

Floodplains and Floodplain Management



Definitions

floodplain: Any normally dry land area susceptible to surface-water flooding.

100-year flood: A flood that has a 1-percent chance of being equaled or exceeded in any year.

floodway: The river channel and that portion of the floodplain required to pass 100-year floodwaters without increasing the water surface elevation more than a designated height (6 inches in Minnesota).

flood fringe: The portions of the 100-year floodplain outside the floodway but still subject to flooding.

Federal Emergency Management Agency (FEMA): Agency whose mission is to reduce loss of life and property and protect critical infrastructure from hazards.

Flood Insurance Rate Map (FIRM): The official map on which FEMA has delineated the areas of special flood hazards. It is used to determine flood insurance premiums.

Special Flood Hazard Areas (SFHA): Areas in a community that have been identified on FEMA maps as susceptible to a 100-year flood.

National Flood Insurance Program (NFIP): Program under which communities are eligible for federal flood insurance if they enroll in the NFIP and administer floodplain management regulations.

Information Links

Series of information sheets related to floodplain management:

www.dnr.state.mn.us/publications/waters

Flood insurance information:

www.floodsmart.gov

FEMA website: www.fema.gov

What are floodplains?

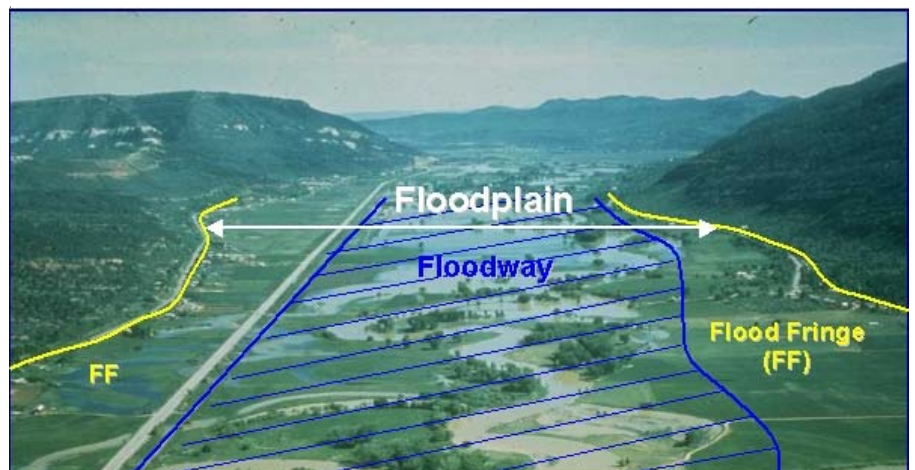
Floodplains are areas susceptible to flooding that are adjacent to rivers, streams, and lakes. In flat areas, the floodplain can extend more than a mile from the flooding source. Floodplains can also be the normally dry areas adjacent to wetlands, small ponds, or other low areas that cannot drain as quickly as the rain falls. A smaller area might be covered by floods every other year, on average (50-percent chance or 2-year floodplain), but a larger area will be covered by the flood that has a 0.2-percent chance of happening in a given year (the 500-year flood). The 1-percent chance (or 100-year) flood is the standard for Minnesota and federal minimum regulations. There is a 1-percent chance of this flood level being equaled or exceeded in any given year. The 100-year floodplain is the land adjoining lakes and rivers that would be covered by the 1-percent chance (or 100-year) flood.

Along large rivers, like the Mississippi River or Red River of the North, floodplains usually are flooded during spring after heavy snow seasons. On these and other floodplains, flooding can also result from intense rains. In fact, climatologists have seen a trend toward a greater percentage of the total annual precipitation coming during the intense rains that can cause flooding. In areas with small streams or ponds, flooding can occur within hours of the intense rain. On the larger rivers and lakes, there may be days of warning.

How are floodplains managed?

Local units of government identify permitted land uses through zoning regulations. Floodplain management regulations are also administered by local zoning authorities. If you want information about permitted land uses on a floodplain within the municipal boundary, check with your city zoning authority. If you are in a rural area, check with your county zoning office. DNR Waters and Federal Emergency Management Agency (FEMA) staffs may assist local officials, especially on complicated issues, but the permitting decisions are made locally.

If your community has a FEMA Flood Insurance Rate Map (FIRM) that shows flood-prone areas, your community should have enrolled in the National Flood Insurance Program (NFIP) and adopted zoning regulations to



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manage land uses in the mapped floodplain. The community's floodplain management regulations must include the minimum federal and state regulations, but can be more restrictive. Most communities adopt a state model that has incorporated the minimum federal and state regulations. The minimum federal and state regulations are enforced in the 1-percent chance (100-year) floodplain that is mapped on the FIRM for the community.

Local zoning regulations also identify permitted land uses in the floodway and flood fringe portions of the 1-percent chance (100-year) floodplain. In the floodway portion, high-velocity floodwaters are expected so most types of development are prohibited. In the flood fringe portion of the floodplain, where the backwater or low-velocity floodwaters occur, development is allowed **if** it meets standards such as elevating on fill or floodproofing to reduce damage when there is a flood.

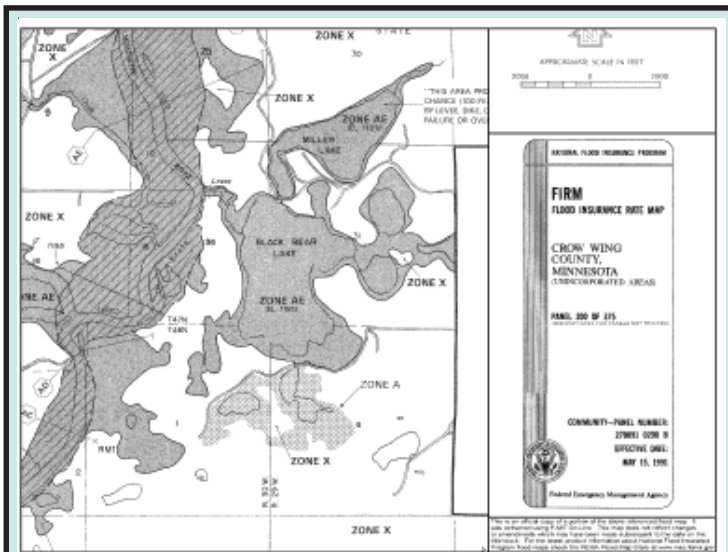
Check with your local zoning authority to find out which floodplains are regulated. Local zoning authorities often have more restrictive regulations than the federal and state minimum. They might regulate activities in the 500-year floodplain, instead of

just the 1-percent chance (100-year) floodplain, especially for essential services such as hospitals, fire stations, and prisons, or for locating hazardous waste sites. They also may have a local water plan that identifies the local ponds and low spots that would be flooded as a result of an intense rain and may require houses to stay above those areas. The FEMA maps usually show floodplains associated with rivers, streams, and large lakes, but the community may also regulate these locally identified areas as high flooding risks.

Flood insurance requirements

If you intend to obtain a loan from a federally regulated lender (like most mortgage lenders), the lender **MUST** require you to have flood insurance if your home is in the Special Flood Hazard Area (SFHA)—the 1-percent chance (100-year) floodplain. Lenders face penalties and fines if properties in these areas mapped as flood prone are not covered by a flood insurance policy.

If your community is enrolled in the National Flood Insurance Program (NFIP), you can buy flood insurance. More than 93 percent of Minnesotans are in communities participating in the NFIP and can buy flood insurance. A common myth is that you can only buy flood insurance if you are in the floodplain on the FEMA Flood Insurance Rate Maps. The fact is that anyone in a participating community can buy flood insurance, and that the flood insurance is much less expensive if you are not in a floodplain mapped by FEMA.



Sample FEMA Flood Insurance Rate Map (FIRM). Flood insurance is required in shaded areas. Flood insurance is available for any location in or out of the shaded area if the community is a participant in the National Flood Insurance Program.

Sometimes areas above the flood elevation are shown as flood prone on these maps. This is usually due to lack of detailed elevation information to accurately locate boundaries of the floodplain.

FEMA has processes (letter of map amendment; letter of map revision based on fill) to apply for corrections to the map when better information is available for the site.

DNR Contact Information



DNR Waters website lists Area Hydrologists:
www.dnr.state.mn.us/waters

DNR Waters in St. Paul:
500 Lafayette Road
St. Paul, MN 55155-4032
(651) 259-5700

DNR Information Center

Twin Cities: (651) 296-6157
Minnesota toll free: 1-888-646-6367
Telecommunication device for the deaf (TDD): (651) 296-5484
TDD toll free: 1-800-657-3929

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