



ENVIRONMENTAL
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State Wetland Protection

Status, Trends, & Model Approaches

*A 50-state study by the
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Appendix: State Profiles

Texas

I. Overview

An ecologically-varied, large state, Texas holds an abundance of diverse wetland resources; however, the state has experienced notable wetland losses over the last two centuries.¹ Today, Texas regulates wetlands primarily through water quality certification under §401 of the Clean Water Act (CWA) and federal consistency under the Texas Coastal Management Program (CMP). Multiple state agencies also conduct non-regulatory activities directed toward wetland conservation.

II. Regulatory Programs

Wetland definitions and delineation

Texas has more than one definition for waters of the state. “State water” is defined as:

the water of the ordinary flow, underflow, and tides of every flowing river, natural stream, and lake, and of every bay or arm of the Gulf of Mexico, and the storm water, floodwater, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed in the state is the property of the state.²

Water quality provisions define “water” or “water in the state” as:

groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.³

State water codes define a wetland as “an area (including a swamp, marsh, bog, prairie pothole, or similar area) having a predominance of hydric soils that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances supports the growth and regeneration of hydrophytic vegetation.”⁴

State wetland delineation relies on both the U.S. Army Corps of Engineers’ 1987 *Wetlands Delineation Manual*⁵ and the U.S. Fish and Wildlife Service’s *Classification of Wetlands and Deepwater Habitats of the United States*.⁶

¹ THOMAS E. DAHL AND GREGORY J. ALLORD, TECHNICAL ASPECTS OF WETLANDS: HISTORY OF WETLANDS IN THE CONTERMINOUS UNITED STATES (U.S. Geological Survey 1997), *available at* <http://water.usgs.gov/nwsum/WSP2425/history.html>.

² TEX. WATER CODE ANN. § 11.021.

³ TEX. WATER CODE ANN. § 26.001.

⁴ TEX. WATER CODE ANN. § 11.502(1). The term “wetlands” does not include “irrigated acreage used as farmland;” “man-made wetlands of less than one acre;” or “man-made wetlands not constructed with wetland creation as a stated objective...” TEX. WATER CODE ANN. § 11.502(4).

⁵ ENVTL. LAB., WETLANDS RESEARCH PROGRAM TECHNICAL REPORT Y-87-1, CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (U.S. Army Corps of Engineers 1987), *available at* <http://www.mvn.usace.army.mil/ops/regulatory/wlman87.pdf>.

Wetland-related law and regulation

Water quality certification under CWA §401 is the primary form of state-level wetland regulation and is conducted according to the state's water quality standards.⁷ Texas also has various other rules in place that affect wetlands.

Conservation of state-owned wetlands is guided by the Texas Parks and Wildlife Code, which mandated the creation of a state wetlands conservation plan specifically for coastal wetlands. The rules required the plan to: define wetlands; establish a no-net-loss goal; inventory coastal wetlands, impacts, and functions; clarify and unify state wetland-related policies and actions; guide mitigation policies; prepare a long-range navigational dredging and disposal plan; establish a public education program; and outline other various actions.⁸ The plan for state-owned coastal wetlands was drafted in 1994 and approved in 1997.⁹

Furthermore, coastal management practices, which pertain to coastal wetlands, are outlined in the state's natural resource codes. These include ongoing analysis and prioritization of best-use practices, land acquisition, inventory of natural resource areas, jurisdictional analyses, review of state and federal actions that affect coastal areas, and other duties.¹⁰

Organization of state agencies

Multiple state agencies are involved in wetland-related activities. On the regulatory side, the Texas Commission on Environmental Quality (TCEQ) conducts §401 water quality certification for most activities.¹¹ Permits are reviewed and certified at the agency's headquarters in Austin, while staff located throughout the state's 16 regional offices may provide some assistance on technical advisory and enforcement. Funding for the program is derived mostly from fees, but also federal grants and state appropriations.¹²

The Texas General Land Office (TGLO) oversees management of coastal wetlands as provided for under the Texas Natural Resource Code. TGLO heads the Coastal Coordination Council, which has developed a CMP and a Coastal Zone Management Plan with other state agencies. The Texas Parks and Wildlife Department (TPWD) acquires, manages, and protects wildlife and its habitat, which may include wetland areas. The agency also coordinated the development of a state wetlands conservation plan.¹³ The Texas Forest Service advises private landowners on various issues, including those relating to wetlands. Finally, the Texas Review and Comment System, coordinated by the Governor's Office, allows all state resource agencies the opportunity

⁶ COWARDIN, L. M., CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS IN THE UNITED STATES (Department of the Interior, Fish and Wildlife Service 1979).

⁷ 30 TEX. ADMIN. CODE § 279.1 *et seq.*; 30 TEX. ADMIN. CODE § 307.1 *et seq.*

⁸ TEX. PARKS AND WILD. CODE ANN. § 14.001 *et seq.*

⁹ TEX. PARKS AND WILDLIFE, TEXAS WETLANDS CONSERVATION PLAN (1997), available at http://www.tpwd.state.tx.us/publications/pwdpubs/media/pwd_pl_r2000_0005.pdf; Personal communication with Tom Calnan, Tex. General Land Office (Dec. 27, 2005).

¹⁰ TEX. NAT. RES. CODE ANN. § 33.001 *et seq.*

¹¹ The Railroad Commission of Texas is responsible for reviewing the water quality certifications related to oil and gas production.

¹² Personal communication with Peter Schaefer, Tex. Comm'n on Env'tl. Quality (Feb. 24, 2006).

¹³ Personal communication with Tom Calnan, Tex. General Land Office (Dec. 27, 2005).

to review and comment on all projects that use federal funds and might have an impact on wetlands.

§401 certification

Any actions that require a federal permit, license, or approval that results in a discharge into waters of the state, including §404 individual dredge and fill permits and nationwide permits, require state water quality certification. The state has adopted procedures and criteria for water quality certification for Department of Army permits and National Pollutant Discharge Elimination System permits. The regulations address application submission, public notice and comment, agency review, and enforcement.¹⁴ The rules also establish a no-net-loss goal.¹⁵

TCEQ uses a tiered system for §404 certification review based on project size and the amount of jurisdictional waters of the U.S. affected. Tier I applies to small projects that affect less than three acres of “waters in the state” or less than 1,500 linear feet of streams. For Tier I, TCEQ requires the incorporation of certain best management practices to address water quality concerns and requires no additional §401 review. A Tier II project is any project that is not eligible for Tier I processing, including: projects that impact rare or ecologically significant wetlands;¹⁶ projects that are submitted after the fact; and projects that otherwise qualify for Tier I, but for which the Corps has not received a complete, signed Tier I checklist before issuance of its permit decision document. Tier II projects are subject to individual §401 certification review.¹⁷ TCEQ waives less than 50 Tier I permits annually, and grants an average of 60 Tier II permits annually. Certification is rarely outright denied.¹⁸

Nationwide permits

TCEQ reviews nationwide permits (NWP), issued by the Corps on an approximately five-year cycle, for compliance with Texas’ water quality standards. The state applied general conditions that relate to erosion control, sedimentation control, and total suspended solids control, as well as some administrative requirements, for most of the 2002 NWPs.¹⁹ In general, implementation of certain best management practices is required for NWP compliance.²⁰ TCEQ’s action on the 2007 NWPs could not be reviewed within the reporting period for this publication.

Mitigation

The U.S. Army Corps of Engineers oversees most wetland mitigation under the §401/404 program; however, TCEQ, TGLO, and TPWD²¹ review and comment on permits and required

¹⁴ 30 TEX. ADMIN. CODE § 279.1 *et seq.*

¹⁵ *Id.* § 279.2(b).

¹⁶ Rare and ecologically significant wetlands generally include pitcher plant bogs, swamps dominated by bald cypress and tupelo gum trees, mangrove marshes and coastal dune swales.

¹⁷ Schaefer, *supra* note 12.

¹⁸ Personal communication with Peter Schaefer, Tex. Comm’n on Env’tl. Quality (Aug. 5, 2005).

¹⁹ Individual certification was usually required for the 2002 NWP #16 (Return Water From Upland Contained Disposal Areas), although the TCEQ did not officially deny the NWP.

²⁰ For specific conditions and the 2002 NWPs to which they apply, *see* Texas Commission on Environmental Quality, *401 Water Quality Certification Conditions for Nationwide Permits – Attachment I*, at <http://www.tceq.state.tx.us/assets/public/permitting/waterquality/forms/20230.pdf> (revised Aug. 21, 2003).

²¹ Specifically, TPWD must review permits that would allow the storage, removal, or diversion of more than 5,000 acre-feet per year for any effects on fish and wildlife habitat. The agency may require mitigation for any adverse impacts to habitat. *See* TEX. WATER CODE ANN § 11.152.

mitigation.^{22,23} Texas law also specifies provisions for the establishment and operation of wetland mitigation banks.²⁴ State agencies also participate on the Mitigation Banking Review Team in coordination with the Fort Worth and Galveston Corps Districts.²⁵

Compliance and enforcement

The state's water quality certification rules provide enforcement measures for violations to permit terms and conditions.²⁶ Under these rules, TCEQ may "institute legal proceedings to compel compliance..."²⁷ In practice, the Corps usually takes the lead on enforcement cases involving unauthorized discharge of fill material into jurisdictional waters.²⁸

Tracking systems

TGLO records and tracks all coastal projects, including those that involve wetland-related actions.²⁹

III. Water Quality Standards

The State of Texas has not developed wetland-specific water quality criteria, but does explicitly recognize the applicability of its surface water quality standards to wetlands.³⁰ The state's anti-degradation policy also applies to wetlands, stating "...the antidegradation policy and public coordination is implemented through the evaluation of alternatives and mitigation under Federal Clean Water Act, §404(b)(1). State review of alternatives, mitigation, and requirements to protect water quality may also be conducted for federal permits which are subject to state certification, as authorized by Federal Clean Water Act, §401 and conducted in accordance with [the state's water quality certification rules]."³¹

Narrative surface water quality standards do identify wetland water quality functions to be protected.³² "Wetland water quality functions" are defined as "[a]ttributes of wetlands that protect and maintain the quality of water in the state, which include storm water storage and retention and the moderation of extreme water level fluctuations; shoreline protection against erosion through the dissipation of wave energy and water velocity, and anchoring of sediments;

²² TEX. PARKS AND WILD. CODE ANN. § 14.002.

²³ Additionally, Texas law mandated the creation of the 1994 Texas Wetland Conservation Plan for state-owned coastal wetlands that includes "provisions for an inventory of sites for compensatory mitigation, enhancement, restoration, and acquisition priorities," "clarification and unification of wetland mitigation policies" among state agencies, and development of "guidelines and regulations for mitigation." Calnan, *supra* note 13. The Texas Wetlands Conservation Plan was drafted in 1994 and approved in 1997. TEX. PARKS AND WILDLIFE, *supra* note 9.

²⁴ TEX. NAT. RES. CODE ANN. § 221.001 *et seq.*

²⁵ Personal communication with Tom Calnan, Tex. General Land Office (Summer 2005).

²⁶ 30 TEX. ADMIN. CODE § 279.13.

²⁷ TEX. WATER CODE ANN. § 7.002.

²⁸ Schaefer, *supra* note 12.

²⁹ Calnan, *supra* note 25.

³⁰ 30 TEX. ADMIN. CODE § 307.2(b).

³¹ *Id.* § 307.5(c)(1)(B).

³² *Id.* § 307.7(b)(5).

habitat for aquatic life; and removal, transformation, and retention of nutrients and toxic substances.”³³

IV. Monitoring and Assessment

Although there is no separate wetland monitoring program, wetlands are monitored as part of Texas’ Water Quality Management Program, which requires water quality monitoring to be conducted on a watershed basis. State law directs that “[w]ater management functions shall be oriented on a watershed basis in consideration of the priorities identified by river authorities and basin steering committees.”³⁴ Regulations establish watershed-based water quality monitoring and assessment procedures designed to support management decisions and allow for the involvement of citizens, local governments, and other entities.³⁵ TCEQ assessment methodologies evaluate the physical, chemical, and biological characteristics of aquatic systems with reference to human health concerns, ecological condition, and designated uses. Data feed into 303(d)/305(b) reporting for the state.³⁶

V. Restoration and Partnerships

TPWD provides technical support and outreach materials, such as newsletters, guides, videos, and web resources, on restoration opportunities and available programs for landowners interested in conservation. TPWD has also established an online wetland registry under grants from the EPA. The Wetlands Project Site Registry links landowners with those who need or want to restore wetlands. The registry is a mechanism by which landowners become interested in wetlands restoration and its benefits.³⁷

TCEQ also manages the Galveston Bay Estuary Program, primarily under grants from EPA. Working in partnership with local, state, federal agencies, as well as citizens, corporations,³⁸ academics, and other interested stakeholders, the program’s goal for restoration is 24,000 acres by 2010.³⁹

The *Texas Wetlands Conservation Plan* for state-owned coastal wetlands was drafted in 1994 and finalized 1997.^{40,41} The plan focuses on voluntary, non-regulatory approaches to

³³ *Id.* § 307.3(70).

³⁴ TEX., WATER CODE ANN. § 26.0136.

³⁵ 30 TEX. ADMIN. CODE § 220 *et seq.*

³⁶ Texas Commission on Environmental Quality, *Surface Water Quality Monitoring*, at <http://www.tceq.state.tx.us/compliance/monitoring/water/quality/data/wqm/mtr/swqm.html> (last revised Jan. 11, 2007).

³⁷ HEATHER BOND & JULIE ANDERSON, TEXAS PARKS AND WILDLIFE DEPARTMENT: THE WETLANDS PROJECT SITE REGISTRY, available at http://gbic.tamug.edu/gbeppubs/T3/gbnepT3_165-168.pdf (last visited July 27, 2007).

³⁸ Under the Texas Corporate Wetlands Restoration Partnership (CWRP), a branch of the National CWRP, Texas corporations and organizations join forces with federal and state agencies to restore wetlands and other aquatic habitat. Texas CWRP, *About Texas CWRP*, at http://www.texascwrp.org/about_txcwrp.htm (last visited July 27, 2007).

³⁹ Calnan, *supra* note 25.

⁴⁰ Calnan, *supra* note 13.

conservation of wetlands in the state by providing financial, technical, and educational incentives to private landowners to encourage stewardship.⁴²

VI. Education and Outreach

Education and outreach are focused on landowners, as described above. TPWD provides technical support and outreach materials, such as newsletters, guides, videos, and web resources, on restoration opportunities and available programs for landowners interested in conservation.

VII. Coordination with State and Federal Agencies

A primary focus of the draft *Texas Wetlands Conservation Plan* was to identify wetland programs in Texas and address gaps in coordination. Multiple state, federal, local, and private entities are involved in both regulatory and non-regulatory efforts throughout the state.

TCEQ and the Corps hold a memorandum of agreement on streamlining regulatory coordination. TCEQ and TPWD, as well as the TGLO and other regional and state groups, private organizations, and land trusts, coordinate occasionally on wetland conservation efforts.

VIII. Acronyms and Abbreviations

CMP-Texas Coastal Management Program
CWA – Clean Water Act
CWRP – Corporate Wetlands Restoration Partnership
NWPs – Nationwide Permits
TCEQ – Texas Commission on Environmental Quality
TGLO – Texas General Land Office
TPWD – Texas Parks and Wildlife Department

⁴¹ TEX. PARKS AND WILDLIFE, *supra* note 9.

⁴² TEX. PARKS AND WILDLIFE DEP'T, TEXAS WETLANDS CONSERVATION PLAN (1994), *available at* http://www.tpwd.state.tx.us/landwater/water/habitats/wetland/publications/conservation_plan.phtml.