Developing a Local Floodplain Management Program in Fort Worth

Public Works Roundup
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Stormwater Program Mission

Protect people and property from harmful stormwater runoff
Primary Functions

- **System Maintenance** (pipes, channels, etc.)
- **Development Review** (compliance with City standards)
- **Hazard Mitigation** (flooding and erosion)
- **Hazard Warning** (flooding and erosion)
• Floodplain Management History

• Local (Non-FEMA) Floodplains
  • What are they?
  • Issues
  • Concerns
  • Benefits

• Policy Development Process

• Stakeholder Engagement

• Wrap Up
Floodplain Management History
Fort Worth Flooding Past

Trinity River 1922

Marine Creek 1942

Marine Creek 1938

May 17, 1949
Nutshell:
In Fort Worth, there is more flooding outside the FEMA floodplain than inside

In Local (non-FEMA) Floodplains:
• Nationwide- 25% of flood insurance claims
• Fort Worth- 62% of flood insurance claims
• Fort Worth ~80% of RL & SRL structures
Local (Non-FEMA) Floodplains
What are Local Floodplains?

Areas of flood risk not shown on FEMA Maps

Other Names – “urban”, “residual” floodplains

FEMA Floodplain

Local Floodplain

Just one example of local floodplains in Fort Worth
Primary Cause- Historic Loss of Natural Drainageways

- Typically very small channels or none at all
- Undersized or no storm drain pipes based on inadequate criteria
  - Many storm drain systems date to the 20's
  - 2-year design storm common
  - Development often on top of undersized systems (often older neighborhoods)
- Increased impervious surfaces
- Climate change???
Perspectives

Increasing frequency of people surprised by flood events/risk

Property Holder (long term owner)

Property Seller

Property Buyer

Developers & Builders
Risks

• Life safety
• Structure Damage
• Vehicle Damage
• Property Damage
• Emergency Response

Often times no obvious risk of flooding
Residents often think the stormwater infrastructure in place will protect them
Policy Issues
What Can We Do About Local Floodplains?

• Status Quo
  • Existing regulations do not address flood risks outside FEMA floodplains
  • Consequences of status quo
• Capital Projects aren’t an option
• Draft Recommendations
  • Mapping
  • Communication
  • Regulation
Key Questions- Communication

• Should we do more to alert the public to the location and extent of flood risk areas?
• If so, how should the public be alerted?
• Should local floodplains be placed on FEMA maps?
  • Flexibility
  • Insurance implications
• If not on FEMA maps, how notify/educate community (residents, developers, real estate professionals, city staff, elected officials)
  • Readily available data?
  • Level of detail?
Key Questions- Mapping

• How detailed does the engineering need to be to map levels of flood risk?
  • Detailed mapping can take time and be costly
    • Complex 2D modeling may be necessary and difficult for some to use
  • Advisory vs. regulatory
  • Should maps cover both property and roads
  • Local standards for studies and mapping
  • Nationwide consistency?
Key Questions- Regulation

• Should we apply existing standards in local floodplains?
  • Floodplain Development Permit
  • iSWM
• Impact on development < 1 acre
  • Permitting & costs
  • ADA issues
• Impact on City development review resources
  • Process
  • Timeframe
Key Concerns

• Communicating local flood risk maps could potentially impact property values

• Application of existing flood protection development standards to local floodplains could potentially impede development

• Mapping of local flood risk areas could increase the time and cost of real estate transactions

• Unintended consequences
Benefits

More informed decision making

• Less risk to life and emergency responders
• Property purchase & improvements
• Decision to purchase flood insurance
• Resiliency / Improved recovery from flooding
• Potential cost savings in development process if requirements are known upfront
• Safer, more sustainable development
• Improved quality of life
Policy Development Process
Policy Development Timeline

- **Early 2018**
  - Kick Off Policy Development
- **Dec. 2018**
  - Public Meetings
- **Early 2019**
  - Draft Policy Development (benchmarking)
  - Implementation Guidance Development
- **Late 2019**
  - Targeted Council Adoption

Stakeholder Engagement
Stakeholders

- Residents
- Developers & Builders & Engineers
- Civic/Economic Development
- FEMA
- Real Estate Professionals
  - Appraisers
  - Lenders
  - Title Company
  - Surveyors
  - Insurers
  - Real Estate Agents
Engagement

- **Focused Stakeholder Working Groups**
  - Policy Development Working Group
  - Real Estate Guidance Group
  - American Council of Engineering Companies

- **Public Meetings**

- **Interested Groups Meetings**
  - Builders Association
  - Greater Fort Worth Association of Realtors
  - Real Estate Council
  - Texas Society of Professional Engineers
  - Development Advisory Committee & Liaison Committee

- **City**
  - Management & Staff, Council, Plan & Zoning Commissions
Wrap Up
Conclusions

• Public protection benefits of communicating flood risk mapping and consistently applying regulation outweighs the concerns, especially if…

• Concerns can be minimized with stakeholder involvement to develop:
  • Communication Plan / Strategy
    • How to let the community know?
    • Reflecting local flood risk in city policies & plans
  • Implementation Plan / Workbook
    • Internal resources to enforce regulation vs. advisory mapping

• Community consensus for change
Questions?

What is your community doing about non-FEMA flood risks?