

Nonstructural Flood Mitigation Assessment La Crosse, Wisconsin

City of La Crosse, Wisconsin
Floodplain Advisory Committee
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USACE – St. Paul District

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Flood Risk

$$\text{Risk} = f [(\text{Probability of Flooding}) \times (\text{Consequences})]$$

Probability of Flooding is the frequency of flooding or how often does flooding occur in a particular location. Reduce the frequency of flooding and risk is reduced (examples: levees and dams).

Consequences are the potential damages and life loss associated with flooding. The structures (critical, residential, commercial, public, and industrial), the land use (agricultural, urban, public), and the infrastructure (highways, roads, rail, utilities) make up the potentially damageable assets. Reduce the consequences of flooding and risk is reduced (examples relocation, acquisition, elevation, basement removal, wet or dry flood proofing).

Nonstructural Assessment Objectives

- Work within the FEMA Significant Flood Hazard Area (SFHA)
- Identify sample structures located within the SFHA
- Compile data for individual structures
- Conduct site visit
- Complete assessment of individual sample structures
- Identify potential nonstructural techniques
- Develop study document and report findings to community

Nonstructural Assessment Process

- Identify areas of FEMA designated flood risk
- Identify groupings of sample residential structures
- Identify sample commercial structures
- Compile flood, structure, and site data for each structure
- Conduct assessment to determine potential nonstructural flood risk techniques for implementation:
 - ❑ relocate structure (eliminates flood risk and flood insurance requirements)
 - ❑ acquire structure (eliminates flood risk and flood insurance requirements)
 - ❑ elevate structure (reduces flood insurance premiums)
 - ❑ remove basement (reduces flood insurance premiums)
 - ❑ dry flood proof (reduces flood insurance premiums for commercial)
 - ❑ wet flood proof (supports the reduction in flood insurance premiums)
 - ❑ warnings and evacuation planning (additional risk reduction actions)

Nonstructural Techniques



Flood Risk Concerns



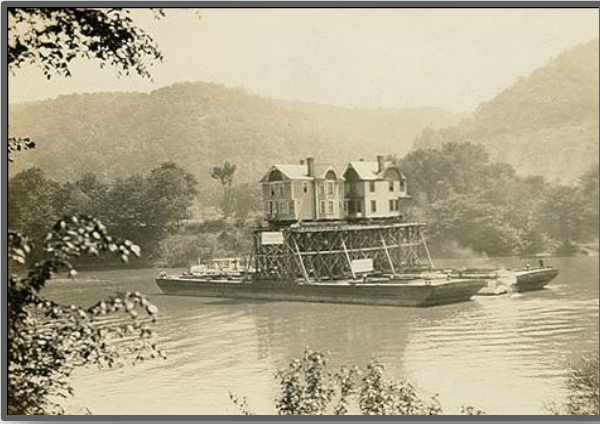
Critical Facilities

- Facilities that could, if flooded, add to the severity of the disaster are considered critical.
- Critical facilities are essential for providing human health, safety, and welfare.
- Within the guidelines of Executive Order 11988, critical facilities should:
 - be located at a flood free site
 - or be located external to the 0.2% Annual Chance Exceedance (500-yr) floodplain
 - or at a minimum, be protected to the extent that it can function as intended during all floods up to and equal to a 0.2% ACE flood event

Note: If critical facilities become inoperable during a flood event, the area of impact extends beyond the flooded structure and can adversely impact the entire service area (ex: fire stations and hospitals generally provide services to large areas which could be located outside of the area flooded).

Critical Facilities Supporting Health Safety and Welfare





Thank You

