

PART III

THE EFFECTIVENESS OF FLOODPLAIN MANAGEMENT



Perception and Awareness of Floodplain Losses

Both individual and institutional perception and awareness of flood risk and vulnerability affect floodplain management. Although substantial progress has been made in increasing institutional awareness and response, individual perception and awareness generally falls far short of what is needed. This shortfall makes itself unpleasantly felt in the unwise development of flood hazard areas and in disregard for the value of natural floodplains.

Recognition of Risk

Local perception of flood hazards—by both governments and floodplain residents—is related to previous experience with flooding; the extent to which the floodplain is developed; the existence of structural control measures; the seriousness of the flooding in relation to other community problems; and attitudes about land use, water resources management, and regulations. In general, the threat of damage from coastal flooding seems to be taken more seriously

FLOODPLAIN MANAGEMENT TERMINOLOGY

Some misperceptions about floodplain management are the result of simple lack of understanding. For example, probably the most misunderstood concept is the "100-year flood." The term is often taken literally, causing individuals to believe, incorrectly, that if they or their community have experienced a 100-year flood, a similar one cannot occur for another century. The terms "1% annual chance flood" and "national base flood standard" have been suggested as less-misleading substitutes.

Use of the term "floodproofing" also can give a false sense of security about susceptibility to flood damage. The techniques involved in floodproofing do not make a structure completely safe from flooding. The term "flood-resistant construction" has been suggested as an alternative.

REGULATION AND PUBLIC AWARENESS

Many regulatory measures have been instituted by governments in an effort to force individual awareness of flood hazards and protective action. For example, the National Flood Insurance Program is voluntary, but changes have been made in the law since it was passed in 1968 in order to encourage greater participation. Primary among these was the Flood Disaster Protection Act of 1973, which prohibits nonparticipating floodprone communities from receiving disaster assistance after a flood. Another mechanism intended to promote awareness and compliance is the provision that federally insured banks and other financial institutions require purchasers of homes and other structures in the floodplain to take out flood insurance. This procedure has not been wholly effective because the institutions currently are not penalized if they fail to comply.



Although public knowledge concerning flood risks has increased significantly in the last 30 years, development in hazardous areas is still occurring.

Flooding and alluvial fan, Magnolia Spring Canyon, Rancho Mirage, California, July 1979.

by communities than is damage from riverine flooding. Because most people discount the probability of loss from infrequently occurring events, such as large floods, individual and community experience with flooding results in both heightened perception of risk and increased attention to solving flood problems. The perceived seriousness of the flood problem is directly associated with the extent of floodplain development and existence of intensive land uses in the hazardous area, increasing development may result in greater awareness of flood problems. The presence of structural flood control measures has varying effects on perception of risk and subsequent responses, structural measures may contribute to a sense of complacency, as though the problem were "solved."

Private citizen perception of risk may be quite different from that of local officials. Even if the risk is acknowledged, the advantages of a floodplain location to the individual property owner may seem to outweigh the disadvantages. Homeowners also may be more concerned with the effect of floodplain regulations on resale value than with the effect of a potential flood on the house or property itself. Some studies have found that even after a control structure is built, local governments remain concerned about a flood problem, while the citizens themselves tend to forget about the threat. Both individual and community perception of risk may be tempered by other considerations, such as apprehension about the potential secondary effects of land use management—reduction in property values, slowed economic growth and development, reduction in the tax base, and increased construction costs.