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State Wetland Protection

Status, Trends, & Model Approaches

A 50-state study by the
Environmental Law Institute

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Appendix: State Profiles

Nevada

I. Overview

More than half of Nevada's historic wetland acreage has been lost to: diversion of flow for agricultural, municipal, and industrial water uses; filling and draining for development; and stream channel erosion and modification.[1] In some areas, such as the terminal basins of the Truckee, Carson, and Humboldt Rivers, more than 80 percent of wetlands have been lost. The state's remaining wetlands are threatened by non-native plant invasions (e.g., tamarisk, perennial pepperweed, and hoary cress); discharges from irrigated farmland, abandoned mines, and urban stormwater containing high levels of salts and metallic compounds; and livestock and wild horse grazing.[2]

Wetlands and riparian areas cover a relatively small portion of land in Nevada, but they are an important ecological feature in the state.[3] Of the 700-plus taxa tracked by the Nevada Natural Heritage Program (NNHP), approximately 230 are wetland dependent. Moreover, of the 69 highest priority sites identified by the NNHP, 53 include wetland-dependent taxa.[4] Thus, Nevada agencies are undertaking a variety of restoration, conservation, and planning efforts intended to improve wetland management in the state.

II. Regulatory Programs

Wetland definitions and delineation

Wetlands in Nevada are protected along with other open waters. Nevada defines "waters of the state" as:

> all waters situated wholly or partly within or bordering upon this State, including but not limited to: (1) All streams, lakes, ponds, impounding reservoirs, marshes, water courses, waterways, wells, springs, irrigation systems and drainage systems; and (2) All bodies or accumulations of water, surface and underground, natural or artificial.[5]

"Wetlands" are defined as land that has:

> (1) A predominance of hydric soil; (2) Is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and (3) Under normal conditions does support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.[6]

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[1] State of Nevada, *Nevada Natural Resources Status Report: Wetlands, at* http://dcnr.nv.gov/nrp01/bio07.htm (last visited Sept. 19, 2007).
[2] *Id*.
[3] *Id*.
[4] Nevada Natural Heritage Program, *Application for Nevada Q1 Grant, Round 5, HCP Category* (Sept. 28, 2006) (on file with author).
[5] NEV. REV. STAT. 445A.415.
[6] *Id*. 244.388(3)(e).

Nevada relies on the U.S. Army Corps of Engineers' 1987 *Wetland Delineation Manual* for delineation of regulated wetlands.[7]

Organization of state agencies

Nevada regulates, monitors, and restores wetlands through a variety of agencies and offices, including the Nevada Department of Conservation and Natural Resources (NDCNR) and the Nevada Department of Wildlife (NDOW). While the state's only FTE dedicated to wetland-related activities is housed in the NNHP, several other agencies have staff that spend a portion of their time working on issues related to wetlands. Much of the wetland activities in Nevada are funded through federal grant programs.

Nevada Department of Conservation and Natural Resources. The Nevada Department of Conservation and Natural Resources oversees several divisions and programs that have jurisdiction over wetlands. These include the Division of Environmental Protection (DEP), the Natural Heritage Program (NNHP), and the Division of Water Resources (DWR).

NDCNR-DEP, Bureau of Water Quality Planning oversees development and implementation of water quality standards, §401 water quality certification, monitoring, and wetlands education, among other activities.[8] NDCNR-DEP, Bureau of Water Pollution Control issues discharge permits, enforces the state's water pollution control laws and regulations, and provides technical and financial assistance to dischargers.[9]

NNHP maintains an inventory and databases on the locations, biology, conservation, and management status of all threatened, endangered, sensitive, and at-risk species, biological communities, and noxious weed infestations in the state. NNHP also supplies information and technical services to meet diverse conservation, planning, development, land management, and research needs.[10]

NDCNR-DWR conserves, protects, manages, and enhances water resources for the state through the appropriation and reallocation of the public waters. In addition, DWR is responsible for quantifying existing water rights, monitoring water use, distributing water, and other tasks related to water allocation.[11]

Nevada Department of Wildlife. NDOW is charged with the preservation, protection, management, and restoration of wildlife and its habitat, which often includes wetlands. The

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[7] Personal communication with Glen Gentry, Bureau of Water Quality Planning, Monitoring Branch Supervisor (July 12, 2007). *See* 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.

[8] Nevada Division of Environmental Protection Bureau of Water Pollution Control, *at* http://ndep.nv.gov/bwpc/bwpc01.htm (last visited Sept. 19, 2007).

[9] *Id*.

[10] *See* Nevada Department of Conservation and Natural Resources Natural Heritage Program, http://heritage.nv.gov/index.htm (last visited Sept. 19, 2007).

[11] *See* Nevada Department of Conservation and Natural Resources Division of Water Resources, http://water.nv.gov/ (last visited Sept. 19, 2007).

department prioritizes wetland resources for acquisition and management and preserves and restores wetland habitat throughout the state.

NDOW acquires or leases land and water for the establishment of Wildlife Management Areas (WMAs), which are managed to protect habitats for game fish, waterfowl, and furbearing mammals, as well as protected and at-risk species. Ten of the state's twelve WMAs contain aquatic wetland habitats totaling almost 60,000 acres. Wetland types mainly entail valley bottom riparian and marsh habitats, some with maintained diversions and reservoirs. The wetland policy plan applicable to WMAs recommends development of wetland management plans for each. Nevada Conservation Bonds have provided substantial funding to acquire wetland areas and water rights for WMAs.[12]

NDOW also administers the Habitat Proliferation Permit program for dredging in any river, stream, or lake. As part of the permitting process, biologists review the proposed operation and ensure that activities are not deleterious to fish or aquatic life.[13]

§401 certification

Nevada regulates wetlands primarily through §401 certification under the Clean Water Act.[14] The state makes an estimated 70-100 certifications decisions annually. An estimated 90 percent of the applications are approved, less than 5 percent are waived, and less than 5 percent are denied.[15] Decisions are based on quantitative and qualitative methodology, as well as the state's anti-degradation rule.[16] The certification process is described in the state's water quality provisions.[17]

Nationwide permits

NDCNR-DEP certifies, waives, and denies certification of nationwide permits (NWPs) in order to protect beneficial uses of state waters.[18] Certification with notification has been granted for several NWPs.[19] Permittees must notify the NDCNR-DEP, Bureau of Water Quality Planning at least 15 days prior to commencing work on the proposed activity.[20] Nevada has waived certification for several NWPs: oil and gas structures on the outer continental shelf (NWP #8);

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[12] NEVADA NATURAL HERITAGE PROGRAM, NEVADA WETLANDS PRIORITY CONSERVATION PLAN TECHNICAL REVIEW DRAFT 5-21 (Ed Skudlarek ed.) (2006).
[13] *Id.,* 5-22.
[14] Bureau of Water Quality Planning, *401 Water Quality Certification*, at http://ndep.nv.gov/bwqp/401cert.htm (last visited Sept. 19, 2007).
[15] Gentry, *supra* note 7.
[16] Bureau of Water Quality Planning, *supra* note 14.
[17] NEV. REV. STAT. 445A.620.
[18] Nevada Division of Environmental Protection - Bureau of Water Quality, *State of Nevada 401 Water Quality Certification Status for Current Nationwide Permits, at* http://ndep.nv.gov/bwqp/401cert_2.htm (last visited Sept. 19, 2007).
[19] Certification with notification has been granted for: aids to navigation (NWP #1); fish and wildlife harvesting, enhancement, attraction devices and activities (NWP #4); scientific measurement devices (NWP #5); survey activities (NWP #6); structures in fleeting and anchorage areas (NWP #9); mooring buoys (NWP #10); temporary recreational structures (NWP #11); oil spill cleanup (NWP #20); removal of vessels (NWP #22); modifications of existing marinas (NWP #28); moist soil management for wildlife (NWP #30); completed enforcement actions (NWP #32); and cleanup of hazardous and toxic waste (NWP #38). *Id.*
[20] *See Id.*

surface coal mining operations (NWP #21); Indian Tribe administered §404 programs (NWP 24); cranberry production activities (NWP #34); existing commercial shellfish aquaculture (NWP #48); coal mining activities (NWP #49); and underground coal mining activities (NWP #50).[21] Finally, certification was denied for those NWPs most applicable in Nevada in order to allow the state to provide a close review on an individual permit basis.[22] [23]

Mitigation

Nevada law authorizes county commissions to establish mitigation banks. The banks must use federal standards and are authorized to cooperate with nonprofits or public agencies.[24] There are several operational wetland mitigation banks in Nevada, including one associated with the Nevada Wash (described below) and another run by the Nevada Department of Transportation.

Compliance and enforcement

Nevada requires permits for discharges pollutants into waters of the state.[25] To maintain the quality of the state's waters, NDCNR-DEP, Bureau of Water Pollution Control issues permits for discharges; enforces permit conditions; and enforces law that prohibits unauthorized discharges.[26] Permits can be revoked, modified or suspended in whole or in part during its term for cause.[27] For enforcement purposes the Bureau can enter private property to inspect for possible violations.[28] They also may issue compliance orders, commence a civil action, or request that the Attorney General initiate criminal proceedings against a person found to be violating the Nevada Water Pollution Control Law.[29]

Violators to the state's water quality provisions are liable for civil penalties of up to $25,000 for each day of the violation.[30] Damages may include compensation for any loss or destruction of wildlife, fish or aquatic life.[31] Criminally negligent violators are guilty of gross misdemeanors

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[21] *Water Quality Certification Status, supra* note 18.
[22] Gentry, *supra* note 7.
[23] Nevada requires individual permits for structures in artificial canals (NWP #2); maintenance (NWP #3); outfall structures and associated intake structures (NWP #3); utility line activities (NWP #12); bank stabilization (NWP #13); linear transportation projects (NWP #14); U.S. Coast Guard approved bridges (NWP #15); returned water from upland contained disposal areas (NWP #16); hydropower projects (NWP #17); minor discharges (NWP #18); minor dredging (NWP #19); approved categorical exclusions (NWP #22); structure discharges (NWP #23); aquatic habitat establishment, enhancement, and restoration activities (NWP #27); residential developments (NWP #29); maintenance of existing flood control facilities (NWP #31); temporary construction access and dewatering (NWP #33); maintenance dredging of existing basins (NWP #35); boat ramps (NWP #36); emergency watershed protection and rehabilitation (NWP #37); commercial and institutional developments (NWP #39); agricultural activities (NWP #40); reshaping existing drainage ditches (NWP #41); recreational facilities (NWP #42); stormwater management facilities (NWP #43); mining activities (NWP #44); repair of uplands damaged by discrete events (NWP #45); discharges in ditches (NWP #46); and pipeline safety program designated time sensitive inspections and repairs (NWP #47). *Water Quality Certification Status, supra* note 18.
[24] NEV. REV. STAT. 244.388.
[25] *Id*. 445A.775, 445A.780.
[26] Nevada Division of Environmental Protection- Bureau of Water Pollution Control, *More About Water Pollution Control, at* http://ndep.nv.gov/bwpc/more.htm (last visited Sept. 19, 2007).
[27] NEV. REV. STAT. 445A.600.
[28] *Id*. 445A.655.
[29] *Id*. 445A.675.
[30] *Id*. 445A.700.
[31] *Id*. 445A.700(b).

and are punishable by a fine of up to $25,000 for each day of the violation or by imprisonment in the county jail for not more than one year, or by both fine and imprisonment.[32]

As part of NDOW's Habitat Proliferation Permit program, the Department may invoke enforcement provisions that make the deposit of substances deleterious to fish a misdemeanor.[33]

III. Water Quality Standards

Nevada's surface water quality standards apply to wetlands because wetlands are included in the definition of waters of the state. Standards are narrative and biological. The state's anti-degradation rule also applies to wetlands. Open water designated uses that relate to wetlands include wildlife propagation and water quality.[34]

IV. Monitoring and Assessment

Nevada monitors wetlands as part of the state's surface water monitoring program that tracks chemical and biological criteria. The surface water quality monitoring program is funded by the U.S. Environmental Protection Agency (EPA).[35]

NNHP also is developing the Nevada Habitat Conservation Plan for Springs of Biodiversity Significance ("Springs HCP") in collaboration with The Nature Conservancy, Desert Research Institute, and NDOW. This statewide information system will contain wetland geographic and attribute data (e.g., physical, biological, ecological community, hydrological, and land use features, as well as conservation/management status). Specific project objectives include: developing a database of locations, site characteristics, ecological attributes, and occurrences of rare and at-risk species or communities; developing a mechanism for making the data available to the public; developing a set of key attributes for measuring the health of spring ecosystems; ranking threats to the springs; and providing public land managers and private landowners with strategies for managing springs. The total project cost is $325,120: $275,120 from the Question One Nevada Conservation Bond Initiative (see also *V. Restoration and Partnerships*, below) and $50,000 from EPA.[36] NNHP currently has two years of funding from EPA for a wetland ecologist. The project is intended to be long-term and continuous. Data will be obtained from a survey of 200 spring wetlands where rare or at-risk species have been found and from other knowledgeable biologists and ecologists.[37]

The Desert Research Institute also maintains and occasionally updates a spring survey database for approximately 1,400 springs. Reconnaissance-scale field surveys were conducted during the

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[32] *Id*. 445A.705.
[33] Nevada Natural Heritage Program, *supra* note 12.
[34] NEV. ADMIN. CODE § 445A.124.
[35] Nevada Division of Environmental Protection- Bureau of Water Quality Planning, *Water Quality Monitoring Branch, at* http://www.ndep.nv.gov/bwqp/monitor.htm (last visited Sept. 19, 2007).
[36] Nevada Natural Heritage Program, *supra* note 4.
[37] Personal Communication with Ed Skudlarek, Wetland Planner, Nev. Natural Heritage Program (July 17, 2007).

1990s, providing baseline data that will be used to assess changes in biological, ecological, disturbance, use and management characteristics.[38]

V. Restoration and Partnerships

A variety of wetland conservation and improvement projects are underway throughout the state. For example, wetlands are included in broader environmental restoration efforts undertaken by the conservation districts.[39]

Another program, the $200 million Question One Nevada Conservation Bond Initiative, authorizes the state to issue bonds for projects to protect and preserve natural resources in Nevada, including wetlands. NDOW is working with the public to determine how to best use its $27.5 million portion of those bonds.[40] Through the initiative, NDOW works to create partnerships and leverage funds such as Fish and Wildlife Restoration Federal Aid monies, state motorboat fuel taxes, donations, and volunteer services. Funds are used to purchase land or acquire interest in real or personal property for the enhancement, protection, and management of wildlife and habitat, as well as some related recreational opportunities. Allocations also may be used for the development and renovation of facilities or the improvement of existing habitats for fish and wildlife. Acquisition projects are selected based on NDOW plans, plans of partner organizations, and specific criteria, including potential for wetland protection and development.[41] As of 2007, nine pending or completed enhancement projects, and seven pending or completed acquisitions, have been selected for their wetland value.[42]

In 1998, NDOW completed an EPA-funded project to develop a Wetland Conservation Plan for the state WMAs.[43] The plan is an overall strategy that is intended to direct implementation plans on more specific topics.[44] For example, the Springs HCP, described above, was developed under this initiative. In addition, the State Board of Wildlife Commissioners adopted policies addressing the plan's concern regarding increased demands for limited water resources and the importance of strategies to keep wetlands and other water-related habitats viable and functioning.[45]

In 2006, the Nevada Wildlife Action Plan was completed, providing a comprehensive wildlife conservation strategy to both examine the health of wildlife and prescribe actions to conserve

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[38] Nevada Natural Heritage Program, *supra* note 12.
[39] NEV. REV. STAT. 458.355.
[40] Nevada Department of Wildlife, *Conservation – Nevada Conservation Bond History, at* http://www.ndow.org/wild/conservation/q1/history.shtm (last visited Sept. 19, 2007).
[41] *See* Nevada Department of Wildlife, *Conservation – Nevada Conservation Bond Criteria, at* http://www.ndow.org/wild/conservation/q1/criteria.shtm (last visited Sept. 19, 2007).
[42] *See* Nevada Department of Wildlife, *2002 Nevada Conservation Bond Project Summaries, at* http://www.ndow.org/wild/conservation/q1/project_sum.shtm#acq (last visited Sept. 19, 2007).
[43] Personal communication with Larry Neel, Nev. Dep't of Wildlife, Wildlife Action Plan Coordinator and Nongame Biologist (Aug. 20, 2007)
[44] *Id.*
[45] Nevada Natural Heritage Program, *supra* note 12.

wildlife and vital habitat, before they become more rare and costly to protect.[46] The plan identifies habitat types that will be the focus of implementation plans, including wetlands. For example, the plan identifies springs and springbrooks as key habitat for maintaining wildlife diversity and describes actions aimed at preventing the loss of spring habitats and restoring their natural functions and ecological communities.[47] Ultimately, each identified habitat type will be the focus of an application plan that will contain a prioritization of actions.[48]

The state also participates on the Intermountain West Joint Venture (IWJV), a public-private partnership dedicated to the conservation of bird habitat in selected portions of the 11 western states stretching from Canada to Mexico.[49] The IWJV implements the North American Waterfowl Conservation Act, which supports projects to protect and restore wetlands. NDOW seeks funding to implement Wetland Conservation Plan priorities through the IWJV.[50] The Nevada steering committee, coordinated by the U.S. Fish and Wildlife Service, includes representatives from federal and state agencies and conservation organizations such as: Bureau of Land Management, Bureau of Reclamation, NDOW, Nevada Highway Patrol, USDA Forest Service, Audubon Society, local waterfowl associations, and Ducks Unlimited.[51] The steering committee meets several times each year to rank projects to propose to the larger IWJV.[52]

Finally, Nevada coordinates with the USDA Natural Resources Conservation Service (NCRS), city and regional authorities, utilities, and citizens' groups on a large-scale wetlands restoration project called the Las Vegas Wash.[53] The Wash is a restored wetland that filters stormwater runoff, reclaimed water, and urban runoff and provide recreational and educational opportunities within Las Vegas.[54] Citizen organizations, local utilities, and federal and state agencies are cooperating to implement a comprehensive plan that focuses on erosion control, environmental monitoring, and wetland construction. Primary benefits include improvement of: Lake Mead water quality, outdoor recreation opportunities for Las Vegas Valley residents and visitors, and habitats for Mojave Desert wildlife.[55]

VI. Education and Outreach

NDCNR-DEP, Bureau of Water Quality Planning has conducted Project WET (Water Education for Teachers) since 2001. Project WET is an interdisciplinary water education program designed to supplement K-12 curriculum by integrating water education into any subject in the classroom. In Nevada, workshops are available throughout the state for educators. The curriculum includes

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[46] Nevada Wildlife Action Plan Summary, *available at* http://www.teaming.com/summary_reports/Nevada.pdf (last visited Sept. 19, 2007).
[47] *See* Nevada Department of Wildlife, *Conservation Plans – Nevada Wildlife Action Plan, at* http://www.ndow.org/wild/conservation/cwcs/index.shtm (last visited Sept. 19, 2007).
[48] Neel, *supra* note 43.
[49] *See* Intermountain West Joint Venture, http://www.iwjv.org/about.htm (last visited Sept. 19, 2007).
[50] *Id.*
[51] *Id.*
[52] *Id.*
[53] Skudlarek, *supra* note 37.
[54] Las Vegas Wash Coordination Committee, *What is the Wash?, at* http://www.lvwash.org/wash/main_thewash.html (last visited Sept. 19, 2007).
[55] State of Nevada, *supra* note 1.

an introduction to water in Nevada, highlighting surface water and groundwater resources, basic hydrology, water uses, Nevada water law, water issues in the state, and pollution prevention.[56] Workshop and training materials also include *Wow! The Wonders of Wetlands*, an instructional guide for teachers developed by Environmental Concern, Inc., and *Explore Nevada's Amazing Wetlands*, a curriculum developed by the University of Nevada Cooperative Extension.[57]

VII. Coordination with State and Federal Agencies

As described above, Nevada collaborates with state and federal agencies on a variety of restoration projects, as well as mapping and monitoring and assessment.

NNHP is preparing the Nevada Wetland Priority Conservation Plan in association with the Nevada Division of State Parks and NDOW. The plan is financed through a planning grant from the National Park Service under the provisions of the Land and Water Conservation Fund Act of 1965, as well as an EPA Wetland Program Development Grant.[58] The plan, which replaces a 1988 wetlands plan, includes: a description of the conservation status of Nevada's wetlands; data on wetland quality (e.g., ecosystem functions and socioeconomic services provided by the state's wetlands); information on threats to Nevada wetlands; plans and priorities for the conservation of wetlands in Nevada; and management strategies for the state's wetland resources.

VIII. Acronyms and Abbreviations

DEP – Division of Environmental Protection
DWR – Division of Water Resources
EPA – U.S. Environmental Protection Agency
IWJV – Intermountain West Joint Venture
NDCNR – Nevada Department of Conservation and Natural Resources
NDOW – Nevada Department of Wildlife
NNHP – Nevada Natural Heritage Program
NRCS – USDA Natural Resources Conservation Service
NWP – Nationwide Permit
Springs HCP – Nevada Habitat Conservation Plan for Springs of Biodiversity Significance
USDA – U.S. Department of Agriculture

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[56] Nevada Division of Environmental Protection- Bureau of Water Quality Planning, *Project Wet, available at* http://ndep.nv.gov/bwqp/wet01.htm (last visited Sept. 19, 2007).

[57] The Cooperative Extension has been providing trainings for K-12 teachers since 2005. While the curriculum targets middle schoolers, it has broader applicability. It is written for use by teachers and includes nine lessons, some in the classroom and some for use in the field. The curriculum includes sample data for teachers who are unable to take the students to the field. The curriculum was written by Susan Donaldson, Associate Professor and Water Quality Education Specialist, University of Nevada Cooperative Extension, Melody Hefner, NEMO Nevada Program Assistant, and Mae Gustin, Associate Professor Department of Environmental and Resource Sciences, University of Nevada. Personal Communication with Susan Donaldson, Associate Professor and Water Quality Educ. Specialist, Univ. of Nev. Coop. Extension (July 18, 2007).

[58] Nevada Natural Heritage Program, *supra* note 12.

(Project) WET – Water Education for Teachers
WMA – Wildlife Management Area