



ENVIRONMENTAL
LAW • INSTITUTE®

State Wetland Protection

Status, Trends, & Model Approaches

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

*With support from the
U.S. Environmental Protection Agency*

2008

Appendix: State Profiles

Hawai'i

I. Overview

Historically, Hawai'i contained an estimated 59,000 acres of wetlands. Hawai'i has lost over 12 percent of its original wetland acreage and over 30 percent of its natural lowland wetlands.¹ Although the remaining wetlands cover less than three percent of Hawai'i's surface area, they provide important functions, including habitat for plant and animal species endemic to the Hawaiian Islands. Hawai'i's unique hydrological conditions—heavy rainfall, porous volcanic soil, and steep terrain—create wetlands that are different from those found in any other region of the United States.² State approaches to the protection of these important, unique resources include management of wildlife and habitat and regulation of aquatic resources, among other activities.

II. Regulatory Programs

Wetland definitions and delineation

Hawai'i's Water Code defines "water" or "waters of the State" as "any and all water on or beneath the surface of the ground, including natural or artificial watercourses, lakes, ponds, or diffused surface water and water percolating, standing, or flowing beneath the surface of the ground."³ The Water Code defines "stream system" as "the aggregate of water features comprising or associated with a stream, including the stream itself and its tributaries, headwaters, ponds, wetlands, and estuary."⁴

Although wetlands are not explicitly included in the definition of state waters, Hawai'i's surface water quality standards do apply to wetlands.⁵ The water quality standards define "wetlands" as:

land that is transitional between terrestrial and aquatic ecosystems where the water table is usually at or near the surface or the land is covered by shallow water. A wetland shall have one or more of the following attributes: (1) at least periodically the land supports predominantly hydrophytic vegetation; (2) the substratum is predominantly undrained hydric soil; or (3) the substratum is nonsoil (gravel or rocks) and is at least periodically saturated with water or covered by shallow water. Wetlands may be fresh, brackish, or saline and generally include swamps, marshes, bogs, and associated ponds and pools, mud flats, isolated seasonal ponds, littoral zones of standing water bodies, and alluvial floodplains.⁶

The regulations further define several different kinds of wetlands,⁷ including "coastal wetlands,"⁸ "elevated wetlands,"⁹ and "low wetlands."¹⁰

¹ NOAA National Marine Fisheries, *Habitat Connections: Wetlands, Fisheries and Economics*, at <http://www.nmfs.noaa.gov/habitat/habitatconservation/publications/habitatconnections/habitatconnections.htm> (last visited July 24, 2007).

² UNITED STATES GEOLOGICAL SURVEY, NATIONAL WATER SUMMARY ON WETLAND RESOURCES, available at http://water.usgs.gov/nwsum/WSP2425/state_highlights_summary.html (last modified Mar. 7, 1997).

³ HAW. REV. STAT. ANN. § 174C-3.

⁴ *Id.*

⁵ HAW. CODE R. § 11-54-5.2.

⁶ *Id.* § 11-54-1.

⁷ *Id.*

The state relies on the U.S. Army Corps of Engineers' 1987 *Wetlands Delineation Manual*¹¹ for delineating wetlands.

Organization of state agencies

The primary state agencies participating in wetlands protection in Hawaii include the Department of Health (HDOH) and the Department of Land and Natural Resources (HDLNR). HDOH's Clean Water Branch (CWB) has administered the state's §401 water quality certification program since 1986. HDLNR, Division of Forestry and Wildlife (DOFAW) manages wetland habitats for native species recovery and conducts habitat restoration and monitoring. HDLNR, Division of Aquatic Resources (DAR) manages aquatic resources and ecosystems.

Hawaii Department of Health. The CWB oversees all HDOH wetland-related activities. CWB's Engineering Section issues §401 water quality certifications, while CWB's Monitoring Section conducts area surveillance, routine inspections, and complaint investigations for all water quality permits, including §401 certifications. Although CWB does not have funds dedicated specifically to wetland work, HDOH funds the salaries of two engineers who work on §401 certifications with an equal combination of state and federal funds. Approximately ten percent of the applications the state reviews for §401 water quality certification are related to wetlands.¹²

Hawaii Department of Land and Natural Resources. Within HDLNR, the Commission on Water Resource Management ("Commission"), DOFAW, and DAR all conduct wetland-related activities. The Commission focuses mostly on water quantity issues, but also permits stream channel alteration, well drilling, pump installation, and diversion work construction, all of which have the potential to affect wetlands.¹³

⁸ "Coastal wetlands" are "natural or man-made ponds and marshes having variable salinity, basin limits, and permanence. These wetlands usually adjoin the coastline and may be subject to tidal, seasonal, or perennial flooding. Coastal wetlands are generally maintained by surface and subterranean sources of fresh and salt water. Many natural coastal wetlands have been modified significantly by man and are characterized by introduced aquatic life. Coastal wetlands include, but are not limited to, salt marshes, open ponds, mudflats, man-made or natural waterbird refuges, isolated seasonal lakes and mangrove flats." See HAW. CODE R. § 11-54-1.

⁹ "Elevated wetlands" are "natural freshwater wetlands located above 100 m (330 ft) elevation. They are generally found in undisturbed areas, mainly in remote uplands and forest reserves with high rainfall. Elevated wetlands include upland bogs, marshes, swamps, and associated ponds and pools." *Id.*

¹⁰ "Low wetlands" are "freshwater wetlands located below 100 m (330 ft) elevation that may be natural or artificial in origin and are usually found near coasts or in valley termini. Low wetlands are maintained by either stream, well, or ditch influent water, or by exposure of the natural water table. Low wetlands include, but are not limited to, natural lowland marshes, riparian wetlands, littoral zones of standing waters (including lakes, reservoirs, ponds and fishponds) and agricultural wetlands such as taro lo'i." *Id.*

¹¹ 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>.

¹² Personal communication with Denis Lau, Haw. Dep't of Health (Feb. 9, 2006).

¹³ Commission on Water Resources Management, *Stream Protection and Management Branch*, at <http://www.hawaii.gov/dlnr/cwrm/brspam.htm> (last visited July 24, 2007).

DOFAW manages wetland habitats for native species and conducts habitat restoration and monitoring.¹⁴ Two full-time equivalent staff, including two coordinators and many other staff, share responsibility for the Division's wetland work. DOFAW has no dedicated funding source; instead it relies on competitive, external grants secured by the staff.¹⁵ The mission of DAR "is to manage, conserve and restore the state's unique aquatic resources and ecosystems for present and future generations."¹⁶ However, DAR freshwater and marine programs do not have a focus on wetlands.¹⁷

§401 certification

Any actions requiring a federal permit, license, or approval that result in a discharge into waters of the state, including §404 dredge and fill permits and nationwide permits, require Clean Water Act (CWA) §401 certification. Applicants for §401 certification must submit a request to HDOH.¹⁸ Individual certification applications are required for all projects creating discharges that cannot be authorized under HDOH's conditional blanket §401 certification. The individual application must include information about associated federal permits, names and classifications of waters where discharges will occur, and a complete description of the project. HDOH requires a \$1,000 filing fee for each individual application.¹⁹

HDOH staff members ensure that a project meets state water quality standards before issuing a §401 certification. If a proposed project does not meet HDOH's requirements, the Department will work with the applicant to modify the project to make its related discharges certifiable. This cooperative effort leads to a nearly 100 percent certification rate. The number of §401 certifications issued per year fluctuates with the economy and has ranged from a minimal number to over 100.²⁰

For each certified project, HDOH creates mandatory, site-specific best management practices and monitoring and assessment plans to ensure that project-related discharges comply with state water quality standards. HDOH bases these plans on specific guidelines for monitoring §401 water quality certified projects. The guidelines include information on which parameters to monitor and how often, based on the type of project and how long the construction phase of the project will last.²¹

Nationwide permits

¹⁴ Hawaii Department of Land and Natural Resources, *Division of Forestry and Wildlife*, at <http://www.dofaw.net> (last visited July 24, 2007).

¹⁵ Personal communication with Jeannie Fujikawa, Haw. Dep't of Land and Natural Res. (Jan. 2006).

¹⁶ Hawaii Department of Land and Natural Resources - Division of Aquatic Resources, *About DAR*, at <http://www.hawaii.gov/dlnr/dar/about.htm> (last visited July 24, 2007).

¹⁷ Personal communication with Mike Yamamoto, Haw. Dep't of Land and Natural Res. – Div. of Aquatic Res. (July 12, 2007).

¹⁸ HAW. DEP'T OF HEALTH - CLEAN WATER BRANCH, CWB-WQC APPLICATION, *available at* <http://www.hawaii.gov/health/environmental/water/cleanwater/about/cleanwater/forms/pdf/cwb-wqc.pdf> (last visited July 24, 2007).

¹⁹ HAW. CODE R. §11-54-9.1.02.

²⁰ Personal communication with Edward Chen, Haw. Dep't of Health (Feb. 6, 2006).

²¹ HAW. DEP'T OF HEALTH, GENERAL MONITORING GUIDELINE FOR SECTION 401 WATER QUALITY CERTIFICATION PROJECTS (Apr. 7, 2000), *available at* <http://www.hawaii.gov/health/environmental/water/cleanwater/forms/pdf/matrix.pdf>.

HDOH conditionally certified 16 nationwide permits (NWP) promulgated by the Department of the Army in 2002.²² Requirements and conditions included notification requirements, limits of coverage, and more specific individual conditions, depending on the NWP. HDOH does not charge a filing fee for projects seeking certification under HDOH's conditional blanket §401 certification authorization. The blanket §401 certification does not apply when projects are located in natural lakes and anchialine pools, Class 1 inland waters, estuaries, Class AA marine waters, embayments, Class I marine bottoms, and stream segments on HDOH's CWA §303(d) water quality-limited segment list.²³ Conditional approval expired on March 19, 2007; Hawaii's action on the 2007 NWP could not be reviewed within the reporting period.

Statewide programmatic general permit

HDOH also issued a conditional §401 certification for a statewide programmatic general permit (SPGP) on February 7, 2003 (expiring on February 1, 2008) that covers placement of up to 10,000 cubic yards of beach sand of acceptable quality for beach nourishment, restoration, and enhancement.²⁴ The conditional §401 certification outlines exclusions and limitations of the coverage, modification and revocation rules, notification requirements, and discharge limitations for permitted projects.²⁵ HDOH has received only three applications for certification under the SPGP.²⁶

Mitigation

The State of Hawaii has not adopted legislation, policies, or guidelines regarding compensatory mitigation for wetlands and generally defers to the Corps for jurisdictional, wetland-related, mitigation issues.

Compliance and enforcement

HDOH handles civil enforcement for violations of the state's water quality standards, and in 2005, brought one enforcement case. Criminal violations are handled by the State Attorney General's Office.²⁷

III. Water Quality Standards

²² Letter from Gary Gill, Deputy Director of Env'tl. Health Admin., to Lt. Colonel Ronald N. Light, District Eng'r Dep't of the Army 2-3 (July 5, 2002), *available at* <http://www.hawaii.gov/health/environmental/water/cleanwater/forms/pdf/wqc543.pdf>. The Nationwide Permits that Hawaii has conditionally approved are: NWP#3 - Maintenance; NWP#4 - Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities; NWP#5 - Scientific Measurement Devices; NWP#6 - Survey Activities; NWP#12 - Utility Activities; NWP#13 - Bank Stabilization; NWP#14 - Linear Transportation Projects; NWP#16 - Return Water From Upland Contained Disposal Areas; NWP#18 - Minor Discharges; NWP#19 - Minor Dredging; NWP#22 - Removal of Vessels; NWP#25 - Structural Discharges; NWP#31 - Maintenance of Existing Flood Control Facilities; NWP#33 - Temporary Construction, Access, and Dewatering; NWP#36 - Boat Ramps; and NWP#38 - Cleanup of Hazardous and Toxic Wastes.

²³ *Id.* Definitions of the various water classifications are found in Hawaii Administrative Rules 11-54.

²⁴ Letter from Chiyome L. Fukino, M.D., Dir. of Health, to Lt. Colonel Ronald N. Light, District Eng'r Dep't of the Army, & Mr. Peter T. Young, Chair Dep't of Land and Natural Res. 2 (February 7, 2003), *available at* <http://www.hawaii.gov/health/environmental/water/cleanwater/forms/pdf/wqc536.pdf>.

²⁵ *Id.* at 2-17.

²⁶ Chen, *supra* note 20.

²⁷ *Id.*

Although wetlands are not explicitly included in Hawaii's definition of state waters, the Hawaii Administrative Rules specifically state that "basic" water quality standards apply to wetlands.²⁸ The rules also outline general numeric and narrative water quality criteria and also include criteria specific to "elevated wetlands," "inland waters," "marine waters," "marine bottom types," and "recreational areas."²⁹ Anti-degradation policies and use designations are also described.³⁰

IV. Monitoring and Assessment

Monitoring and assessment for wetlands

Hawaii does not have a formal program for wetland monitoring and assessment, but does conduct related activities through grant-funded projects.³¹

Monitoring and assessment for streams

The HDOH Environmental Planning Office's Water Quality Management Program updated the Hawaii Stream Bioassessment Protocol Version 3.01 in January 2002.³² The protocol employs a multimetric approach to assessment, establishes expectations of biotic quality, and standardizes assessment methods and sampling protocols.³³ For each stream, the protocol calls for a Stream Index of Biotic Integrity and a Stream Habitat Assessment.³⁴ Hawaii Stream Bioassessment Reports for five streams are available on HDOH's website.³⁵

V. Restoration and Partnerships

Hawaii does not operate a formal, state-level, wetland restoration program; however, HDLNR does conduct restoration-related activities for wetlands. For example, in 2003, DOFAW received a \$75,000 grant from the U.S. Environmental Protection Agency for the Hamakua Wetland Restoration and Monitoring Program at the Hamakua State Wildlife Sanctuary, a project that focuses on restoration.³⁶ Three other grants totaling \$2.4 million were awarded to DOFAW in 2007 from the U.S. Fish and Wildlife Service (FWS) National Coastal Wetland

²⁸ HAW. CODE R. § 11-54-5.2.

²⁹ *Id.* § 11-54.

³⁰ *Id.* § 11-54-3.

³¹ Personal communication with Scott Fretz, Haw. Dep't of Land and Natural Res. (Jan. 5, 2006).

³² Michael Kido, The Hawaii Stream Research Center, Center for Conservation Research and Training, University of Hawaii, *The Hawaii Stream Bioassessment Protocol Version 3.01*. (Jan. 2002).

³³ *Id.* at 4, 23.

³⁴ *Id.* at 5.

³⁵ Hawaii State Department of Health, *Water Quality Management Program*, at <http://www.hawaii.gov/health/environmental/env-planning/wqm/env-planning/wqm/wqm.html> (last updated Feb. 1, 2007).

³⁶ Press Release, US EPA Region 9, U.S. EPA Awards \$75,000 to Hawai'i Department of Land and Natural Resources (Dec. 15, 2005), available at <http://yosemite1.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/a5a2257a5b5d7eb2852570d8005e1569!OpenDocument>.

Program; two of these grants fund restoration activities.³⁷ Grants and other non-state monies typically fund restoration projects, which often involve partners such as local non-governmental organizations and federal agencies.³⁸

DOFAW also works with volunteers, on habitat restoration, including wetlands. Volunteers help to improve habitat by eradicating invasive species and removing trash at specific sites.³⁹ DOFAW also has partnerships with private land conservation agencies and landowners to acquire or restore and manage wetlands.⁴⁰

On a case-by-case basis, the CWB's Polluted Runoff Control Program also provides CWA §319 grants for qualified wetland restoration projects.

VI. Education and Outreach

Hawaii has no formal, strategic plan specifying education goals for a comprehensive state wetland program; however, many of the grant-funded projects that the state administers include an educational component.⁴¹ For example, as part of the Hamakua Wetland Restoration Program, schoolchildren constructed a website about the importance of wetlands.⁴² Also, DOFAW provides access to state-managed wetlands and logistical support for education and outreach programs that target citizens, universities, teachers, and youth.⁴³

VII. Coordination with State and Federal Agencies

HDOH coordinates regularly with the U.S. Army Corps of Engineers and the FWS on §404 permit applications. Furthermore, HDOH and HDLNR consult (and, in some cases, hold memoranda of agreement/understanding) with each other and the state transportation agency on multiple wetland-related issues, which may include waterbird recovery, habitat/ecosystem improvements/restoration, water quality remediation, wetland conservation, anchialine pool protection, and native shrimp recovery. The state agencies also often work with the USDA Natural Resources Conservation Service and nonprofit conservation organizations.⁴⁴

The Pacific Coast Joint Venture, which has a Hawaii steering committee, includes biologists from DOFAW. The Joint Venture is developing a strategic plan for Hawaii that will identify

³⁷ Personal communication with Megan Laut, Haw. Dep't of Land and Natural Res. (Apr. 25, 2007).

³⁸ See Ducks Unlimited, *Hawaii Region 32*, at <http://www.ducks.org/conservation/initiative32.aspx> (last visited July 24, 2007); National Resource Conservation Service, *Wetlands Reserve Program in Hawaii*, at <http://www.hi.nrcs.usda.gov/programs/prwrp99.html> (last visited July 24, 2007); U.S. EPA, *River Corridor and Wetland Restoration*, at http://www.epa.gov/owow/wetlands/restore/5star/fy04grants.html#kihapai_hi (last updated Mar. 17, 2006).

³⁹ Personal communication with Christina Maguire, Haw. Dep't of Land and Natural Res. (Apr. 24, 2007).

⁴⁰ Laut, *supra* note 37.

⁴¹ *Id.*

⁴² See *Hamakua Marsh*, at <http://hamakuamarsh.com> (last visited July 24, 2007).

⁴³ Fujikawa, *supra* note 15.

⁴⁴ Chen, *supra* note 20.

wetland areas in the state to target for restoration and/or acquisition.⁴⁵ In addition, the state's recently completed Comprehensive Wildlife Conservation Strategy includes wetland priorities.⁴⁶

VIII. Acronyms and Abbreviations

Commission – Commission on Water Resource Management

CWA – Clean Water Act

CWB – Clean Water Branch

DAR – Division of Aquatic Resources

DOFAW – Division of Forestry and Wildlife

FWS – U.S. Fish and Wildlife Service

HDLNR – Hawaii Department of Land and Natural Resources

HDOH – Hawaii Department of Health

SPGP – Statewide Programmatic General Permit

USDA – U.S. Department of Agriculture

⁴⁵ Laut, *supra* note 37.

⁴⁶ See: Hawaii Department of Land and Natural Resources – Division of Forestry and Wildlife, *Aloha and Welcome to Hawaii's Comprehensive Wildlife Conservation Strategy*, at <http://www.state.hi.us/dlnr/dofaw/cwcs/> (last updated Oct. 4, 2005).