achieving the program goal of no net loss of coastal wetlands. (See Appendix E for the Department's full response.)

**Recommendation 5:** The Department of Natural Resources should develop and implement formal written policies and procedures requiring that a permit applicant's history of compliance with the provisions of the Louisiana Coastal Resources Program is adequately and consistently considered prior to issuing a coastal use permit.

**Management's Response:** The Department's management partially agrees with this recommendation and indicates that it will seek legal advice regarding consideration of a permit applicant's history of compliance in the determination of whether to issue a coastal use permit. (See Appendix E for the Department's full response.)

**Recommendation 6:** The Department of Natural Resources should draft and seek to implement state regulations governing the enforcement provisions of the Louisiana Coastal Resources Program, as required by R.S. 49:214.27(A).

**Management's Response:** The Department's management partially agrees with this recommendation and indicates that it has implemented extensive regulations governing various aspects of the Louisiana Coastal Resources Program. (See Appendix E for the Department's full response.)

**Matter for Legislative Consideration 1:** The legislature should consider revising R.S. 49:214.36 to factor into the calculation of fines and penalties, using a quantitative habitat assessment methodology, the extent to which an activity has caused damage to the coastal zone when dredging or filling is not involved. The legislature may also consider allowing the Department of Natural Resources to assess fines and penalties and require mitigation without issuing a coastal use permit in situations where damages have occurred but a permit is not warranted.

**Matter for Legislative Consideration 2:** The legislature should consider revising R.S. 49:214.30(C) to require the Department of Natural Resources to consider a permit applicant's history of compliance with the provisions of the Louisiana Coastal Resources Program prior to issuing a coastal use permit.

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## **Formal Monitoring of Mitigation Banks/Areas Could Help the Department to Ensure Full Compensation for Wetland Losses**

Mitigation banking agreements require bank and area sponsors to submit annual monitoring reports and accounting statements, and federal guidance suggests that mitigation sites should be inspected at least annually to evaluate performance. However, there are no state regulations governing the mitigation bank and areas. Thus, the Department does not formally monitor the bank and areas to evaluate performance. As a result, the Department cannot ensure that damages to the coastal zone have been replaced at full compensation for their loss. Also, the Department cannot be certain that it has met state and federal legislative intent of balancing

restoration with economic development in the coastal zone or that it has achieved the goals of the Louisiana Coastal Wetlands Conservation Plan.

LAC 43:I.724(F)(9) requires the Department to review the survivability of plantings in the mitigation banks at specified intervals. The purpose of these reviews is to determine if any corrective action is needed, to determine the possible benefit of revising project features and/or their operation or maintenance, to determine whether the mitigation bank has operated in accordance with its memorandum of agreement, and to determine if the habitat has responded as predicted. However, the only mitigation bank in operation was approved before the mitigation regulations took effect, and thus is not subject to the requirements of these regulations. Also, the mitigation areas are not governed by the regulations; therefore, they are also not subject to the requirements.

The banking agreements for the mitigation bank and five mitigation areas require the sponsors to submit annual reports documenting the usage of the sites and the results of monitoring. One additional sponsor is required to submit semiannual reports. However, the Department had only two reports on file for fiscal year 2003. Mitigation Section staff obtained copies of an additional five reports from the U.S. Fish and Wildlife Service at our request. The sponsors usually do not send reports directly to the Department. If Department staff do not receive and review these reports, the Department cannot ensure that the mitigation sites are operating in accordance with their banking agreements.

The sponsors of the mitigation bank and six mitigation areas are required to include in their reports a ledger of transactions containing the total credits available, the number of credits sold and to whom, and the credit balance. In our review of the reports for these seven mitigation sites, we found that only four reports contained a ledger of transactions. Without a ledger of transactions, the Department cannot determine whether sponsors have properly accounted for their credits.

In addition, the *Federal Guidance for the Establishment, Use and Operation of Mitigation Banks*<sup>2</sup> encourages the members of the Mitigation Bank Review Team (MBRT) to conduct regular (e.g., annual) on-site inspections, as appropriate, to monitor performance. Members of the MBRT try to meet at least once a year to discuss performance, and according to the Permits/Mitigation Program Manager, they conduct a five-year review of each site. However, the Department was neither aware of nor had any documentation of these reviews. Also, the Department has not conducted its own on-site inspections of the mitigation bank and areas. Department staff has visited sites on an as-needed basis, along with other members of the MBRT, but these visits are not documented. The Department needs a system in place that notifies appropriate staff when annual reports are due, or Department staff should make an effort to obtain the reports themselves. Also, the Department should have a written policy in place regarding conducting on-site inspections of the bank and areas.

**Recommendation 7:** The Department of Natural Resources should develop and implement formal written policies and procedures requiring the annual review of performance reports prepared by sponsors of mitigation banks and areas.

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<sup>2</sup> *Federal Register*: 11/28/95, Volume 60, No. 228, Pages 58605-58614.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

**Recommendation 8:** The Department of Natural Resources should develop and implement formal written policies and procedures requiring the periodic inspection of mitigation banks and areas, and/or the review of documented inspections conducted by the other members of the Mitigation Bank Review Team, to evaluate the banks' and areas' achievement of ecological success.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

**Recommendation 9:** The Department of Natural Resources should draft and seek to implement state regulations governing the use, operation, maintenance, and monitoring of mitigation areas, as required by R.S. 49:214.27(A).

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

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## **Proactive Approach to Use of Mitigation Contributions Could Increase the Department's Ability to Replace Lost Ecological Values**


State law and regulations require that contributions made to the state and local trust funds as compensatory mitigation must be used to implement specific mitigation projects. In implementing these projects, the Department of Natural Resources must consider the recommendations of the various regulatory and resource agencies involved with mitigation, but is not required to fulfill these recommendations. However, the Department has committed to each of these agencies to reach a consensus when deciding which mitigation projects to implement. This decision-making process has caused delays in developing and implementing suitable projects. As such, neither the Department nor the St. James Parish local coastal program has constructed any mitigation projects using the contributions that have been collected for over ten years. Therefore, the Department cannot ensure that the ecological values lost from permitted activities will be replaced.

LAC 43:I.724(I)(21) requires the Department to implement specific wetland creation, restoration, protection, and/or enhancement measures using monies in the Wetlands Conservation and Restoration Fund ("the state trust fund"). According to the Department's accounting records, contributions for mitigation have been accumulating in the state trust fund since fiscal year 1992 and now total \$1,388,668. However, the Department has not yet constructed any mitigation projects using these contributions, but has made significant progress over the last few years in developing suitable projects.

Also, the St. James Parish Code of Ordinances [18-142(5)(c)] requires that monetary contributions to the local trust fund as compensatory mitigation must be dedicated to a specific project(s) that is planned and approved. However, the St. James Parish local coastal program

has not yet used the monies in its trust fund, which has accumulated a balance of \$4,558 since September 2001. The program administrator said that difficulties in obtaining approval from the Department and all other relevant agencies have caused delays in the development and implementation of any mitigation projects.

Department staff said that initially the Department, along with the various regulatory and resource agencies involved with mitigation--primarily the Louisiana Department of Wildlife and Fisheries, the National Marine Fisheries Services, the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service--planned to use the contributions in the state trust fund to develop and implement mitigation projects in the same habitat type and in the same hydrologic basin where the damages occurred. However, after several years of planning, the agencies realized that the costs of these projects exceeded the balance of mitigation contributions. Therefore, the agencies began to focus on other projects that would be more cost effective and identified the following projects:

- The Department has dedicated approximately \$360,000 in mitigation contributions to continue a shoreline stabilization project located at Lake Salvador in St. Charles Parish that began under the National Marine Fisheries Services. The project involves creating rock barriers to control erosion of fresh and intermediate marshes. The Coastal Restoration Division has designed the project and is in the process of obtaining the required permits for construction. Construction is expected to begin by mid-2004.
- 
- Figure 10: Shoreline stabilization project at Lake Salvador.**
- The Department was negotiating with the Louisiana Department of Wildlife and Fisheries' Rockefeller Refuge to purchase credits from the refuge for the creation of brackish and saline marshes. The refuge would have used the funds to fill eroded areas with dredge material. However, the monetary value of the credits associated with the project was \$300,000, while the cost of the project was estimated at over \$1 million. The Department decided that the cost of this project was too high (\$20,000 per acre), and began considering other options. The Department is now investigating the feasibility of constructing a project at Point au Fer in Terrebonne Parish that involves converting open water to brackish and saline marshes. The project is estimated to cost about \$936,000 (\$13,000 per acre), but the Department has only \$411,000 available in mitigation contributions for brackish/saline marsh projects. Therefore, the Department will probably supplement the cost of the project with other funds.
  - Following the solicitation of public bids, the Department has recently approved contracts with the Bayou Pelton mitigation area to allow the Department to purchase 15 cypress swamp credits and 40 bottomland hardwoods credits for a total of \$678,755. The agreement also allows the Department to purchase additional credits

on an as-needed basis to sell to permit applicants whose projects are too small to purchase credits themselves. This aspect of the contracts should help the Department avoid accumulating significant monies for mitigation in the Coastal Wetlands and Restoration Fund, according to Department staff.

- The Department is also considering the possibility of constructing small dredge projects. However, the Department has had difficulty finding suitable locations.

Because of the rapid wetlands loss that our state is experiencing, it is urgent that the Department take a more proactive approach to using the mitigation contributions. The Department should improve its decision-making process for developing mitigation projects so that the projects are implemented in a timely manner. In doing so, the Department may not always be able to reach a consensus among the relevant agencies when deciding which mitigation projects to implement. However, if the Department continues to allow the monies in the state and local trust funds to remain idle, the Department cannot be certain that the ecological values projected to be gained from mitigation will be realized. Therefore, the Department cannot ensure that it has met state and federal legislative intent of balancing restoration with economic development in the coastal zone or that it has achieved the goals of the Louisiana Coastal Wetlands Conservation Plan.

**Recommendation 10:** The Department of Natural Resources should streamline its decision-making process to develop and implement, in a timely manner, mitigation projects using the monies in the state and local trust funds.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

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## **Alternate Use for Mitigation Contributions May Increase the Department's Ability to Offset Wetland Losses**

The Department of Natural Resources has had difficulty in identifying suitable mitigation projects partly because of a lack of sufficient funds. According to Department staff, the formula used to calculate the amount of each contribution, which is regulated by LAC 43:I.724(I)(3), does not result in sufficient funds to adequately offset the costs of mitigation. The Department may experience even greater difficulty in constructing mitigation projects because of a decrease in revenue. Act 962 of the 1999 Regular Legislative Session requires that contributions to the state trust fund for compensatory mitigation can be made only if a permittee is unable to implement an individual mitigation project or purchase credits from a mitigation bank or area. As a result, the rate at which contributions are made to the state trust fund has and will continue to decline.

The Department may be able to use the mitigation contributions to fund, in whole or in part, restoration projects implemented by the Coastal Restoration Division. According to the Coastal Management Division Administrator, that portion of a project funded by the contributions must be identified separately to account for the expenditure of mitigation funds,

such as with the Lake Salvador project. This project is being funded by several different sources, all of which have been identified separately.

Unless the Department actively develops and implements projects using the mitigation contributions, it cannot be certain that the ecological values projected to be gained from mitigation will be realized. Therefore, the Department cannot ensure that it has met state and federal legislative intent of balancing restoration with economic development in the coastal zone or that it has achieved the goals of the Louisiana Coastal Wetlands Conservation Plan.

**Recommendation 11:** The Department of Natural Resources should draft and seek to implement state regulations revising the formula for calculating the amount of contributions into the Wetlands Conservation and Restoration Fund for mitigation to provide for adequate funds to offset the ecological losses caused by permitted activities.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

**Recommendation 12:** The Department of Natural Resources should consider using the contributions made to the Wetlands Conservation and Restoration Fund for mitigation to fund, in whole or in part, restoration projects developed and implemented by the Coastal Restoration Division.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

**Matter for Legislative Consideration 3:** The legislature should consider amending R.S. 49:214.42 to authorize the Department of Natural Resources to use the contributions made to the Wetlands Conservation and Restoration Fund for mitigation to fund, in whole or in part, restoration projects developed and implemented by the Coastal Restoration Division.

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## **Permitted Activities May Not Be Adversely Impacting Restoration Projects**

State and federal laws provide for a balance between restoration and economic development in the coastal zone. As such, the Department of Natural Resources coordinates its coastal management responsibilities with its coastal restoration responsibilities when permitted activities are located near restoration projects. Therefore, the Department appears to be providing reasonable assurance that permitted activities do not adversely impact restoration projects.

The federal Coastal Zone Management Act of 1972 provides for protecting, restoring, and responsibly developing the nation's important and diverse coastal communities and resources. The act also encourages states to develop and implement management programs to achieve the wise use of the land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic, and esthetic values as well as the needs for compatible economic development [16 USCS 1452(2)].



Also, R.S. 49:214.22(5) provides for the development and implementation of a coastal resources management program which is based on the consideration of our resources, the environment, the needs of the people, and the needs of state and local governments. The Coastal Management Division of the Department of Natural Resources is responsible for implementing our state's coastal zone management program, while the Coastal Restoration Division performs those functions relating to the conservation, restoration, and enhancement of our state's wetland resources [R.S. 36:358(B)(2)].

During the permit process, Coastal Management Division staff determines whether proposed activities that are located near restoration projects could adversely impact the restoration projects and/or surrounding areas. If the staff determines that adverse impacts are possible, the staff requests that the Coastal Restoration Division staff review the permit application for consistency with the restoration projects. If the Coastal Restoration Division staff objects to the proposed activity, staff from both divisions work with the permit applicant to make modifications to the proposed activity.

During our review of permit files for activities located near restoration projects, we found that only one activity required and received review from the Coastal Restoration Division staff. The remaining files did not require review because of one or more of the following reasons:

- A coastal use permit was not required for the activity.
- The application was for a "statement of views" rather than a coastal use permit.
- The activity did not adversely impact any restoration projects.
- The beneficial uses of the activity outweighed the adverse impacts.

# **Completeness and Accuracy of Performance Data**

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## **Do the Department of Natural Resources' Louisiana Coastal Resources Program performance data present a complete and accurate evaluation of state wetland mitigation policy?**

Although the Department of Natural Resources' Louisiana Coastal Resources Program performance indicators are valid, they are not always clearly portrayed and do not always contain complete data. Also, the indicator values were not always calculated consistently. The Department lacks sufficient management controls to ensure that the performance indicators provide a clear view of progress toward their objective and that the indicator values are based on accurate and reliable data. Therefore, the performance data do not present a complete and accurate evaluation of state wetland mitigation policy.

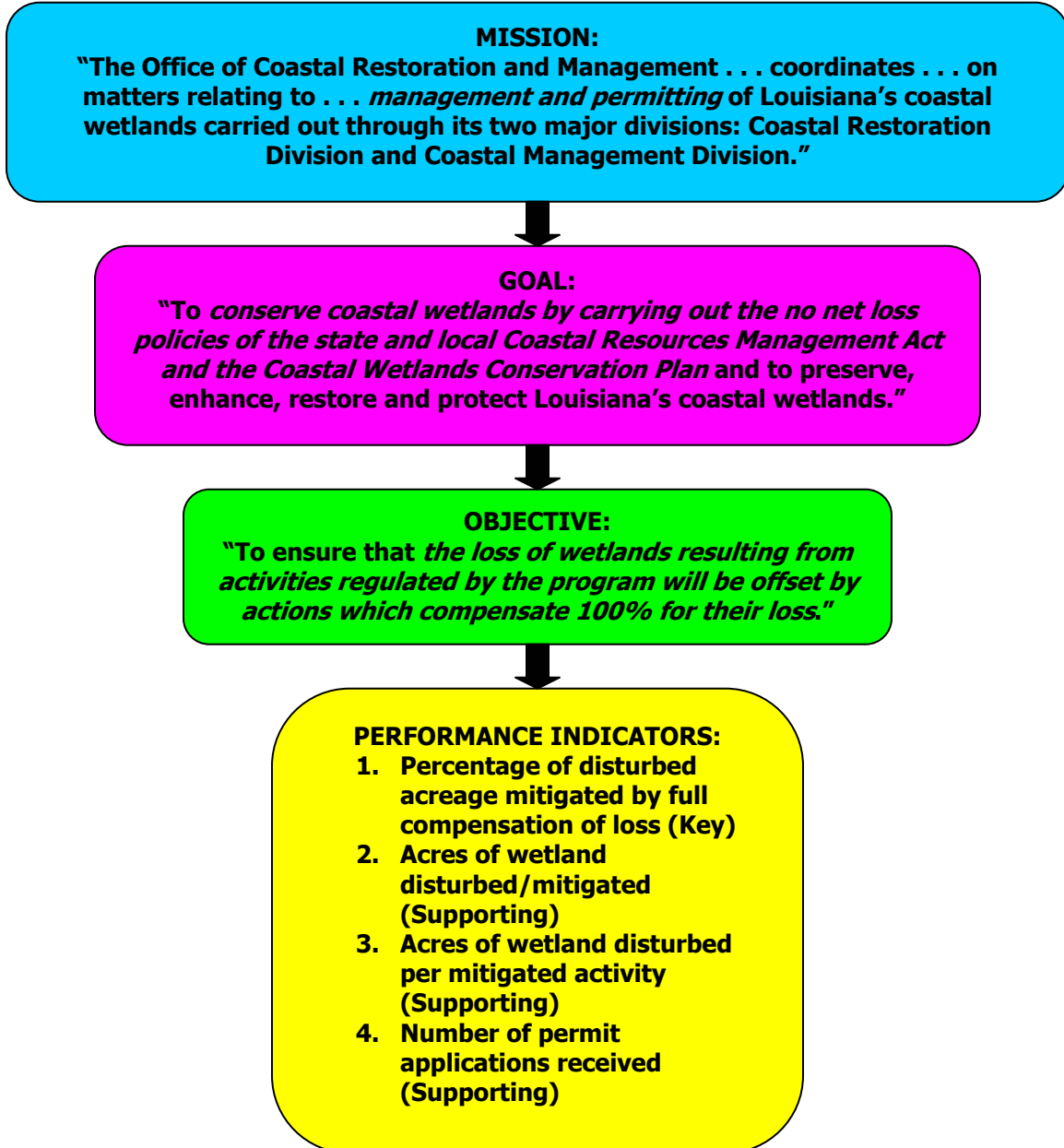
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## **Performance Indicators Are Suitable for Their Intended Use**

Factors used to gauge the validity of a performance indicator include whether it is relevant to the missions, goals, and objectives of the program and whether it can be linked to a major function of the program. Accordingly, we determined that the Louisiana Coastal Resources Program performance indicators are valid since they represent the program's permitting and mitigation functions. Also, Exhibit 6 on the following page illustrates that the performance indicators directly relate to the program's mission, goal, and objective. Therefore, the indicators are suitable for their intended use.

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**Exhibit 6****Louisiana Coastal Resources Program Performance Data  
Fiscal Year 2003**

**Source:** Prepared by legislative auditor's staff using information provided by the Department of Natural Resources.

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## Improvements in Presentation and Consistency of Performance Indicators Could Increase Their Value

The state's management manual suggests that valuable performance indicators are clear, simple, and based on credible data. However, the Louisiana Coastal Resources Program performance indicators are not always clearly portrayed, and the data used to calculate the indicator values are not always complete. Also, the Department lacks sufficient management controls to ensure that indicator values are calculated in a consistent manner and reviewed for accuracy. As a result, the program's performance indicators do not present a complete and accurate evaluation of state wetland mitigation policy.

**Unclear Performance Indicators.** According to *Manageware: A Practical Guide to Managing for Results*, the state's management manual for the performance-based budgeting process, performance indicators should be unambiguous and easily understood. However, the key performance indicator and two supporting indicators could be subject to misinterpretation because they are not clearly portrayed. These indicators appear to represent actual results occurring during the fiscal year; however, we found that the data used to calculate the indicator values are based on projected results. Wetland losses and gains are projected during the permitting and mitigation processes and are reported when both the permitted activity and its associated mitigation have been authorized. However, permittees are allowed two years to initiate a project, and construction could take as long as five years. Therefore, the losses may not occur until seven years after they were reported or may not occur at all if the project is cancelled. Also, mitigation usually does not occur until after the permitted activity has been completed. Therefore, the performance indicators portray what could happen at some future time, but not what actually happened during the fiscal year.

**Incomplete Data.** According to the state's management manual, credible performance indicators are based on accurate data. However, the key performance indicator and two supporting indicators do not include the wetland losses and gains for permits authorized by the local coastal programs. Department staff said that they were unsure why these data are not included, but cited difficulties in obtaining timely information from the local coastal programs as a possible reason. The Department's contract with each local government for the implementation of their local coastal programs requires only that the programs submit permitting and mitigation information at the end of December and June for inclusion in the Louisiana Coastal Wetlands Conservation Plan report. Using only the data for the permits authorized by the Department, the performance indicator values appear to be accurate. However, we cannot determine whether and to what extent these values would change if the local coastal program data were included in the calculations.

**Inconsistent Calculations.** In addition to being incomplete, the performance indicator values were not always calculated in a consistent manner. Credible performance indicators are based on reliable data, according to the state's management manual. However, the values for the key performance indicator (one of the four) were calculated inconsistently for three of the four quarters during fiscal year 2003. Errors in the calculation of these values were not detected during the review process. As a result, the indicator values were under-reported in the Louisiana Performance Accountability System (LaPAS) by 3%, 9%, and 10% for the first three quarters, respectively, as can be seen in Exhibit 7 on the following page. These inaccuracies occurred because the Department does not have sufficient policies and procedures in place to ensure that performance indicator values are calculated consistently and reviewed for accuracy.

<b>Exhibit 7</b>								
<b>Evaluation of Louisiana Coastal Resources Program Performance Indicator Values Fiscal Year 2003</b>								
<b>Performance Indicator</b>	<b>First Quarter</b>		<b>Second Quarter</b>		<b>Third Quarter</b>		<b>Fourth Quarter</b>	
	<b>Value Reported in LaPAS</b>	<b>Value Calculated by Auditor</b>	<b>Value Reported in LaPAS</b>	<b>Value Calculated by Auditor</b>	<b>Value Reported in LaPAS</b>	<b>Value Calculated by Auditor</b>	<b>Value Reported in LaPAS</b>	<b>Value Calculated by Auditor</b>
1. Percentage of disturbed acreage mitigated by full compensation of loss (Key)	115.88%	119%	105%	114%	100%	110%	102.6%	103%
2. Acres of wetland disturbed/mitigated (Supporting)	*	N/A	166	166	*	N/A	322	322
3. Acres of wetland disturbed per mitigated activity (Supporting)	*	N/A	1.9	1.9	*	N/A	1.65	1.65
4. Number of permit applications received (Supporting)	*	N/A	953	953	*	N/A	1,950	1,950
<b>Note:</b> *Supporting indicator values are not reported in the first and third quarters.								
<b>Source:</b> Prepared by legislative auditor's staff using information provided by the Department of Natural Resources and data obtained from LaPAS.								

**Recommendation 13:** The Department of Natural Resources should revise the Louisiana Coastal Resources Program performance indicators #1 through #3 to clarify that the indicators represent projected, rather than actual, results.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)

**Recommendation 14:** The Department of Natural Resources should revise the local coastal program contracts to require that the programs submit permitting and mitigation information at least quarterly to be included in the calculation of the Louisiana Coastal Resources Program performance indicator values.

**Management's Response:** The Department's management agrees with this recommendation and indicates that it has included provisions in the contracts with local coastal programs to require monthly reporting of permit and mitigation data. (See Appendix E for the Department's full response.)

**Recommendation 15:** The Department of Natural Resources should enter the local coastal program data in its coastal use permit database and include these data in the calculation of the Louisiana Coastal Resources Program performance indicators #1 through #3.

**Management's Response:** The Department's management agrees with this recommendation and indicates that it will modify the performance measures to include local permit data. (See Appendix E for the Department's full response.)

**Recommendation 16:** The Department of Natural Resources should develop and implement formal written policies and procedures requiring that the Louisiana Coastal Resources Program performance indicator values are calculated in a consistent manner and are reviewed for accuracy to ensure continuity in the performance indicator process.

**Management's Response:** The Department's management agrees with this recommendation. (See Appendix E for the Department's full response.)



# Appendix A

## Scope and Methodology



# Appendix A

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**Audit Scope and Methodology.** We conducted this performance audit in accordance with generally accepted government auditing standards as promulgated by the Comptroller General of the United States. We focused our work on the Department of Natural Resources' monitoring of individual mitigation projects that were permitted during fiscal years 1991 through 2000, as well as the Department's monitoring of the mitigation bank and areas during fiscal year 2003. We also reviewed the Department's enforcement files that were opened during fiscal years 2001 through 2003. In addition, we examined the use of contributions to the Wetlands Conservation and Restoration Fund and the St. James Parish trust fund for mitigation in implementing state mitigation projects. Furthermore, we evaluated the Department's performance data pertaining to the Louisiana Coastal Resources Program for fiscal year 2003.

**Determining the effectiveness of the Department's management and oversight of the Louisiana Coastal Resources Program.** Using a list of all Coastal Use Permits requiring compensatory mitigation that were issued during fiscal years 1991 through 2000, we used specialized audit software to randomly select a judgmental sample of 37 permits for which the permittees chose to implement individual mitigation projects to fulfill their compensatory mitigation obligations. We reviewed the files of these 37 permits and consulted with Department staff to determine whether the Department provided effective monitoring of these activities to ensure that successful mitigation had been achieved. In making this determination, we considered the following factors:

- Whether the mitigation plans included monitoring requirements and success criteria
- Whether the Department monitored the mitigation activities upon completion
- Whether the Department evaluated the success of the mitigation activities
- Whether the Department's monitoring database included all necessary information to conduct routine monitoring of mitigation activities

We also reviewed the Department's enforcement database containing potential violations that occurred during fiscal years 2001 through 2003 to determine whether the Department's enforcement actions are deterring violations of the Louisiana Coastal Resources Program. We sorted the list of potential violations by violator name to identify any repeat offenders. We then compared the list of repeat offenders to the Department's permit database to determine whether the Department had issued coastal use permits to these offenders while conducting an enforcement investigation. We consulted with Department staff to determine whether the Department had required a surety bond for these permits.

In addition, we reviewed copies of mitigation banking agreements and performance reports maintained by the Department of Natural Resources to determine whether the Department monitored the mitigation bank and areas to ensure that the sites were operating in accordance with their banking agreements. Furthermore, we reviewed the list of contributions made to the Wetlands Conservation and Restoration Trust Fund and the St. James Parish trust fund for mitigation to calculate the total amount of funds available to the Department for

implementing state mitigation projects. We consulted with Department staff to determine whether the Department had implemented any such projects.

**Determining the completeness and accuracy of performance data.** We reviewed the Louisiana Coastal Resources Program performance data to determine whether the indicators were valid (i.e., suitable for their intended use). In making this determination, we considered the following factors:

- Whether the performance indicators were linked to a major function of the program
- Whether the performance indicators were relevant to the missions, goals, and objectives of the program
- Whether the mission was comparable and reflective of the program's legal authority

We also obtained from the Louisiana Performance Accountability System (LaPAS) the indicator values that the Department reported during fiscal year 2003. Using a judgmental sample of 100 permit files, we compared the information in the permit files to the Department's coastal use permit database to verify that the information in the database was accurate and complete. Also, using the Department's source documentation for calculating indicator values, we re-calculated the values for each quarter in fiscal year 2003 to determine whether the values were calculated consistently and reported correctly in LaPAS.

## Appendix B

### General Permits Issued by the Coastal Management Division

# Appendix B

<b>General Permits Issued by the Coastal Management Division</b>		
<b>Permit Type</b>	<b>Purpose</b>	<b>Notification Period</b>
GP 1 through 4	Expired and replaced by GP 5 through 7 (oil and gas activities)	N/A
GP 5	Ring levees and board roads	5 calendar days
GP 6	Flowlines for oil and gas activities	None
GP 7	Parallel slip for oil and gas exploration	5 calendar days
GP 8	Sediment fences	5 calendar days
GP 9	Expired and replaced by GP 18	N/A
GP 10	Maintenance dredging for oil and gas activities	15 calendar days
GP 11	Mitigation projects for permitted activities	10 calendar days
GP 12	Field-wide maintenance dredging	None
GP 13	Maintenance dredging for the management of surface water flow	None
GP 14	Installation and maintenance of cables and pipelines for utility service	None
GP 15	Maintenance dredging of commercial and private channels and slips	None
GP 16	Dredging of new channels in open water areas	None
GP 17	Small dredge project	None
GP 18	Home site preparation	5 calendar days
GP 19	Not used	N/A

**General Permits Issued by the  
Coastal Management Division  
(Continued)**

<b>Permit Type</b>	<b>Purpose</b>	<b>Notification Period</b>
GP 20	Oil field site restoration by the Department of Natural Resources (for orphan wells project)	5 calendar days
GP 21	Foundation pads for drilling rigs	5 calendar days
GP 22	Seismic survey operations	5 calendar days
GP 23	Maintenance of existing trenasses	5 calendar days

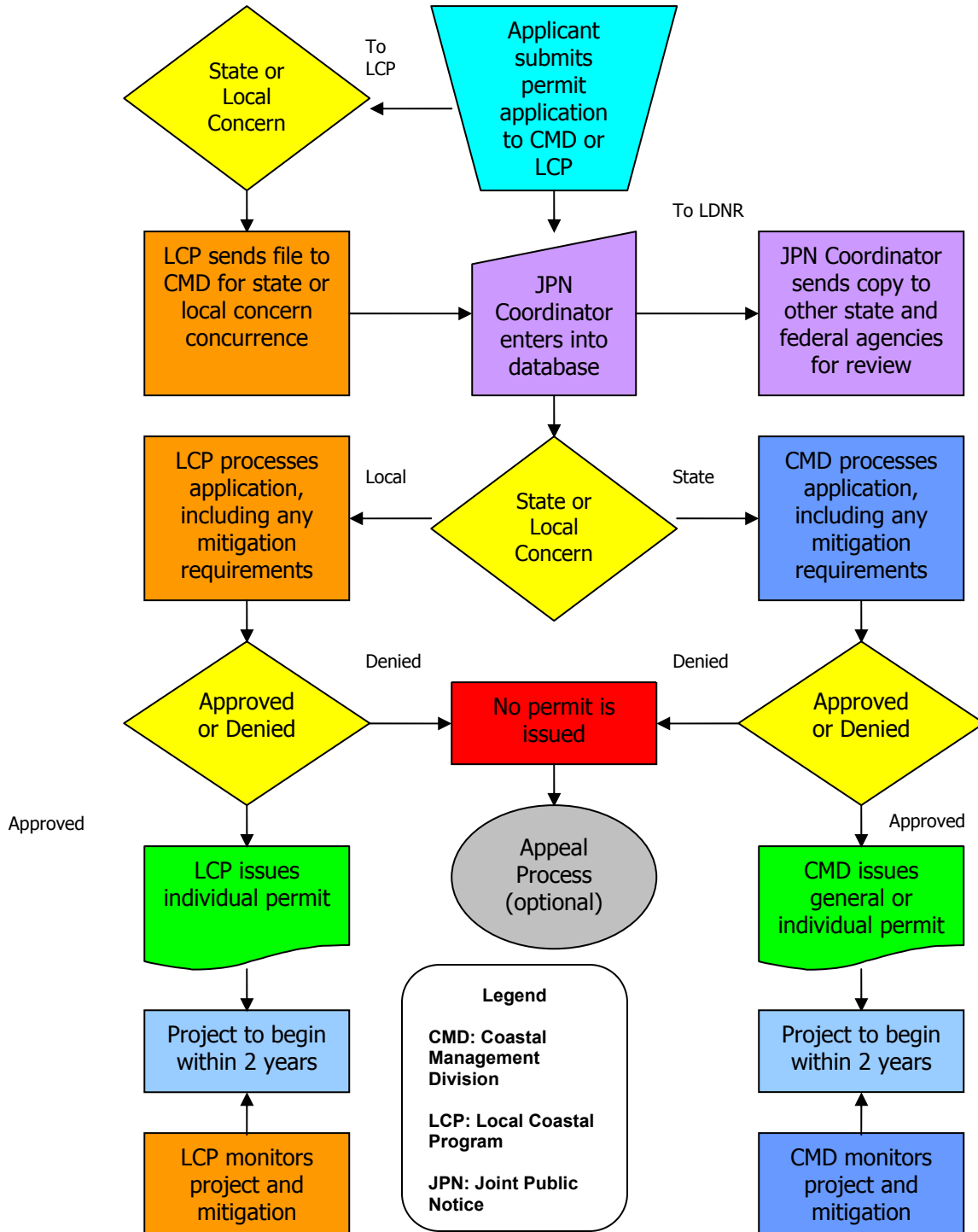
**Source:** Prepared by legislative auditor's staff using information provided by the Department of Natural Resources.

# Appendix C

## Coastal Use Permit Application Process

# Appendix C

## Coastal Use Permit Application Process



Source: Prepared by legislative auditor's staff using information provided by the Department of Natural Resources.





# Appendix D

## Approved Mitigation Bank and Areas

# Appendix D

Approved Mitigation Bank and Areas						
Location	Name	Date Approved	Habitat Type	Credits Approved for Sale	Credits Sold	Credit Balance
Cameron Parish Calcasieu Basin	Miami Corporation Terracing Project <sup>1</sup>	August 2, 2001	Intermediate marsh	47.14	Not available <sup>2</sup>	Not available <sup>2</sup>
Livingston Parish Pontchartrain Basin	Highpoint Wetlands Mitigation Area	January 14, 2002	Bottomland hardwoods	48.096	48.096	0
			Cypress-tupelo swamp	108.627	Not available <sup>3</sup>	Not available <sup>3</sup>
St. Charles Parish Barataria Basin	Riverside Coastal Mitigation Lands, LLC	September 10, 1999	Bottomland hardwoods	165.59	Not available <sup>4</sup>	Not available <sup>4</sup>
			Cypress-tupelo swamp	48.62	Not available <sup>4</sup>	Not available <sup>4</sup>
St. John the Baptist Parish Pontchartrain Basin	Sawgrass Bayou Mitigation Area	December 18, 2002	Cypress-tupelo swamp	Not available <sup>3</sup>	Not available <sup>2</sup>	Not available <sup>2</sup>
St. Mary Parish Teche/Vermilion Basin	Bayou Teche Mitigation Area	January 6, 1998	Bottomland hardwoods	94.38	Not available <sup>4</sup>	Not available <sup>3</sup>
			Cypress-tupelo swamp	87.57	Not available <sup>4</sup>	Not available <sup>4</sup>

<sup>1</sup> This mitigation area operates on a coastal use permit rather than a memorandum of agreement, but it does have state and federal approval.

<sup>2</sup> The bank sponsor reported the number of linear feet or acres sold rather than the number of average annual habitat units sold.

<sup>3</sup> The average annual habitat units were not calculated based on the total acreage of the mitigation area.

<sup>4</sup> The bank sponsor did not provide this information in the performance report for fiscal year 2003.

<b>Approved Mitigation Bank and Areas (Continued)</b>						
<b>Location</b>	<b>Name</b>	<b>Date Approved</b>	<b>Habitat Type</b>	<b>Credits Approved for Sale</b>	<b>Credits Sold</b>	<b>Credit Balance</b>
Terrebonne Parish Terrebonne Basin	Apache LaTerre Mitigation Bank <sup>5</sup>	December 20, 1983	Fresh marsh Intermediate marsh Brackish marsh Submerged aquatics Scrub/shrub	228,254 <sup>6</sup>	Not available <sup>4</sup>	Not available <sup>4</sup>
Terrebonne Parish Terrebonne Basin	Louisiana Land and Exploration Co. Bank Stabilization Project <sup>7</sup>	September 17, 1996	Intermediate marsh	Not available <sup>8</sup>	51.22	Not available <sup>4</sup>
Terrebonne Parish Terrebonne Basin	Bayou Pelton Mitigation Area	July 16, 2002	Bottomland hardwoods	82.17	Not available <sup>9</sup>	Not available <sup>9</sup>
			Cypress-tupelo swamp	26.69	Not available <sup>9</sup>	Not available <sup>9</sup>
<b>Source:</b> Prepared by legislative auditor's staff using information provided by the Department of Natural Resources.						

<sup>5</sup> This mitigation bank is used as compensatory mitigation for permitted activities located only in the Terrebonne Basin.

<sup>6</sup> The average annual habitat units were not separated according to habitat type in the banking agreement.

<sup>7</sup> This mitigation area operates on a coastal use permit rather than a memorandum of agreement, and it does not have federal approval. Therefore, it cannot be used for mitigation proposals that require federal approval.

<sup>8</sup> This information was not included in the coastal use permit that established the mitigation area.

<sup>9</sup> The Department did not have a copy of the performance report for this mitigation area on file.

# Appendix E

## Department of Natural Resources' Response

# State of Louisiana



KATHLEEN BABINEAUX BLANCO  
GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
February 9, 2004

Grover C. Austin, CPA  
First Assistant Legislative Auditor  
Office of Legislative Auditor  
State of Louisiana  
1600 North Third Street  
Baton Rouge, Louisiana 70804-9397

Dear Mr. Austin:

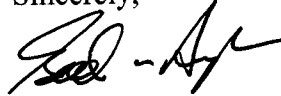
The Department of Natural Resources has reviewed the revised draft of your office's performance audit report on the Louisiana Coastal Resources Program (LCRP). The Department, for the most part, concurs with the recommendations contained in that report. As requested, we have included the enclosed completed checklist.

As pointed out in the revised draft report, the mitigation of activities authorized by local coastal programs were not reported as an outcome of the LCRP. In the future, that mitigation will be reported as a separate category; that will help to ensure consistency and continuity in our calculations. Please note that during the Department's Strategic Planning process, executive and administrative staff determined that local program performance measures would not be included. Although the Department considered the concept of including local coastal program performance measures, it later dropped them, in the interest of simplification. We viewed the local program permit function as being a local program activity, so we did not include local permit decisions in the Department's permit and mitigation performance measures. We will modify our Coastal Management Division's performance measures to include local permit data. We have included provisions in contracts with local coastal programs to require monthly reporting of permit and mitigation data.

The Department will seek legal advice regarding consideration of a permit applicant's history of compliance in the determination of whether to issue a coastal use permit. The Department uses the assessment of fines as one of several tools for achieving our program goal of no net loss of coastal wetlands, and compliance with coastal use regulations. Finally, we wish to point out that the Department has implemented extensive regulations governing various aspects of the LCRP.

In closing, we greatly appreciate the professional efforts of your office in the preparation of this report. We are proud that our performance information is valid and relevant to the LCRP's mission, goals and objectives, and demonstrates the success of that program, and we feel that the report's recommendations will be useful in our administration of the LCRP.

Sincerely,

A handwritten signature in black ink, appearing to read "Gerry Duszynski". The signature is stylized and written in a cursive-like font.

Gerry Duszynski  
Acting Assistant Secretary-  
Office of Coastal Restoration  
and Management

Enclosure

cc: Randy Hanchey, Acting Secretary, Department of Natural Resources  
Bob Harper, Undersecretary, Department of Natural Resources

# Attachment 1

## Glossary

# Glossary

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**After-the-Fact Permit** A coastal use permit which is issued after the commencement of a use. Such a permit may only be issued after all legal issues resulting from the commencement of a use without a coastal use permit have been resolved.

**Average Annual Habitat Unit (AAHU)** A unit of measure of ecological value.

**Bank Sponsor** Any public or private entity responsible for establishing and, in most circumstances, operating a mitigation bank.

**Barrier Island** A long, relatively narrow island running parallel to the mainland, built up by the action of waves and currents and serving to protect the coast from erosion by surf and tidal surges.

**Bottomland Hardwoods** Deciduous forested wetlands, made up of different species of gum and oak and bald cypress, which have the ability to survive in areas that are either seasonally flooded or covered with water much of the year. Bottomland hardwoods serve a critical role in the watershed by reducing the risk and severity of flooding to downstream communities by providing areas to store floodwater. These wetlands also improve water quality by filtering and flushing nutrients, processing organic wastes, and reducing sediment before it reaches open water.

**Coastal Use Permit** The basic regulatory tool used by the Coastal Management Division for activities that may increase the loss of wetlands and aquatic resources.

**Coastal Waters** Those bays, lakes, inlets, estuaries, rivers, bayous, and other bodies of water within the boundaries of the coastal zone which have measurable seawater content (under normal weather conditions over a period of years).

**Coastal Zone** The coastal waters and adjacent shorelands within the boundaries established in R.S. 49:214.24.

**Compensatory Mitigation** Replacement, substitution, enhancement, or protection of ecological values to offset anticipated losses of those values caused by a permitted activity.

**Creation** Development of a wetland on an upland or deepwater site where a wetland did not previously exist.

**Credit** A unit of measure representing the number of wetland acres restored, created, enhanced, or preserved through compensatory mitigation.

**Ecological Value** The ability of an area to support vegetation and fish and wildlife populations.

**Enhancement** Intensification or improvement of specific functions or to change the growth stage or composition of the vegetation present.



**Habitat** The natural environment where a plant or animal population lives.

**Habitat Type** The general wetland vegetative communities which exist in the Louisiana coastal zone, including fresh marsh, intermediate marsh, brackish marsh, saline marsh, fresh swamp, and bottomland hardwoods.

**Hydrologic Basin** One of the nine general drainage areas within the Louisiana coastal zone as delineated on pages A-2 and A-3 of the Louisiana Coastal Wetlands Conservation and Restoration Plan, April 1990.

**Local Coastal Program** A local coastal management program which has been and continues to be approved by the Department secretary.

**Marshes** Wetlands frequently or continually inundated with water, characterized by emergent soft-stemmed vegetation adapted to saturated soil conditions, such as cattails, reeds, and cordgrass. Marshes recharge groundwater supplies and moderate streamflow by providing water to streams. This is an especially important function during periods of drought. The presence of marshes in a watershed helps to reduce damage caused by floods by slowing and storing flood water. Also, marsh vegetation and microorganisms use excess nutrients that can otherwise pollute surface water, such as nitrogen and phosphorus from fertilizer, for growth. Marshes can be freshwater, intermediate, brackish (somewhat salty), or saline (salty).

**Mitigation** All actions taken by a permittee to avoid, minimize, restore, and compensate for ecological values lost due to a permitted activity.

**Mitigation Bank** An area identified, with specific measures implemented to create, restore, protect, and/or enhance wetlands, for the purpose of producing ecological values, measured as mitigation credits. Mitigation credits may be donated, sold, traded, or otherwise used for the purpose of compensating for the ecological values lost due to a permitted activity.

**Preservation** Removal of a threat to or prevent the decline of wetland conditions by an action in or near a wetland.

**Residential Coastal Use** Any coastal use associated with the construction or modification of one single-family, duplex, or triplex residence or camp. Includes the construction or modification to any outbuilding, bulkhead, pier, or appurtenance on a lot on which there exists a single-family, duplex, or triplex residence or camp or on a water body which is immediately adjacent to such lot.

**Restoration** Return of natural or historic functions to a former wetland (re-establishment) or to repair natural or historic functions of a degraded wetland (rehabilitation).

**Scrub/Shrub** Areas dominated by woody vegetation less than 20 feet tall.

**Submerged Aquatics** Wetlands and deepwater habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years.

**Swamps** Any wetland dominated by woody plants. Swamps are characterized by saturated soils during the growing season and standing water during certain times of the year. The highly organic soils of swamps form a thick, black, nutrient-rich environment for the growth of water-tolerant trees such as cypress and tupelo. Swamps serve vital roles in flood protection and nutrient removal.

**Wetland** An open water area or an area that is inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

