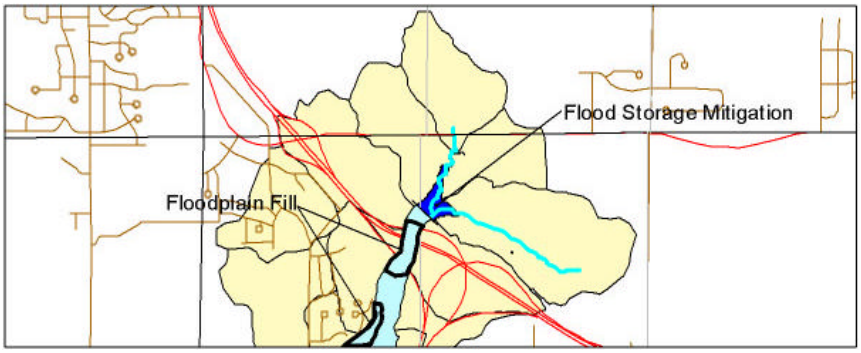
Floodplain Management: Floodplain Mitigation



Description

Floodplain mitigation allows for development within the flood fringe, provided that the flood storage volume and environmental impacts are mitigated at a single designated off-site location to be used by multiple stakeholders along a given stream reach. This concept can be effective for mitigating the loss of riparian buffers, wetlands areas, and wildlife habitat by establishing a banking system. The banking system preserves a environmentally valuable tract of land as a means to maintain the balance of environmental assets as development occurs in a watershed. This concept has limited applicability for mitigating floodplain storage unless the tract of land is located in a proper location relative to the development. For example, it is not appropriate to mitigate floodplain storage loss in a separate watershed or at a location downstream from the development site.

Advantages

- Can prevent the loss of environmentally sensitive areas such as wetlands, if environmental issues are considered as part of this floodplain management alternative.
- May be appropriate for regional detention facilities within a watershed if hydraulic equivalency can be demonstrated.

Disadvantages

- Can increase flood elevations if not implemented properly.
- Limited applicability for flood storage mitigation.
- Difficult to locate and to obtain mitigation site.
- High construction costs.
- Requires detailed planning.
- Not always appropriate for developed watersheds.
- Requires a significant administrative effort to implement and manage.

Implementation Considerations

- Most effective with established watershed plan.
- May require more technical resources for review.
- Requires increase awareness and understanding of dynamic floodwater flow through a watershed.

- Identification of mitigation sites within the watershed important for success.
- Ownership and maintenance of mitigation sites.

Example Communities

- Lake County, Illinois (Mitigation for "isolated" wetlands)
- Spaulding Township, Michigan

References

No Adverse Impact Status Report: Helping Communities Implement NAI, Association of State Flood Plain Managers, June 2002.

Mitigation Success Stories, Edition 4, Association of State Flood Plain Managers, January 2002.