



## **WETLANDS** **(1992, R2000, R2001, R2007, R2019)**

### **Policy Statement**

The American Society of Landscape Architects believes that wetlands are essential to earth's ecological systems, and it supports the protection, conservation, restoration, and creation of wetland resources. Wetlands are diverse and complex ecosystems that remove pollutants, reduce flood hazards, provide critical habitat, provide open space, mitigate climate change impacts, and provide recreational opportunities. ASLA advocates for viable policies and strategies that ensure the health and function of wetland ecosystems.

As pressures continue to increase in wetlands and surrounding land uses, ASLA encourages site-specific solutions that preserve and enhance the functions of wetlands, whether mitigated, created or preserved. ASLA promotes comprehensive consideration of direct and indirect impacts on wetlands in all policies, designs, development endeavors, and management practices.

### **Rationale**

Wetlands deliver a wide range of ecosystem services that contribute to human well-being, such as water supply, water purification, flood regulation, carbon sequestration, agricultural productivity, erosion control, coastal protection, recreational opportunities, and tourism. Wetlands are critical to overall watershed health. Elements in the watershed but not within the wetlands themselves must be considered in any wetlands project. Many wetlands remain wet year round; however, other wetlands may contain water reserves for only a few consecutive days. These ephemeral wetlands are defined by wet-dry cycles as in the case of playas, vernal pools, flood plains, wet meadows and prairies, cypress ponds, perched depressions and potholes. Wetlands are critical to the survival of wildlife and plant species.

In the past 300 years, 50% of wetlands in the contiguous United States have been lost. Many more have been altered, degraded or otherwise adversely impacted.<sup>i</sup> For example, California alone has lost 90% of their wetlands in the past 200 years.<sup>ii</sup> Development of adjacent lands significantly threatens wetland resources; therefore, proper analysis, protection, planning, design, and management must be in the context of the larger watershed/ecosystem.

Causes of degradation and loss include land conversion, infrastructure development, loss of hydrologic connections, eutrophication and pollution, and water diversion. Sea



level rise, drainage structures (levees, canals, impoundments, etc.), and invasive species also impact wetlands. Excess nutrient loading and other pollutants lead to serious impacts on human health, plant and animal species, tourism, agriculture, and aquaculture. Health concerns include direct exposure to algae blooms and other toxic elements, nitrates in drinking water, and harmful by-products of water treatment.<sup>iii</sup> U.S. tourism alone loses close to \$1 billion each year, mostly through losses in fishing and boating activities, as a result of water bodies that have been affected by nutrient pollution and harmful algal blooms.<sup>iv</sup> As public awareness and government-issued warnings to avoid toxic areas increase, damages to tourism-related economies, real estate markets, and other economic drivers will increase.

“Mitigation rarely replaces in full the wetland functions that are lost due to permitted impacts.”<sup>v</sup> Many land parcels and activities allow exemptions from permit requirements, thus exacerbating degradation and loss. Where mitigation is allowed through construction of replacement wetlands, landscape architects create appropriate solutions that function with and enhance ecological resources. Beyond quantifiable functions, landscape architects also relate their projects to the larger contexts of hydrologic linkages on and off site, site character, and user needs.

Green infrastructure (nature-based solutions) have often been found to be more stable, less expensive to build and maintain, and provide more ecosystems services and other benefits than traditional greywater solutions. Landscape architects have long taken the lead on nature-based solutions that extend cost-benefits through enhanced recreation, additional compatible uses, habitat enhancement and creation, and building upon the sense of place inherent in the local and regional ecosystems.

The Society supports:

- Sound federal and state legislation and policies for wetland protection, conservation, rehabilitation, and enhancement.
- Increased transparency and accountability of government and private-sector performance in decisions that affect wetlands.
- Governmental wetlands determination, classification and mitigation processes based on science, not politics.
- Protection, preservation, and restoration of ephemeral wetlands .
- Research, monitoring, and dissemination of knowledge to spur creative solutions and ecologically functioning wetlands at a variety of scales and situations.



- Wetland system assessment at the watershed planning level to support preservation, restoration, and creation of these ecological systems.
- Programs to improve ecological literacy and responsibility through education for professionals, members of the general public and in elementary and secondary schools and colleges.
- A national program to restore existing wetlands that have been degraded to a point of declining functional value.
- Financial investment in the preservation, restoration, maintenance, creation of wetland resources and funding of research,
- Development and wise use of sustainable water supplies that help conserve and protect wetlands and other water resources.

### **Resources:**

EPA - Environmental Protection Agency (WATER QUALITY)

CORPS - Army Corps of Engineers; Section 404 (NAVIGABLE WATERS)

NOAA - National Oceanic and Atmospheric Administration (COASTAL ZONES MANAGEMENT)

FWS - Fish and Wildlife Service (FISH & ANIMAL SPECIES)

NRCS - National Resources Conservation Service (AGRICULTURE)

ASWM - Association of State Wetland Managers (MANAGEMENT)

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<sup>i</sup> [https://www.aswm.org/pdf\\_lib/watershed/healthy\\_wetlands\\_healthy\\_watersheds\\_white\\_paper.pdf](https://www.aswm.org/pdf_lib/watershed/healthy_wetlands_healthy_watersheds_white_paper.pdf)

<sup>ii</sup> [https://mywaterquality.ca.gov/eco\\_health/wetlands/extent/loss.html](https://mywaterquality.ca.gov/eco_health/wetlands/extent/loss.html)

<sup>iii</sup> <https://www.epa.gov/nutrientpollution/effects-human-health>

<sup>iv</sup> <https://www.epa.gov/nutrientpollution/effects-economy>

<sup>v</sup> [https://www.aswm.org/pdf\\_lib/wetland\\_restoration\\_whitepaper\\_041415.pdf](https://www.aswm.org/pdf_lib/wetland_restoration_whitepaper_041415.pdf)