



# WETLANDS FACT SHEET #25

## Wetlands and Runoff

Since wetlands are typically the lowest points on the landscape, they often receive runoff from surrounding land. Runoff can be collected, conveyed or discharged from conduits, pipes, animal feedlots, waste treatment plants or floating crafts. In addition, precipitation, atmospheric deposition, seepage, or hydrologic modifications can result in runoff that moves over and through the ground picking up natural or anthropogenic pollutants, which then become deposited directly into surface or groundwater. In either case, as runoff move across the land, water picks up and carries with it pollutants which ultimately end up in rivers, lakes, groundwater, and wetlands.

### *TO USE OR NOT TO USE?*

Because wetlands have a natural water quality improvement function, there has been a tremendous amount of interest in using wetlands to treat runoff from urban areas, agricultural lands, and other pollutant sources. There are significant opportunities to protect and restore wetlands and riparian areas as one part of programs addressing runoff. However, the critical question is: "What can wetlands safely handle before they are contaminated or their functions degraded?" While wetlands do provide valuable water quality protection for downstream rivers, lakes, and estuaries, the quality of the wetlands, as waters of the United States, should also be protected. Decisions that route runoff into wetlands, either inadvertently or by design, should be carefully evaluated and adequate wetlands protection should be provided, including use of best management practices (BMPs) and monitoring how well they work.

### EPA PROGRAMS

- **Clean Water Act §402(p)**  
Section 402(p) requires stormwater permits for four major classes of stormwater discharges: (1) a discharge with respect to which a permit has been issued under Section 402 before the date of the enactment of this subsection, (2) a discharge associated with industrial activity, (3) a discharge from a municipal separate stormwater sewer system serving an incorporated or unincorporated, urbanized population greater than 100,000, and (4) a discharge that contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This program has issued guidance for preparation of permit applications for regulated municipal and industrial stormwater discharges. In addition, it stresses the use of best management practices (BMPs) to minimize or eliminate the contribution of pollutants to stormwater discharges to waters of the United States, including wetlands.
- **Clean Water Act §319**  
EPA supports a national program to control nonpoint sources of pollution. EPA stresses a watershed based approach to nonpoint source management which can include protection or restoration of wetlands and riparian areas to reduce nonpoint source pollution. EPA has funded a number of these projects under Section 319(h).
- **Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 §6217**  
EPA and the National Oceanic and Atmospheric Administration have developed guidance specifying management measures for nonpoint source pollution affecting coastal waters. Included in the guidance (released January 1993) is a chapter on protection and restoration of wetlands and riparian areas, and use of vegetated treatment systems for nonpoint source control.

**FOR MORE INFORMATION: call the EPA Wetlands Hotline\* at 1-800-832-7828**

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## UNTREATED RUNOFF: IMPACTS TO WETLANDS

Untreated runoff from agricultural land, urban areas, and other sources is a leading cause of water quality impairment. Siltation, excess nutrients, changes to water flows such as, more frequent inundation, and increased turbidity are responsible for most of the impacts to wetlands from runoff.

Impacts to wetlands have resulted in consequences such as changed species composition, increased pollutant loadings (e.g., heavy metals), and replacing complex wetland systems with less desired open water. Modifications of wetlands associated with some stormwater management practices have resulted in significant impacts to wetlands.

Some impacts have been particularly tragic, such as in Kesterson and Stillwater Wildlife Refuges, where untreated, contaminated run-

off resulted in mortality and deformities of wildlife populations, particularly fish and migratory birds.

## CURRENT STATUS

EPA is developing technical information that landowners can use to protect the many functions of wetlands, including water quality improvement. An issue paper highlighting the impacts of stormwater on wetlands entitled, *Natural Wetlands and Urban Stormwater: Potential Impacts and Management*, is available through the EPA Wetlands Hotline. A guide describing best management practices to pretreat stormwater runoff before it enters a natural wetland is also being developed. Additional materials on wetlands protection and restoration for nonpoint source benefits will be developed to assist in implementation of the wetlands and riparian areas chapter in the CZARA Management Measures Guidance. EPA will continue to work to address potential opportunities and conflicts regarding wetlands and programs addressing runoff.



### ADDITIONAL INFORMATION:

- For additional information regarding the Section 319 program or the CZARA guidance, contact the EPA Nonpoint Source Control Branch at (202) 260-7100.
- For additional information about the Section 402 stormwater program, contact the Stormwater Hotline at (703) 821-4823.

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