

Developers are increasingly faced with making land use decisions that may involve potential impacts to wetlands. Sound planning and design can turn wetlands into a developmental asset, rather than a liability. This fact sheet presents general wetland information and explains how developers can play a vital role in wetland protection without sacrificing the bottom line.

## WHAT IS A WETLAND?

Wetlands are areas of land where the soils are saturated for varying periods of time during the growing season. In addition; wetland soils contain little or no oxygen and as a result, support plants adapted to such conditions. Examples of wetland plants common to the Northern Great Plains and Rocky Mountain regions include cattails, willows, rushes, sedges and cottonwoods.

### **VALUES AND FUNCTIONS**

Wetlands have a variety of functions and values, many of which can

> enhance development projects. Studies show that residential and commercial developments that harmonize with natural landscapes and contain wildlife receive greater public-

ity, and have higher rental rates and faster occupancy.

monetary value of the site.

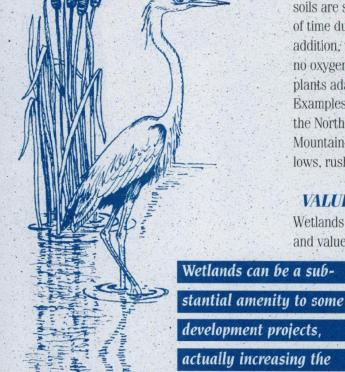
Wildlife Habitat: Urban wetlands provide food sources, shelter and other habitat needs for many fish and wildlife species, including endangered species.

Waterfowl, beavers and red-winged blackbirds are examples of species commonly found in the Northern Great Plains and Rocky Mountain regions.

#### Flood Protection and Water

Quality: Wetlands have the ability to hold large volumes of water and release it slowly during heavy storms, reducing the risk of property damage. Wetlands filter and capture sediments, nutrients and other pollutants from heavy water flows, thereby improving water quality.

Aesthetics, Open Space and Recreation: Wetlands can provide natural buffers between residential areas and highways. They can be used as greenways to enhance the landscape, and help diversify development tracts. Nature trails and bike paths adjacent to wetland areas add benefits to development projects, as communities increasingly place more value on open space.





## WHAT DEVELOPERS CAN DO TO PROTECT WETLANDS

Preserving existing wetlands is the single most important thing developers can do to conserve wetland resources. The second most important thing is to restore drained wetlands. In addition, planting trees and other plants along stream banks reduces erosion and helps protect water quality.

Oftentimes it is cost-effective to prepare a project plan that avoids wetlands altogether. If this is not possible, a good land plan can turn a wetland into an asset. If you need assistance identifying wetlands on your property, contact the Army Corps of Engineers, the U.S. Fish and Wildlife Service or the Environmental Protection Agency (EPA) office in your area.

Consult with a wetlands expert during the initial design of your project. This approach should minimize conflicts with wetlands regulations, and it demonstrates to citizens your effort to protect vital resources.

## WHAT DEVELOPERS NEED TO KNOW

Section 404 of the nation's Clean Water Act is the primary means of wetland protection. Section 404 regulates the discharge of dredged and fill materials into the waters of the United States; including wetlands. It also establishes a permit program to ensure that such discharges comply with requirements. The U.S. Army Corps of Engineers and the Environmental Protection Agency jointly administer this permitting process. The U.S. Fish and Wildlife Service and other state agencies have advisory roles.

If you are planning a project which may involve wetlands, contact the Corps of Engineers office in your area and ask about the permitting requirements that may be applicable to your project. Developers who fail to obtain the necessary 404 permit can be subject to severe penalties and may be required to repair the damage they cause to wetlands.

### REFERENCES

A Citizen's Handbook for Wetland Protection in the Rocky Mountain and Northern Great Plains Regions. U.S. Environmental Protection Agency, Region 8. 1989.

Dorward, Sherry. *Design for Mountain Communities: A Landscape and Architectural Guide.* Van Nostrand Reinhold. 1990.

Our Urban Wetlands: An Endangered Resource. A video available from U.S. Environmental Protection Agency, Region 8.

Restoration of Aquatic Ecosystems: Science, Technology and Public Policy. National Research Council, National Academy Press, Washington, D.C., 1992.

Wetlands: Development Assets.
David Jensen Associates, Inc., land
planners, 1451 S. Parker Rd., Denver,
CO 80231.

Wetlands in the Rocky Mountains and Northern Great Plains. U.S. Environmental Protection Agency, Region 8 brochure. 1992.

A wetlands poster is available on request. U.S. Environmental Protection Agency, Region 8, 1992.

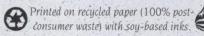
# FOR MORE INFORMATION

Please contact:

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