



ENVIRONMENTAL
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State Wetland Protection

Status, Trends, & Model Approaches

*A 50-state study by the
Environmental Law Institute*

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U.S. Environmental Protection Agency*

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Appendix: State Profiles

Louisiana

I. Overview

The State of Louisiana contains approximately 15 percent of the freshwater wetlands and 40 percent of the salt marshes that remain in the contiguous United States.¹ In total, Louisiana's wetlands comprise nearly 7.8 million acres and provide habitat for over 5 million waterfowl. Although it has been difficult to measure historic statewide wetland loss, it is estimated that Louisiana currently loses 25 to 35 square miles of coastal wetland area annually to natural processes (e.g., wave energy, subsidence, and sea-level rise) and anthropogenic conversion (e.g., oil and gas production, urban sprawl, and landscape modification). Furthermore, preliminary estimates indicate that Hurricanes Katrina and Rita caused the transformation of 217 square miles of coastal land to open water.² Given current trends, Louisiana is predicted to lose an additional 800,000 acres of wetlands by 2040.³

To address the dramatic loss of coastal land in Louisiana, the Department of Natural Resources (LDNR) - Coastal Restoration Division (CRD) and planning authorities based in the Governor's office administer coastal wetland restoration programs throughout the state. One of Louisiana's restoration programs is funded in part by the federal Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA), which designates approximately \$50 million dollars annually for coastal restoration projects in the state. The Louisiana Department of Environmental Quality administers the state's §401 water quality certification program for all wetlands. Coastal wetlands are also regulated through coastal use permits (CUP) issued by LDNR's Coastal Management Division (CMD) and delegated local authorities.⁴ The Louisiana Department of Wildlife and Fisheries (LDWF) also plays a role in state wetland regulation by commenting on permit and certification applications and conducting non-regulatory activities, such as restoration, and education and outreach.⁵

II. Regulatory Programs

Wetland definitions and delineation

Louisiana defines state waters to include "both the surface and underground waters within the state of Louisiana including all rivers, streams, lakes, groundwaters, and all other water courses and waters within the confines of the state, and all bordering waters and the Gulf of Mexico."⁶

¹ Louisiana Department of Environmental Quality, *Surface Water Assessment Chapter 6: Wetlands Water Quality Assessment*, available at <http://www.deq.louisiana.gov/portal/Portals/0/planning/305b/2004/PART%20III.doc> (last visited Sept. 12, 2007).

² JOHN A. BARRAS, U.S. GEOLOGICAL SURVEY, LAND AREA CHANGE IN COASTAL LOUISIANA AFTER THE 2005 HURRICANES - A SERIES OF THREE MAPS: Open-File Report 06-1274, available at <http://pubs.usgs.gov/of/2006/1274/>.

³ LaCoast, <http://www.lacoast.gov> (last visited Sept. 10, 2007).

⁴ U.S. Army Corps of Engineers, Coastal Use Permit by Louisiana Coastal Management Division, available at http://www.mvn.usace.army.mil/ops/regulatory/permit_submit.htm (last visited Sept. 10, 2007).

⁵ Personal communication with Heather Warner-Finley, Habitat Program Manager, La. Dep't of Wildlife and Fisheries (Oct. 26, 2006).

⁶ LA. REV. STAT. ANN. § 30:2073.

However, for purposes of the Louisiana Pollutant Discharge Elimination System, waters are defined as:

all surface waters within the state of Louisiana and, on the coastline of Louisiana and the Gulf of Mexico, all surface waters extending there from three miles into the Gulf of Mexico...[including] all surface waters which are subject to the ebb and flow of the tide, lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, natural ponds, impoundments of waters within the state of Louisiana otherwise defined as 'waters of the United States' ... and tributaries of all such waters. 'Waters of the state' does not include waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act...⁷

Louisiana Coastal Management Regulations define "wetlands" in the state's coastal zone to include "open water areas or areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions."⁸ However, it should be noted that the Rules and Procedures for Mitigation section of the state's Coastal Management Regulations exclude "fastlands and lands more than five feet above mean sea level which occur within the designated coastal zone of the state."⁹

Louisiana delineates jurisdictional wetlands in accordance with the criteria outlined in the U.S. Army Corps of Engineers' ("Corps") 1987 *Wetlands Delineation Manual*.¹⁰

Wetland-related laws and regulations

In addition to protections offered under §401/404 of the Clean Water Act (CWA), Louisiana protects coastal wetlands under the State and Local Coastal Resources Management Act.¹¹ The Coastal Wetlands Conservation and Restoration Act and the Coastal Protection, Conservation, Restoration and Management Act establish wetlands protection and restoration efforts in Louisiana.

Louisiana State and Local Coastal Resources Management Act.¹² The goal of the State and Local Coastal Resources Management Act is to protect, develop, and where feasible, restore or enhance the resources of Louisiana's coastal zone. The Act, as amended in 1989, establishes the Louisiana Coastal Resources Program (LCRP), which includes a Coastal Use Permit (CUP) program to help ensure the management and reasonable use of resources within the Louisiana Coastal Zone (LCZ). The LCZ is defined by the Act with referral to certain roads and canals. Special areas in the LCZ with unique and valuable characteristics requiring special management procedures may be designated under the Act. Although the CUP program is implemented by the LDNR - CMD's Louisiana Coastal Resources Program, the Act includes a provision allowing

⁷ *Id.*

⁸ LA. ADMIN. CODE tit. 43 § 700.

⁹ LA. REV. STAT. ANN. § 49:214.3

¹⁰ U.S. ARMY CORPS OF ENGINEERS, WETLANDS RESEARCH PROGRAM TECHNICAL REPORT Y-87-1, CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987), available at <http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf>.

¹¹ LA. REV. STAT. ANN. § 49: 214.21 *et seq.*

¹² LA. REV. STAT. ANN. § 49: 214.21 *et seq.*

local governments to assume permitting authority by developing local coastal management programs (LCPs).¹³

CUPs are required for uses of both state and local concern¹⁴ in the LCZ, including but not limited to dredge and fill work, bulkhead construction, shoreline maintenance, and other development projects.¹⁵ A CUP is not required for all activities regulated under §404, but does cover some upland activities that are exempt from §404 permits. Due to Coastal Zone Management Act consistency provisions, a §404 permit cannot be issued for impacts in the LCZ until an applicant receives an approved CUP from the CMD. An online joint permit application is available for CUP and §404 permits, and 60 percent of permit applicants use this system.¹⁶

The CMD rarely denies a permit. Instead, the agency staff work with the federal agencies to negotiate with the permit applicant to complete a successful permit application. The CMD and the Corps' New Orleans District issue joint public notices for CUPs and §404 permits within their jurisdiction. The public is generally allowed a 25-day comment period on these permits. LDEQ, LDWF, and other state and federal agencies also provide comment on CUPs.¹⁷

Local governments may assume coastal permitting authority by developing local coastal management programs (LCPs). Once an LCP has received federal and state approval, the local government is authorized to issue CUPs for coastal uses of local concern.¹⁸ Ten coastal parishes have active LCPs, including: Calcasieu, Cameron, Lafourche, Jefferson, Orleans, Plaquemines, St. Bernard, St. James, St. Tammany, and Terrebonne. Two additional parishes, St. Charles and St. John the Baptist, are currently developing LCPs.¹⁹

Coastal Management Regulations, developed under the Act, include: coastal use guidelines; rules and procedures for the issuance, denial, renewal, modification, suspension, and revocation of CUPs and general CUPs; rules and procedures for mitigation; guidelines for the development, approval, modification, and periodic review of LCPs; guidelines for public hearings related to a proposed action; and procedures for the designation, utilization, and management of special areas.²⁰ The Coastal Use Guidelines include both general provisions applicable to all uses and

¹³ *Id.* § 49: 214.28.

¹⁴ *Id.* § 49:214.25. (Uses of local concern are “those uses which directly and significantly affect coastal waters and are in need of coastal management but are not uses of state concern and which should be regulated primarily at the local level if the local government has an approved program.” Uses of local concern include: privately funded projects which are not uses of state concern; publicly funded projects which are not uses of state concern; maintenance of uses of local concern, jetties or breakwaters, dredge or fill projects not intersecting more than one water body, bulkheads, piers, camps and cattlewalks; and maintenance dredging and private water control structures of less than \$15,000 in cost.”).

¹⁵ *Id.*

¹⁶ Personal communication with Jim Rives, La Coastal Resources Program (Oct. 11, 2006).

¹⁷ *Id.*

¹⁸ LA. REV. STAT. ANN. § 49:214.25.A.2.

¹⁹ Louisiana Coastal Management Division, *Local Coastal Programs*, at <http://dnr.louisiana.gov/crm/coastmgt/interagencyaff/lcp/lcp.asp> (last visited Sept. 12, 2007).

²⁰ LA. ADMIN. CODE tit. 43 §§ 700 – 729.

specific provisions applicable only to certain types of uses within the LCZ.²¹ The guidelines were designed so that development in the LCZ could be accomplished with the greatest benefit and the least amount of damage.

*Louisiana Coastal Wetlands Conservation and Restoration Act*²² & *Louisiana Coastal Protection, Conservation, Restoration and Management Act of 2005*.²³ The Louisiana Coastal Wetlands Conservation and Restoration Act created the Wetlands Conservation and Restoration Authority and Wetlands Conservation and Restoration Fund, which provided revenue from oil and gas for wetland restoration efforts in Louisiana.²⁴ In 2005, the Louisiana Coastal Protection, Conservation, Restoration and Management Act created the Coastal Protection and Restoration Authority (CRPA) and Coastal Protection and Restoration Fund (CRPF). Upon ratification of a constitutional amendment by the voters of Louisiana, the CRPF will provide revenues derived from oil, gas, and mineral activities for coastal wetlands conservation, coastal restoration, hurricane protection, and infrastructure impacted by coastal wetland losses. The 2005 Act also established the Governor's Advisory Commission on Coastal Protection, Restoration and Conservation. The Commission was formed to: advise the governor on the status of the state's coastal protection and restoration programs; provide a forum for cooperation and collaboration among federal, state, and local governmental agencies, conservation organizations, and the private sector; review programs, conditions, trends, and scientific and engineering findings that affect coastal protection, restoration and conservation; and assist in the identification of potential sources of funding for coastal protection, restoration and conservation programs. In addition, the Act established programs and funds for barrier islands, shoreline and coastal pass stabilization, and preservation programs.²⁵

The CPRA, an expanded and restructured version of the previous Wetlands Conservation and Restoration Authority, is charged with developing, implementing, and enforcing a comprehensive coastal protection master plan as well as annual coastal protection plans. A final Comprehensive Coastal Protection Master Plan for Louisiana was released and approved by the Louisiana Legislature in May 2007.²⁶ The CRPA also represents the state's position in policy implementation relative to coastal protection, conservation, and restoration. CPRA is chaired by the Governor's Executive Assistant for Coastal Activities and includes representatives from several other state agencies.²⁷

²¹ LA. ADMIN. CODE tit. 43 § 701 (Specific Uses include: levees, linear facilities, dredged spoil deposition, shoreline modification, surface alterations, hydraulic and sediment transport modifications, disposal of wastes, uses that result in the alteration of waters draining into coastal waters, and oil, gas and other mineral activities).

²² LA. REV. STAT. ANN. § 49:214.1.

²³ LA. REV. STAT. ANN. § 49:213.1.

²⁴ The Wetlands Conservation and Restoration Fund provided revenue from oil and gas for wetland restoration efforts in Louisiana. LA. REV. STAT. ANN. § 49:214.1.

²⁵ LA. REV. STAT. ANN. § 49:213.1.

²⁶ COASTAL PROTECTION AND RESTORATION AUTHORITY OF LOUISIANA, INTEGRATED ECOSYSTEM RESTORATION AND HURRICANE PROTECTION: LOUISIANA'S COMPREHENSIVE MASTER PLAN FOR A SUSTAINABLE COAST (2007), available at <http://www.lacpra.org/assets/docs/cprafinalreport5-2-07.pdf>.

²⁷ Coastal Protection and Restoration Authority of Louisiana, <http://lacpra.org/index.cfm?md=pagebuilder&tmp=home&nid=4&pnid=0&pid=2&fmid=0&catid=0&elid=0> (last visited Sept. 10, 2007).

*Water quality certification.*²⁸ Louisiana's water quality certification regulations, developed under Louisiana's Water Quality Control Law,²⁹ apply to all applications for federal licenses or permits. The regulations include procedures for issuance, modification, and revocation of water quality certifications, including application requirements and public notice requirements.

In Louisiana, five categories of activities require §401 certification. These include: oil and gas activities, commercial projects, private non-profit projects, residential development, and government (municipal) projects. In 2005, LDEQ processed 1,086 certification applications, of which 687 applications required certification.³⁰ LDEQ generally does not deny certification applications; instead the department negotiates with applicants until each permit contains all information necessary for LDEQ staff to approve a permit decision. LDEQ staff rely on a combination of quantitative and qualitative assessment and best professional judgment to make certification decisions. The agency also references the state's water quality management plan to make certification decisions within a basin-by-basin framework. CMD, CRD, LDFW, and other state and federal agencies provide comments to LDEQ on §401 certification applications. LDEQ also issues a joint public notice on §401 certifications with the four local Corps districts.³¹

Following the hurricanes of 2005, the number of applications for water quality certification dropped dramatically from 100 applications in August 2005 to 9 applications in September 2005. The number of applications rebounded steadily over the following few months and is now back to pre-hurricane levels. Prior to the hurricanes, the majority of §401 certification applications related to oil and gas. Following Katrina, there is an increase in residential applications.³²

Organization of state agencies

LDEQ administers the §401 certification program statewide. Wetlands in the coastal zone are regulated by the LDNR-CMD or delegated local governments. Planning authorities based in the Governor's office and the LDNR-CRD implement coastal protection and restoration efforts.

Louisiana Department of Environmental Quality. LDEQ implements the state's §401 certification program, which operates from the headquarters in Baton Rouge. LDEQ employs one full-time equivalent (FTE) that issues §401 certifications, maintains the program's database, and coordinates with the CMD on CUPs and the Corps on §404 permits. Four part-time engineers also work on wetland-related activities.³³ The certification program is funded by §401 application fees and general appropriations. LDEQ also serves on the CPRA and manages wetland-related efforts associated with CWA §319 grants.³⁴

²⁸ LA. ADMIN. CODE tit. 33 § 1501- 1507.

²⁹ LA. REV. STAT. ANN. § 30:2071 *et seq.*

³⁰ Personal communication with Jamie Phillippe, La. Dep't of Env'tl Quality Water Quality Certification Program, (Oct. 12, 2006) Of the 687 applications, 18 were associated with Nationwide Permit #39 (Residential, Commercial, Institutional Developments), 462 were individual permits, and 207 were associated with the state programmatic general permit general category 2. *Id.*

³¹ *Id.*

³² *Id.*

³³ Personal communication with Jamie Phillippe, La. Dep't of Env'tl Quality Water Quality Certification Program, (June 16, 2007)

³⁴ *Id.*

Louisiana Department of Natural Resources. LDNR's Office of Coastal Restoration and Management is responsible for the maintenance and protection of the state's coastal wetlands. LDNR's Coastal Management Division is the regulatory authority for coastal wetlands in Louisiana, while the Coastal Restoration Division and the Coastal Engineering Division are responsible for wetlands protection, restoration, planning, and monitoring efforts. LDNR staff also participate on the CPRA's Integrated Planning Team (IPT), which serves to coordinate the development of the comprehensive coastal protection master plan with local, state and federal agencies. The IPT consists of representatives from the LDNR, Louisiana Department of Transportation and Development (LDOTD), and the New Orleans District of the Corps.

LDNR-CMD's Coastal Resources Program is the regulatory authority for coastal wetlands and issues CUPs under the State and Local Coastal Resources Management Act (local governments also may assume CUP authority over certain uses by developing LCPs).³⁵ The CMD has about 40 full-time equivalents (FTEs), as well as several specialists working on wetland-related activities. Eighteen FTEs, including six field staff, are involved with writing and monitoring CUPs. The program is funded through a variety of mechanisms, including approximately \$2.5 million dollars annually under the federal Coastal Zone Management Program (as well as an in-kind match), CWA §319 funds dedicated to nonpoint source pollution, permit and mitigation fees of about \$600,000 to \$800,000 annually, and grants through the Wetland Conservation and Restoration Fund of approximately \$800,000 a year.³⁶

LDNR's Coastal Restoration Division was created in 1989 by the Louisiana Coastal Wetlands Conservation and Restoration Act.³⁷ The Division is responsible for planning and monitoring projects aimed at creating, protecting and restoring the state's coastal wetlands. The Coastal Engineering Division split from the Coastal Restoration Division in 2003. The Division performs the engineering design, and prepares plans, specifications, and bid packages for coastal restoration projects, serves as technical advisors for the development and review of project designs for other federal projects, and is responsible for the construction administration/inspection and operations/maintenance of all Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) (see *V. Restoration and Partnerships* section, below) and state coastal restoration projects.³⁸

Louisiana Department of Wildlife and Fisheries. LDWF partners with various state and federal agencies and private land owners on wetland management and restoration projects. The agency also owns and manages several coastal wetland refuges and develops and manages CWPPRA-funded projects on these lands. The Department also comments on §404 permits, §401 certifications, and CUPs and serves on the CPRA. In addition, LDWF controls activities on public grounds set aside to provide seed oysters for private oyster lease holders and cultivators. Through this effort, the LDWF is able to influence habitat conservation on over 2 million acres of public grounds.³⁹

³⁵ LA. REV. STAT. ANN. § 49:241.21(H)(1).

³⁶ Rives, *supra* note 16.

³⁷ LA. REV. STAT. ANN. § 49:214 et seq.

³⁸ Louisiana Department of Natural Resources, <http://dnr.louisiana.gov/crm/coastres/coasteng.asp> (last visited Sept. 10, 2007).

³⁹ Email from Heather Finley, Habitat Program Manager, La. Dep't of Wildlife and Fisheries (July 2, 2007).

Nationwide permits

Section 404 nationwide permits (NWP) are reviewed by the LDEQ as the Corps revises them every five years. In 2002, LDNR denied Coastal Zone Consistency to certain NWPs⁴⁰ and conditionally approved others.⁴¹ Conditions applied to coastal zone consistency include: (1) preconstruction notification requirements for proposed activities covered by the NWP within the LCZ or the Louisiana Conservation Plan Boundary; (2) a CUP or other authorization from the CMD for proposed activities in the LCZ; and (3) compensatory mitigation requirements for all wetland losses that occur within the Louisiana Conservation Plan Boundary, regardless of the size of the wetland loss.

Starting in May 2007, LDEQ requires individual certification for seven NWP's including NWP #21 (Surface Coal Mining Operations), NWP #29 (Residential Development), NWP #31 (Maintenance of Existing Flood Control Facilities), NWP #39 (Commercial & Institutional Development), NWP #40 (Agricultural Activities), NWP #43 (Stormwater Management Facilities), and NWP #44 (Mining Activities).⁴² Regional conditions for 2007 NWPs were not finalized for Louisiana during the reporting period.

Statewide programmatic general permit

Louisiana has a programmatic general permit for wetland uses within the LCZ.⁴³ Category I uses cannot impact greater than 0.5 an acre of special aquatic sites.⁴⁴ LDEQ has issued blanket

⁴⁰ LDNR denied coastal zone consistency to NWPs #3 (Maintenance), #7 (Outfall Structures and Maintenance), #12 (Utility Line Activities), #13 (Bank Stabilization), #14 (Linear Transportation Projects), #18 (Minor Discharges), #20 (Oil Spill Cleanup), #22 (Removal of Vessels), #23 (Approved Categorical Exclusions), #27 (Stream and Wetland Restoration Activities), #29 (Single-Family Housing), #31 (Maintenance of Existing Flood Control Facilities), #33 (Temporary Construction, Access and Dewatering), #35 (Maintenance Dredging of Existing Basins), #36 (Boat Ramps), #38 (Cleanup of Hazardous and Toxic Waste), #39 (Residential, Commercial, Institutional Developments), #40 (Agricultural Activities), #41 (Reshaping Existing Drainage Ditches), #42 (Recreational Facilities), #43 (Stormwater Management Facilities), and #44 (Mining Activities). U.S. Army Corps, *Regional Conditions for the Nationwide Permits in Louisiana*, at <http://www.mvk.usace.army.mil/offices/od/odf/REGION%20CONDS%20%20NWP%20LA%202002.doc> (last visited Sept. 10, 2007).

⁴¹ The Louisiana Department of Natural Resources has conditionally issued coastal zone consistency to NWPs #1 (Aids to Navigation), #2 (Structures in Artificial Canals), #4 (Fish and Wildlife Harvesting, Enhancement, and Attracting Device), #5 (Scientific Measurement Devices), #6 (Survey Activities), #8 (Oil and Gas Structures), #9 (Structures in Fleeting and Anchorage Areas), #10 (Mooring Buoys), #11 (Temporary Recreational Structures), #15 (U.S. Coast Guard Approved Bridges), #16 (Return Waters from Upland Contained Disposal Areas), #17 (Hydropower Projects), #19 (Minor Dredging), #21 (Surface Coal Mining Activities), #25 (Structural Discharges), #28 (Modifications of Existing Marinas), #30 (Moist Soil Management for Wildlife), #32 (Completed Enforcement Actions), #37 (Emergency Watershed Protection and Rehabilitation). *Id.*

⁴² Phillippe, *supra* note 30.

⁴³ U.S. Army Corps of Engineers, *New Orleans District. Programmatic General Permit for use in the New Orleans District within the Boundaries of the Louisiana Coastal Zone*, available at <http://www.mvn.usace.army.mil/ops/regulatory/PGP.pdf> (last visited Sept. 12, 2007).

⁴⁴ *Id.* ("Category I uses include some oil and gas activities, survey activities, flowlines/pipelines less than 10,000 feet in length and 6 inches in diameter and other transmission lines 500 feet or less in length, emergency work, dredging of existing waterbodies less than 1,000 cubic yards of material, maintenance of existing structures and fill provided the structures, miscellaneous structures, scientific measuring devices, sealed forms or cell for pile supporting structures, fish and wildlife harvesting, enhancement, and attraction devices and cultivation activities, single piles, pile clusters, trenasse maintenance, minor road crossings, bank stabilization less than 200 feet in length

water quality certification for Category I uses.⁴⁵ Category II uses not related to oil and gas may impact no more than 2.0 acres of tidal or 3.0 acres of non-tidal special aquatic sites, while oil and gas related activities may impact no more than 3.5 acres of tidal or non-tidal special aquatic sites.⁴⁶ Category II permits only apply for projects within the Corps' New Orleans District jurisdiction and within the LCZ. Category II activities have not been granted water quality certification by LDEQ.⁴⁷

Mitigation

LDEQ does not require mitigation for §401 certification above that required by the Corps under a §404 permit. However, state statutes and regulations address mitigation for impacts to wetlands in the LCZ. CUPs must contain requirements for compensatory mitigation to offset any loss of wetland ecological value.⁴⁸ Compensatory mitigation can include CMD-approved mitigation bank credits, advanced mitigation credits, project-specific mitigation, or a monetary contribution to an approved compensatory mitigation plan or to the Louisiana Wetland Conservation and Restoration Fund when the permittee is unable to provide mitigation through an individual project or a mitigation bank.⁴⁹ The CMD serves on the Mitigation Banking Review Team for banks in the LCZ and conservation plan areas.⁵⁰ The CMD uses the wetland value assessment methodology, a numeric computer model, to determine the mitigation fund contribution that an applicant must make based on the impacts outlined in the permit.⁵¹

State staff require a 1:1 replacement of impacted wetlands for all mitigation projects in order to achieve a goal of “no-net-loss” of wetland acreage,⁵² and Louisiana statute stipulates that mitigation should be of the same habitat type as the impact.⁵³ If in-kind mitigation is not possible, the mitigation should produce similar ecological value to the impacted site or should contribute to the overall health of the hydrologic basin despite being a different habitat type. In

without land reclamation, erosion protection and restoration along public highways less than one mile in length, wharves, piers, and similar structures less than 300 square feet, federal categorical exclusions, activities specifically designed which have a beneficial effect on wetlands, work involving the clearing, grading, filling or excavation of less than 0.5 acre of special aquatic sites.”) *Id.*

⁴⁵ Jamie Phillippe, *supra* note 30.

⁴⁶ Army Corps, *supra* note 43. (“Category II uses include some oil and gas activities, seismic surveys, flowlines/pipelines greater than 6 inches in diameter and 10,000 feet in length and all other transmission lines greater than 500 feet in length, cleanup of hazardous and toxic waste, oil spill cleanup, dredging of existing waterbodies where excavation is between 1,000 and 40,000 cubic yards of material, outfall structures, wharves, piers, and similar structures exceeding 300 square feet, erosion protection and restoration along public highways greater than one mile in length, bank stabilization less than 500 linear feet with land reclamation, categorical exclusions, mitigation banks and areas of wetland restoration and creation activities, completed enforcement actions, work which clears, grades, fills or excavates up to 2.0 acres of tidal special aquatic sites or, up to 3.0 acres of non-tidal special aquatic sites, and oil and gas activities impacting no more than 3.5 acres of tidal or non-tidal special aquatic sites.”)

⁴⁷ Phillippe, *supra* note 30.

⁴⁸ LA. REV. STAT. ANN. § 49:214.41.

⁴⁹ LA. ADMIN. CODE tit. 43 § 724.

⁵⁰ Rives, *supra* note 16.

⁵¹ *Id.* The wetland value assessment methodology was developed to evaluate the value of restoration projects.

⁵² *Id.*

⁵³ LA. REV. STAT. ANN. § 49:214.41.

addition, land owners have the option to require on-site mitigation for impacts that occur on their land, provided that the mitigation plan is approved by the CMD.⁵⁴

Louisiana's mitigation regulations also provide general procedures for avoiding, minimizing, restoring, and compensating for potential wetland losses and for quantifying the anticipated net gain and unavoidable losses of ecological value.⁵⁵ In addition, regulations include stipulations for the use of mitigation banks and advanced mitigation projects.⁵⁶

Compliance and enforcement

LDEQ refers §401 violations to the local Corps district.⁵⁷ LDNR-CMD and delegated local governments monitor impact and mitigation sites to ensure the proper enforcement of the CUP program. Under Louisiana statute, permit infractions may result in cease and desist orders; suspension, revocation or modification of CUPs; or injunctive, declaratory, or other actions. Violators may be issued a fine of between \$100 and \$500, jail time of up to 90 days, or both.⁵⁸ There is also an administrative fine system, which allows a willing party to resolve an enforcement issue with the payment of a fine that is determined by a formula.⁵⁹ Enforcement actions are tracked in a CMD database.⁶⁰

Tracking systems

LDEQ maintains a records tracking system called Electronic Document Management System (EDMS), which is accessible to the public. Since 1998, all §404 permit components have been included in the database.⁶¹

CMD maintains an extensive database system, PermitTrak, to track all CUPs, consistency applications, compliance and enforcement actions, and local programs.⁶² PermitTrak is live, making information available in the database as it is updated. The tracking system helps the agency to manage the large number of permit applications, while allowing permittees to track the status of their applications. State and federal natural resource agencies, local governments, university researchers, environmental and community associations, and various industry groups also use the information in the database. The CMD also tracks mitigation in a GIS system and records data from all mitigation monitoring visits.⁶³

⁵⁴ Rives, *supra* note 16.

⁵⁵ LA. ADMIN. CODE tit. 43 § 724.

⁵⁶ *Id.* An advanced mitigation project is a project implemented to create, restore, protect, and/or enhance wetlands for the purpose of producing ecological values, measured as average annual habitat units or cumulative habitat units (advanced mitigation credits). Such projects must be approved by the secretary prior to implementation, and the advanced mitigation credits shall have limited utility for the purpose of compensating for the ecological values lost due to a permitted activity. *See Id.*

⁵⁷ Phillippe, *supra* note 30.

⁵⁸ LA. REV. STAT. ANN. § 49:241.36.

⁵⁹ Email from Jim Rives, La Coastal Resources Program (July 19, 2007).

⁶⁰ Louisiana Coastal Management Division, *Coastal Management PermitTrak System*, at <http://dnr.louisiana.gov/crm/coastmgt/databases.asp> (last visited Sept. 11, 2007).

⁶¹ Phillippe, *supra* note 30.

⁶² Louisiana Coastal Management Division, *supra* note 60.

⁶³ Rives, *supra* note 16.

III. Water Quality Standards

Louisiana has not adopted water quality criteria, designated uses, or anti-degradation standards specific to wetlands. Although not specific to wetlands, Louisiana has seven water use designations for surface waters: primary contact recreation, secondary contact recreation, fish and wildlife propagation, drinking water supply, oyster propagation, agriculture, and outstanding natural resource waters.⁶⁴ Uses of drinking water supply, oyster propagation, and outstanding natural resource apply only to specifically designated waters. Water quality standards are general and numeric, are based on drainage basin, and may be seasonal.⁶⁵ Numeric criteria include chemical conditions.⁶⁶ LDEQ is in the process of developing a water body category for wetlands, with specific criteria applied to those receiving wastewater discharges.⁶⁷ There is also growing interest throughout Louisiana in using natural wetlands for wastewater management.

IV. Monitoring and Assessment

Although there is no wetland monitoring program specific to wetlands outside of the LCZ, wetland water quality is assessed by the LDEQ as part of the overall water quality assessment and conditions are reported in the state's 305(b) report.⁶⁸ The department is also currently in the process of developing an interactive data feature that will allow the public to access all collected ambient surface water quality data.⁶⁹

In the 1990s, the CRD, in collaboration with the U.S. Geological Survey National Wetlands Research Center, several federal agencies, and academic institutions, began development of a coast-wide reference monitoring system (CRMS) for coastal wetlands.⁷⁰ The monitoring program, which evolved from an earlier project-by-project monitoring effort, allows for a broad assessment of cumulative and indirect effects on a basin or coast-wide scale.⁷¹ CRMS was authorized and funded by the CWPPRA task force in 2003 and both provides a scientific evaluation of the effectiveness of each coastal wetland restoration project and supports decisions on future restoration projects. Monitoring sites were selected using historic LDWF helicopter survey data.⁷² Wetland monitoring data, including water level, salinity, temperature, accretion, herbaceous marsh vegetation, soil properties, and surface elevation are available to the public on the CRD's website.⁷³ One third of the CRMS stations are within CWPPRA projects, and all

⁶⁴ LA. ADMIN. CODE tit. 33 § 1113.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ Louisiana Department of Environmental Quality, *supra* note 1.

⁶⁸ *Id.*

⁶⁹ Louisiana Department of Environmental Quality, *Ambient Water Quality Monitoring Data*, at <http://www.deq.louisiana.gov/portal/Default.aspx?tabid=2421> (last visited Sept. 10, 2007).

⁷⁰ Personal communication with Richard Raynie, La Coastal Restoration Div. (Nov. 2, 2006).

⁷¹ *Monitoring: The Measure of Success in Saving Louisiana's Coastal Wetlands*, Watermarks, Louisiana Coastal Wetlands Planning, Protection and Restoration News (LaCoast), April 2004, Number 25, available at <http://www.lacoast.gov/watermarks/2004-04/1monitoring/index.htm>.

⁷² Raynie, *supra* note 70.

⁷³ Louisiana Department of Natural Resources, *Coastal Restoration Monitoring Data*, at <http://dnr.louisiana.gov/crm/coastres/monitoring.asp> (last visited Sept. 10, 2007).

CWPPRA project monitoring plans have been revised to incorporate the system's monitoring methods.⁷⁴

V. Restoration and Partnerships

There are several ongoing and evolving coastal protection and restoration planning initiatives designed to address coastal land loss in Louisiana. The U.S. Congress passed the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) in 1990.⁷⁵ CWPPRA funds wetland enhancement projects nationwide and designates approximately \$50 million annually for work in Louisiana.⁷⁶ In addition, the CWPPRA task force, which includes one Louisiana state representative (Executive Director of the Governor's Office of Coastal Activities), prepares an annual priority list of coastal wetlands restoration projects in the state and develops a comprehensive plan to restore and prevent the loss of coastal wetlands in Louisiana.⁷⁷ The 1993 plan's goal was no net loss of wetlands in the coastal areas of Louisiana as a result of development activities initiated after approval of the plan.⁷⁸ CWPPRA projects are assigned one federal sponsor; LDNR serves as the local sponsor on every project. Federal agencies on the task force include: Corps, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, USDA Natural Resources Conservation Service, and NOAA National Marine Fisheries Service.⁷⁹ Funds are allocated among task force members to carry out coastal wetlands restoration projects in accordance with the priorities developed by the task force.⁸⁰ In an effort to increase the planning focus at the ecosystem level, approved CWPPRA projects from annual priority lists are described in terms of the restoration objectives to which they contribute in each of the nine coastal hydrologic basins. Assessing contributions at the basin level allows the state to identify objectives that are not being met and to use that knowledge in future decision-making. Costs for CWPPRA projects are shared between the federal and state government (15 percent state/85 percent federal).⁸¹

The joint local, state, and federal Coast 2050 planning effort was initiated by the CWPPRA task force in 1996 and was designed to build upon and reconcile several prior restoration plans in order to strategically address coastal land loss in Louisiana and define future coastal restoration projects to be implemented under CWPPRA.⁸² *Coast 2050: Toward a Sustainable Coastal Louisiana*, developed by the federal Louisiana Coastal Wetlands Conservation and Restoration Task Force and Wetlands Conservation and Restoration Authority, was published in 1998 and drew heavily on public input.⁸³

⁷⁴ Raynie, *supra* note 70.

⁷⁵ LaCoast, *supra* note 3.

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ Louisiana Coastal Wetlands Conservation and Restoration Task Force, COASTAL WETLANDS RESTORATION PLANNING PROTECTION AND RESTORATION ACT: A RESPONSE TO LOUISIANA'S WETLAND LOSS (2006), available at <http://lacoast.gov/reports/program/CWPPRA%20A%20Response%20to%20Louisiana's%20Land%20Loss.pdf>.

⁷⁹ Email from Richard Raynie, La. Coastal Restoration Div. (June 27, 2007).

⁸⁰ *Id.*

⁸¹ Louisiana Department of Natural Resources, *Louisiana Coast Lines* (March 1996) available at <http://dnr.louisiana.gov/crm/coastmgt/coastlines/1996-03.htm>.

⁸² Personal communication with Jon Porthouse, Coast2050 Program (Oct. 16, 2006).

⁸³ See LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION TASK FORCE AND THE WETLANDS

The Louisiana Coastal Area Ecosystem Restoration Plan (LCA) was initiated as the first step towards implementing and prioritizing the long-range, large-scale ecosystem restoration strategies outlined in the Coast 2050 plan. The original plan outlined \$14 billion for coastal restoration projects, with costs to be shared between federal (65 percent) and non-federal agencies (35 percent). Due to federal budgetary concerns, a scaled-down, near-term plan that defines the first ten years of the LCA program was developed in 2005. This near-term plan identifies around \$2 billion in restoration efforts and includes provisions for the implementation of 15 restoration projects, creation of a science and technology program, a program to increase the beneficial use of material dredged from federal navigation channels, a demonstration project program, a program to evaluate and modify existing federal water resources projects to better achieve restoration, and six large scale restoration concepts that have high potential to provide significant benefits.⁸⁴

The hurricanes of 2005 prompted Congress to direct the Corps to initiate a comprehensive and integrated hurricane protection plan in Louisiana. Also in 2005, the state passed the Louisiana Coastal Protection, Conservation, Restoration and Management Act to address the protection and restoration of coastal resources through comprehensive planning. CPRA is charged with developing, implementing, and enforcing the comprehensive coastal ecosystem restoration and hurricane protection master plan and annual coastal ecosystem restoration and hurricane protection plans under the Act. This state effort provides a mechanism to unify projects and programs for coastal restoration (such as the LCA, CWPPRA, and Coastal Impact Assessment Program efforts) and therefore includes similar restoration strategies (e.g. river diversions, delta management, barrier island restoration, marsh creation using material dredged out of navigation channels, shoreline protection, etc.).⁸⁵ The CPRF will provide revenues from several sources, including state mineral revenues and revenue sharing from outer continental shelf activities, for the restoration and hurricane protection projects identified by the plan.⁸⁶

LDEQ's Nonpoint Source Pollution Section also manages innovative, voluntary restoration programs in Louisiana. The section, with the help of local officials, educates the public on the value of wetland restoration through demonstration projects. For example, the section is currently involved with a 22-acre demonstration stormwater treatment project in the city of Mandeville, Louisiana. Called Neighborwoods, the site includes a wetland ecological channel with native vegetation, wetland-themed gardens, boardwalks, and interpretive signage.⁸⁷ For successful projects, the section will work with local governments to incorporate coastal resource restoration into local ordinances or master plans. These projects are funded through CWA §319.

Finally, the Coastal Impact Assistance Program, authorized under the Energy Policy Act of 2005, provides \$135 million dollars annually of outer continental shelf mineral revenues for conservation, restoration, and protection of coastal areas including wetlands, mitigation of

CONSERVATION AND RESTORATION AUTHORITY. COAST 2050: TOWARD A SUSTAINABLE COASTAL LOUISIANA (1998), available at http://www.lca.gov/net_prod_download/public/lca_net_pub_products/doc/2050report.pdf.

⁸⁴ Porthouse, *supra* note 82.

⁸⁵ *Id.*

⁸⁶ Email from Jon Porthouse, Coast2050 Program (July 20, 2006).

⁸⁷ Personal communication with John James Clark, La. Dep't of Env'tl. Quality, Nonpoint Source Pollution Section (Oct. 26, 2006).

damage to fish, conservation of wildlife and natural resources, implementation of a comprehensive management plan, and mitigation of the impacts of outer continental shelf activities. Funds, available from 2007 through 2010, are provided by a 37.5 percent royalty revenue for production that is generated offshore.⁸⁸

VI. Education and Outreach

LDNR-CMD's outreach and education efforts are designed to increase awareness of the value of coastal habitats and to protect these resources. The division has developed and distributed guides and lesson plans for elementary school teachers on wetlands topics, LCZ maps that include nonpoint source pollution sources, and an official boundary map.⁸⁹ The division also distributes public information packets on coastal issues, slide shows, video tapes, CDs on coastal and wetland issues and wetland functions and values.⁹⁰ In addition, CMD regularly takes a coastal resources management and restoration "information booth" to festivals, fairs, and schools.

The *America's WETLAND* public education campaign focuses on issues related to Louisiana's high rate of coastal wetlands loss.⁹¹ The campaign is raising awareness related to the impact of Louisiana's wetland loss on the state, nation, and world and increasing support for efforts to conserve and save coastal Louisiana.⁹² The campaign is privately funded and works closely with Governor's office on coastal activities.⁹³

VII. Coordination with State and Federal Agencies

Louisiana state agencies regularly coordinate both with each other and with federal agencies on wetland-related issues. The Governor's Commission was formed in part to provide a forum for cooperation and collaboration among federal, state, and local governmental agencies, conservation organizations, and the private sector. Members of the committee include the Governor's Executive Assistant for Coastal Activities, the Governor's Special Assistant for Environmental Affairs, the secretaries of the LDNR, LDEQ, and LDOTD, the Commissioner of Administration, and the Director of the State Soil and Water Conservation Committee.⁹⁴ The Executive Assistant for Coastal Activities also serves on the CWPPRA task force.

⁸⁸ Louisiana Department of Natural Resources, *The Coastal Impact Assistance Program of 2005*, at <http://dnr.louisiana.gov/crm/background/ciap.asp> (last visited Sept. 10, 2007).

⁸⁹ Jim Rives, *supra* note 16.

⁹⁰ Department of Natural Resources Louisiana, Coastal Management Division, *Support Services*, at <http://dnr.louisiana.gov/crm/coastmgt/supportserv/supportserv.asp> (last visited Sept. 10, 2007).

⁹¹ Personal communication with Lisa Noble, *America's WETLAND: Campaign to Save Coastal La.* (Oct. 11, 2006).

⁹² *See America's WETLAND: Campaign to Save Coastal Louisiana, About Us*, at <http://www.americaswetland.com/custompage.cfm?pageid=2> (last visited Sept. 10, 2007).

⁹³ Lisa Noble, *supra* note 91.

⁹⁴ *See The Governor's Office on Coastal Activities, The Coastal Wetlands Conservation and Restoration Authority*, at <http://www.goca.state.la.us/SWA-Members.html> (last visited Sept. 10, 2007).

The Governor's Executive Assistant for Coastal Activities also chairs the CPRA, which is charged with developing, implementing, and enforcing a comprehensive coastal protection master plan and annual coastal protection plans, as well as representing the state's position in policy implementation relative to coastal protection, conservation, and restoration. CPRA participants include: the secretaries of the LDNR, LDOTD, LDEQ, LDWF, and Department of Economic Development; the commissioners of the Department of Agriculture and Forestry, Department of Insurance, and Division of Administration; the Director of the State Office of Homeland Security and Emergency Preparedness; and the chair of the Governor's Advisory Commission on Coastal Protection, Restoration, and Conservation. Additionally, CPRA includes participants from coastal parishes and three levee district presidents from coastal Louisiana.⁹⁵

State agencies regularly coordinate with each other and the federal agencies on other wetland regulatory and non-regulatory efforts. LDEQ has entered into a Memorandum of Understanding (MOU) with the four Corps districts to coordinate public notice on permits and NWP's.⁹⁶ The U.S. Environmental Protection Agency and the U.S. Fish and Wildlife Service also provide comments on LDEQ's water quality certification applications and CMD's CUP's.⁹⁷ The CMD has also developed an MOU with the Louisiana Oil Spill Coordinators Office to utilize their database for natural resources damage assessments after oil spills. In addition, the LDNR-CMD collaborates with LDWF and is working with the Department of Forestry on a coastal estuarine land acquisition program.⁹⁸

VIII. Acronyms and Abbreviations

Corps – U.S. Army Corps of Engineers
CMD – Louisiana Coastal Management Division
CPRA – Coastal Protection and Restoration Authority
CRD – Louisiana Coastal Restoration Division
CRMS – Coast-wide Reference Monitoring System
CRPA – Coastal Protection and Restoration Authority
CRPF – Coastal Protection and Restoration Fund
CUP – Coastal Use Permit
CWA – Clean Water Act
CWPPRA – Coastal Wetlands Planning, Protection and Restoration Act
EDMS – Electronic Document Management System
FTE – Full-time Equivalent
IPT – Integrated Planning Team
LCA – Louisiana Coastal Area Ecosystem Restoration Plan
LCP – Local Coastal Management Program

⁹⁵CPRA: *Coastal Protection and Restoration Authority: A Master Plan for Louisiana's Coast*, Watermarks, Louisiana Coastal Wetlands Planning, Protection and Restoration News (LaCoast), Nov. 2005, http://www.lacoast.gov/watermarks/2006-11/2master_plan/.

⁹⁶ Phillippe, *supra* note 30.

⁹⁷ Rives, *supra* note 16; Jamie Phillippe, *supra* note 30.

⁹⁸ Rives, *supra* note 16.

LCRP – Louisiana Coastal Resources Program

LCZ – Louisiana Coastal Zone

LDNR – Louisiana Department of Natural Resources

LDOTD – Louisiana Department of Transportation and Development

LDWF – Louisiana Department of Wildlife and Fisheries

MOU – Memorandum of Understanding

NWP – Nationwide Permit