

What is a floodplain?

Floodplains are the level areas bordering river channels. These portions of the river valleys are frequently defined in terms of flooding in a given year. Hence, the "100-year" flood is the flood having a 1% chance of occurring in any given year.

In recent years many communities have come to recognize that the floodplain environment is an important community asset and have taken the initiative to create greenways, riverside parks and other popular amenities. Significantly, protecting the natural resources and functions of floodplains have proved to be effective in reducing flood losses as well.



Floodplains perform a variety of functions and in the process prove valuable to both humans and fish and wildlife species. Important functions of a community floodplain might include all of the following: flood water storage, water quality maintenance, fish and wildlife habitat and recreation.

What happens in your community's floodplain can have impacts to human uses and natural resources within your community as well as in areas located downstream.



Additional Resources:

<http://www.fema.gov>

<http://www.flood.org>

<http://www.flash.org>

<http://www.nws.noaa.gov>

<http://www.redcross.org/services/disaster/>

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FLOODPLAIN MANAGEMENT



*A Rising Concern
in Communities*

Who is affected by a floodplain?

Every community makes choices about land use. These choices will vary according to the characteristics of a particular community, and in many cases choices are limited by land-use decisions of the past. Current land-use patterns may reflect inadequate consideration or understanding of the consequences of altering natural features of the environment. Even so, it is important that an awareness of the value of natural functions is incorporated into the land-use decisions that will affect the future of any community.

- Urban Areas** - It is likely that the floodplain within an urban community is already highly developed. Here, the management options include restoration of natural areas and the relocation of structures that are particularly threatened by flood hazards.
- Suburban Areas/Urban Fringe** - Urban fringe areas often face great development pressure, but may be fortunate enough to have some open space to work with. Effective planning is critical in these communities, and can include a focus on maintaining existing open areas along waterways and restoration of vegetation.
- Rural Areas** - Agricultural communities have a different set of floodplain concerns. They have an advantage in the fact that open spaces are more plentiful. Management strategies here should focus on controlling erosion and excessive nutrient loadings, as well as revegetating stream banks to restore natural ecosystem functions.

Floodplain Functions

The basic characteristics of floodplains and their natural resources function in ways that make them very valuable to humans and wildlife.

Water Resources

Natural Flood and Erosion Control

- Provide flood storage & conveyance
- Reduce flood velocities
- Reduce peak flows
- Reduce sedimentation

Water Quality Maintenance

- Filter nutrients and impurities from runoff
- Process organic wastes
- Moderate temperature fluctuations

Groundwater Recharge

- Promote infiltration & aquifer recharge
- Reduce frequency & duration of low surface flows

Biological Resources

Biological Productivity

- Promote vegetative growth in rich soils
- Maintain biodiversity
- Maintain integrity of ecosystems

Fish & Wildlife Habitats

- Provide breeding and feeding grounds
- Create and enhance waterfowl habitat
- Protect habitats for rare & endangered species

Societal Resources

Harvest of Wild and Cultivated Products

- Enhance agricultural lands
- Provide sites for aquaculture
- Restore and enhance forest lands

Recreational Opportunities

- Provide areas for active and passive uses
- Provide open spaces
- Provide aesthetic pleasure

Areas for Scientific Study & Outdoor Education

- Contain historic & archeological cultural resources
- Provide opportunities for outdoor study

Floodplain Management

Floodplain management is regarded as a process by which decisions are made rather than simply a set of floodplain regulations or flood control structures.

In terms of the natural environment, floodplains include important habitat areas such as river channels, the water's edge, riparian buffers, wetlands, and upland areas adjoining flood-prone areas. Additionally, vegetation that grows in the floodplain helps determine how water flows across the land and can play a major role in controlling erosion and sediment deposition.



While it is important for communities to plan and take responsibility for the land uses that occur in their own floodplains, it must be recognized that flood level and water quality can be very much affected by land use activities that occur elsewhere in the watershed. Land uses along tributaries are likely to have an impact on downstream communities. Wise management of tributaries is therefore extremely important, as their protection can yield benefits for the entire network.