

No Adverse Impact (NAI) Floodplain Management Strategies



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Oklahoma Water Resources Board

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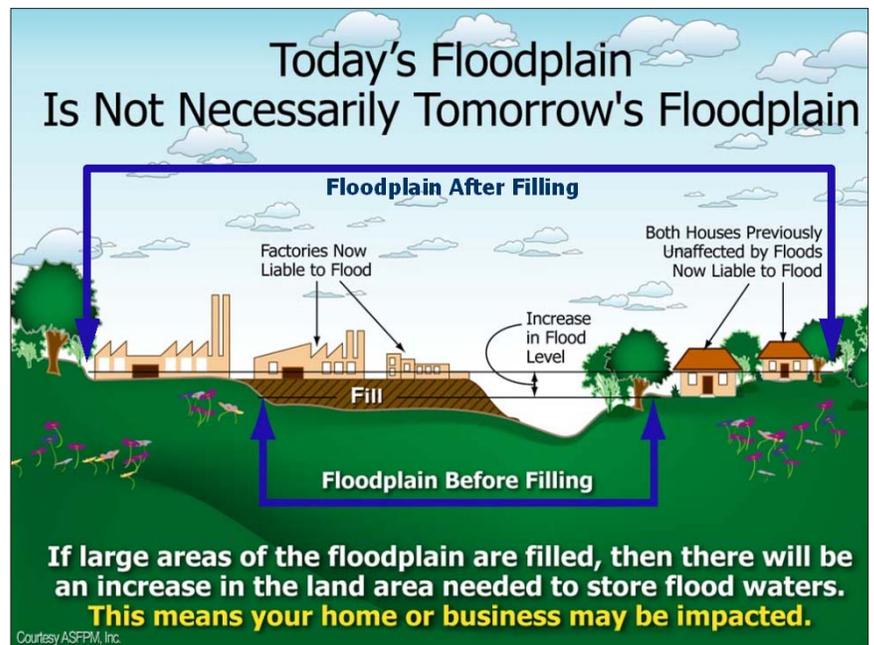
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No Adverse Impact

NAI Floodplain Management

In 2000, the Association of State Floodplain Managers recommended a no adverse impact (NAI) approach for floodplain management to help control development that increases flood risks or erosion damages to contiguous areas. Development continues within 100-year floodplains, and with this development, flood prone or marginally protected structures or areas are suddenly prone to damages. They are adversely impacted by the actions of others. Current NFIP standards allow for floodwater to be diverted onto others, channel and overbank conveyance areas to be reduced, essential valley storage to be filled, and velocities changed without regard as to how these changes impact others in the floodplain. Such actions intensify the potential for damage.

Despite implementation of intelligent floodplain management strategies, damages will increase. Current Floodplain management policies deal with how to build in a floodplain instead of how to minimize future damages. These policies ignore changing conditions and undervalue natural floodplain functions.



Minimum NFIP Standards

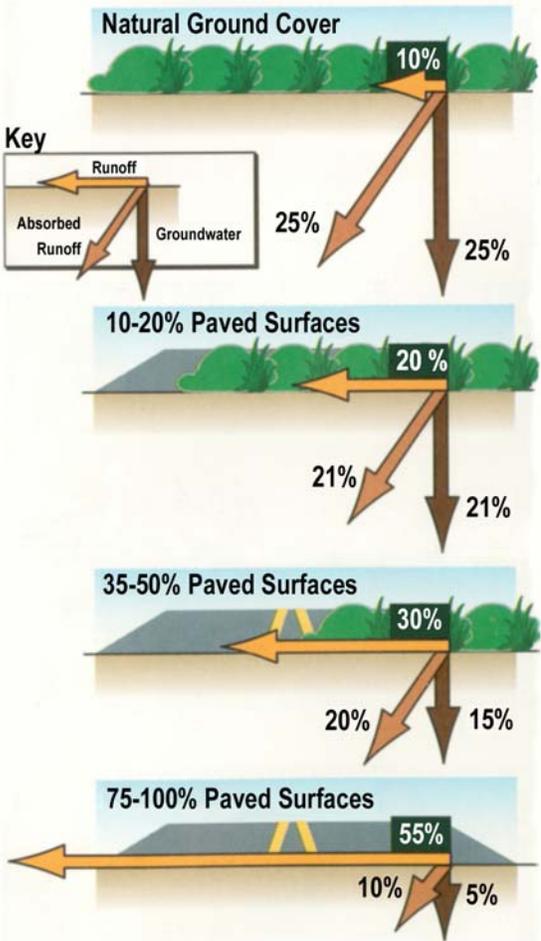
The minimum NFIP standards allow new development in the 1% chance floodplain to raise the base flood elevation by one foot. This does not recognize the dynamics of future development. By only adopting the minimum standards, construction permitted today could cause an increase in flood level by one foot of water tomorrow.

Addressing the problem at the Local Level

NAI promotes local accountability. Adopting the NAI approach to floodplain management will lead to reduced flood losses across the state. It will also promote and reward strong management and mitigation actions at the local level.

NAI floodplain management is about local communities being proactive in understanding potential impacts and implementing programs of mitigation before damage occurs. Every community in the floodplain must develop and adopt a comprehensive management plan that identifies acceptable levels of impact, appropriate measures to mitigate those adverse impacts, and a plan for implementation.

Increased Runoff from Increased Construction



Note: Percentage of evapotranspiration not shown.
 Source: Water Resources Protections Technology; A Handbook of Measures to Protect Water Resources in Land Development, by Toby Tourbier and Richard Westmacott, The urban Land Institute, Washington, D.C., 1981



Comprehensive Management Plan
 Every community in the floodplain must develop and adopt a comprehensive management plan that identifies acceptable levels of impact, appropriate measures to mitigate those adverse impacts, and a plan for implementation.





Photo courtesy City of Kingfisher

What is a Floodplain?

Flooding is a natural phenomenon. Periodically, rain and melting snow cause rivers to rise and streams and lakes to overflow their banks onto adjacent land areas. These areas, known as floodplains, have been carved out by floods for the specific purpose of carrying excess floodwaters. In the past, little regard has been given to the purpose and function of floodplains. Homes, businesses, and even entire communities have been and continue to be built in floodplain areas. The development of these floodplains has resulted in ongoing and often severe social and economic losses.

Benefits of a Natural Floodplain

NAI helps us to understand and appreciate the natural floodplain. If we protect and enhance the floodplain for its primary purpose then we will see a reduction in flood damages. The benefits of a natural floodplain include the following:

- Flood Water Storage
- Enhanced Stormwater Management
- Reduced Flood Damages
- Improved Water Quality
- Recreational Opportunities
- Aesthetics
- Preservation of Wildlife and Natural Habitats
- Sustained Biological Productivity
- Enhanced Erosion Control
- Opportunities for Scientific Study
- Increased Property Values
- Preservation of Cultural Resources
- Sustained Economic Prosperity
- Maintenance of Natural Products

Adverse Impact

Adverse impact is a term used to describe the outcome of a situation where a decision, practice, or policy of one individual or group has a disproportionately negative effect on another individual or group.



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