

## Water Quality

# WETLANDS

Photo Courtesy of Lynda Saul

### WETLANDS FILTER OUT POLLUTANTS AND TRAP SEDIMENTS

- ▶ Wetlands act as filters by slowing water flow, allowing sediments to settle, and absorbing and breaking down polluting nutrients.
- ▶ Wetlands can eliminate 15 to over 50% of the nitrogen, up to 60% of some metals, and 30 and 70% of phosphorus from entering streams and other water bodies.
- ▶ Wetlands can filter up to 90% of sediments from runoff, helping to purify water and slow down erosion.
- ▶ Treatment of wastewater by constructed wetlands could cost 60% less than conventional treatment methods.

### BUFFERS PRESERVE WETLAND WATER QUALITY

The upland area surrounding a wetland—or the wetland buffer—is essential for maintaining wetland water quality and wildlife habitat. When surrounded by parking lots and buildings, a wetland's functions may be significantly weakened. But, healthy wetland buffers can protect and maintain wetland functions by removing sediments and pollutants from surface water runoff, removing nutrients and contaminants from upland sources, and maintaining habitats for wetland species.

In general, wide, densely vegetated buffers are better than narrow, sparsely vegetated buffers. The most effective buffer size depends on the wetland type, intensity of surrounding land use, watershed characteristics, and desired buffer function. For example, wetland buffers of 30 to greater than 100 feet may be most effective for removing sediment and phosphorous, while 100- to greater than 160-foot buffers may be most effective for removing nitrogen, and 100- to greater than 300-foot buffers may be most effective for wildlife protection.

Local governments are best positioned to regulate activities and development in wetland buffer areas. A well designed local buffer ordinance clearly defines its objectives, the wetlands to be protected, buffer dimensions, allowable activities, review procedures, and enforcement procedures. Visit [www.eli.org](http://www.eli.org) for more information on wetland buffers.

### WETLANDS IN A CHANGING CLIMATE

A changing climate will bring unpredictable rainfall, earlier snow melt, and more frequent and intense storms. Greater precipitation in some regions may increase surface runoff and soil erosion. In rural areas, that could result in more chemicals, fertilizers, and sediments reaching rivers and lakes from farms. In urban areas, high percentages of impervious surfaces could exacerbate this problem. This increase in polluted runoff may overwhelm the capacity of wetlands to filter harmful pollutants.

# National Wetlands Awards

*For the past 20 years, the National Wetlands Awards program has honored leaders in wetland conservation, research, and education. These wetland champions personify the concept of “think globally, act locally,” dedicating countless hours and resources to our nation’s wetlands.*

## MAKING AN IMPACT



Photo Courtesy of Sky Jones-Lewey

2004 Education and Outreach recipient Sky Jones-Lewey (behind the workshop sign) is the Resource Protection and Education Director for the Nueces River Authority. The organization works across 23 watersheds that spread over 17,000 square miles in Texas. The water quality functions of the wetlands in the Nueces Basin are threatened by erosion, invasion of non-native species, trash and illegal dumping, and the alteration of streambeds. Given that most of the Basin’s riparian lands are privately owned, the goal of the network is to educate local landowners about riparian function. “The biggest obstacle to riparian preservation is a lack of understanding and awareness about how riparian areas, creeks, and rivers work,” says Ms. Jones-Lewey. “The best opportunity for riparian preservation lies in education.”

While the project is voluntary, approximately 190 landowners have attended training sessions to learn about the economic benefits of protecting riparian functions on their properties. The Nueces River Authority hopes to protect the headwater streams that lead into the Nueces River by giving landowners the knowledge and tools to make the right choices. This project is the first of its kind in Texas, and as a result of its success there are hopes to create a similar program for the entire state. Learn more, visit [www.nueces-ra.org/CP/LS/index.php](http://www.nueces-ra.org/CP/LS/index.php).

## YOU CAN MAKE A DIFFERENCE

**LEARN** more about wetland habitats and restoration efforts in your area, at [www.ducks.org](http://www.ducks.org).

**CONTACT** your state wetland program or your local natural heritage program at [www.natureserve.org/visitLocal](http://www.natureserve.org/visitLocal).

**EDUCATE** friends, family, local reporters, and elected officials about the importance of wetlands.

**VISIT** us online, check out former National Wetland Awards recipients at [nationalwetlandsawards.org](http://nationalwetlandsawards.org).

**VOLUNTEER** with a local conservation group or floodplain restoration project.

**PROTECT** wetlands on your own land. Find out how at [www.aswm.org/fwp/consultant/index.htm#guides](http://www.aswm.org/fwp/consultant/index.htm#guides).

*The National Wetlands Awards are administered by the Environmental Law Institute and supported by the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, USDA Natural Resources Conservation Service, USDA Forest Service, Federal Highway Administration, and NOAA Fisheries.*