U.S. Floodplain Regulations

An Overview

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Discussion Outline

- Competing Interests
- Goals of Floodplain Regulations
- Levels of Regulations
  - Federal Regulations
    - National Flood Insurance Program
  - State Regulations
  - Local Regulations
- Closing Considerations
Competing Interests

- Developers
- The Environment
- The Public
Goals of Floodplain Regulations

- Protection of Life and Property
- Protection of the Environment
- Maintenance of Beneficial Uses of the Floodplain
Levels of Regulations

- **Federal (U.S.)** – sets minimum baseline of acceptable regulation for all participating areas
  - National Flood Insurance Program (44 CFR Ch.1, 42 CFR)
  - Executive Order 11988 – Floodplain Management

- **State** – not all states have regulations, may defer to local governments for floodplain management
  - State Laws, Policies, Coordinators

- **Local** – set within city (county) borders only in communities that participate in the program
  - Local Ordinances and Policies
Federal Regulations (U.S.)

- Written into the U.S. Code of Federal Regulations or by Executive Order
- The program is called the National Flood Insurance Program (NFIP)
- Administered by the Federal Emergency Management Agency (FEMA)
- States and local governments voluntarily participate in the program by agreeing to adopt and enforce floodplain management ordinances
- FEMA does not directly manage the floodplain
- Program of corrective and preventative measures for reducing flood damage
National Flood Insurance Program (NFIP)

- Contains baseline regulations
- Makes flood insurance available within participating jurisdictions
- Framework for overseeing changes in the floodplain and providing management tools (mapping, regulations…)
- Provides assistance for post flood recovery
- Establishes the “Base Flood” as the 100-year flood (1%)
  - Use caution in selecting terms and educating the public
  - Consideration being given to risk-based management
Flood Insurance Rate Map
Stipulations

- Requires permits for development within the floodplain
- Contains standards for construction within the floodplain
  - Prevent flotation, collapse and lateral movement
  - Materials must be resistant to flood damage
  - Electrical, plumbing, HVAC and mechanical should be located to prevent damage
  - Protect public utilities from flood water infiltration
  - Floors must be elevated above the base flood (1-foot min.)
- Requires the flood-carrying capacity of the stream to be maintained (regulatory floodway)
- Additional provisions for development within the regulatory floodway
Floodplain and Floodway

The floodway is an engineered conveyance for carrying the base flood discharge with no greater than 1-foot surcharge.
Additional Federal Stipulations

- Requires the community to adopt the minimum floodplain management measures contained in the federal code, but allows more strict local measures.
- Allows flood-resistant design, but requires that licensed professionals prepare designs.
- Encourages the preservation of open space.
- Discourages re-development of severely damaged areas and structures following a flood (50% rule).
State Regulations

- Some states do not administer the floodplains within their borders (TN) but leave administration to communities
- Provide liaison with local and federal governments through state Emergency Management Agencies
- Some states adopt the minimum floodplain regulations, while other choose to add further restrictions
- Some states assist by providing hazard mitigation programs and providing assistance to local governments in establishing regulations (MD)
Some Typical Local Regulations

- Require compensating excavation for fill in the floodplain in order to maintain floodplain storage
- Prohibit any fill / development within the floodplain
- Require developers to provide storm water detention up to the base flood in order to mitigate increases in peak discharges
- Developers along unstudied streams must provide engineering analyses to determine the flood hazard
- Use stream buffer zones to preserve flood carrying capacity and environmental benefits of vegetation
- Additional height requirements for floor elevations above the base flood (up to 3-feet for residential)
Additional Typical Local Regulations

- Erosion must be considered as part of any proposal.
- When improvements to existing structures =>50% of existing value are made, the entire structure must be brought into compliance with regulations.
Closing Considerations

- Government officials and regulatory officials should be in support of the regulations.
- Regulations should be as comprehensive as possible, be appropriate to the situation and allow engineering judgment.
- Enforcement should be consistent.
- Determine what your minimum criteria should be and allow communities to adopt and expand.
- Consider carefully what the minimum criteria will be.
- Review and revise the regulations as appropriate based on operational experiences.
- Educate the public – why, what, who and how.
Questions?