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Developing a Local Floodplain Management Program in Fort Worth

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Outline of Presentation

- Recap of Local / Urban / Non-FEMA Floodplains
- Policy Development Process & Stakeholder Engagement
 - Key Policy Issues – Mapping, Communication, Regulation
 - Benefits
 - Concerns
 - Impacts
- Wrap up

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Local / Urban / Non-FEMA Floodplains

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How Significant is the Non-FEMA Floodplain Risk in your Community?

83% Very or Somewhat Significant Floodplain Risk

97% - We should be doing more to address local flood risk issues

Significance Level	Percentage
Very Significant	~45%
Somewhat Significant	~38%
Not Really Significant	~10%
Don't Know	~1%

97% - We should be doing more to address local flood risk issues

polling Source: TFMA Fall Conference 2017, between 114 to 131 participants

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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


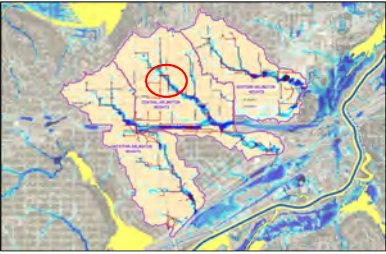
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Which photo shows the Local Floodplain?

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Characteristics of Local Floodplains

Often have drainage areas < 1.0 square mile (traditional FEMA cutoff for detailed mapping)

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Risks

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



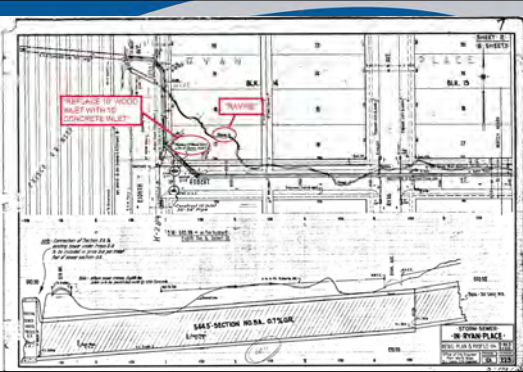
Often times no obvious risk of flooding
Residents often think the stormwater infrastructure in place will protect them

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Primary Cause:

Undersized, Obsolete Storm Drain System



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Repetitive Losses and Claims

	FEMA Floodplains	Local Floodplains
Rep Loss Areas	7	38
Rep Loss Properties	10	39
SFHA Claims	38%	62%

Nutshell: There is more flooding outside the FEMA floodplain than inside.

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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



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Policy Development Process & Stakeholder Engagement

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Policy Development Process

- 2016 Floodplain Management Plan identified the problem
- Live polling (results) at this conference in 2017 confirmed we were not alone
- 2018 strategic Stormwater Program Master Plan was adopted and identified non-FEMA flood risk as a priority initiative
- Identified stakeholders, interviewed other cities, reviewed available research

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FRAMING THE CHALLENGE OF URBAN FLOODING IN THE UNITED STATES 2019

THE GROWING THREAT OF URBAN FLOODING: A NATIONAL CHALLENGE 2018

Figure 4.1

Figure 36

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Local Floodplain Policy Community Review

Fort Collins
Denver

Centennial & Unincorporated Arapahoe County

Dallas
Grand Prairie
Austin
Houston

Raleigh
Charlotte

Colorado

Texas

North Carolina

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Stakeholders

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

What Reaction Would You Expect from Majority of Stakeholders to Non-FEMA Floodplain Regulations?

Reaction	Percentage
Significant Support	0%
Minimal Support	10%
Minimal Opposition	10%
Significant Opposition	67%
Don't Know	4%

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Engagement

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

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Perspectives

Increasing frequency of people surprised by flood events/risk

Developers & Builders

Property Holder (long term owner)

Property Seller

Property Buyer

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Key Policy Issues & Draft Recommendations

1. Mapping
2. Communicating
3. Regulating

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How Many Non-FEMA Floodplains Have Been Mapped or Modeled in your Community?

~50% Minimal or Insignificant Mapping

Category	Percentage
City-Wide	~18%
Major Areas	~20%
Minimal	~28%
Insignificant	~22%
Don't Know	~18%

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Floodplain Mapping


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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?



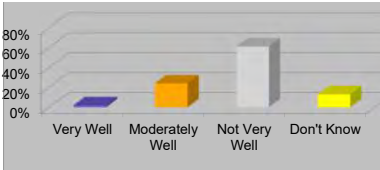
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How Well are Non-FEMA Floodplain Risks Being Communicated to Residents in Your Community?

~60% Not Very Well




Communication Level	Percentage
Very Well	~10%
Moderately Well	~20%
Not Very Well	~60%
Don't Know	~10%

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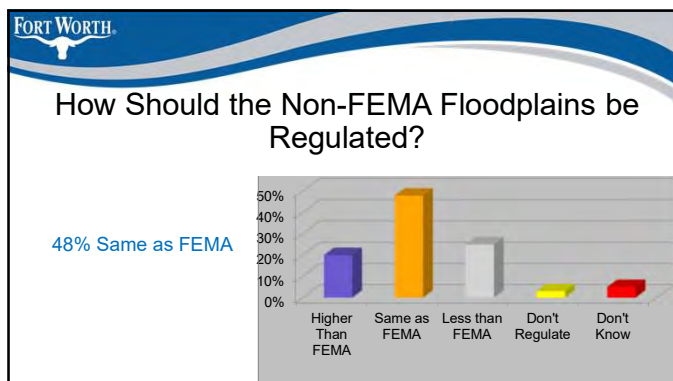
Key Questions- Communication



- 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?

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Key Questions- Regulation

- Should we apply existing standards in local floodplains?
 - Floodplain Development Permit
 - Stormwater Criteria Manual
- Impact on development < 1 acre
 - Permitting & costs
 - ADA issues
- Impact on City development review resources
 - Process
 - Timeframe

STORMWATER CRITERIA MANUAL
September 26, 2015

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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

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Key Community Concerns

- "Please don't call these areas Floodplains" – Insurance required?
- Mapping of local flood risk areas could increase the time and cost of real estate transactions – insurance and banking costs
- Communicating local flood risk maps could potentially impact property values – appraisal values and takings
- Applying existing flood protection standards & regulations in local floodplains could potentially impede development – more projects reviewed in greater detail
- Unintended consequences

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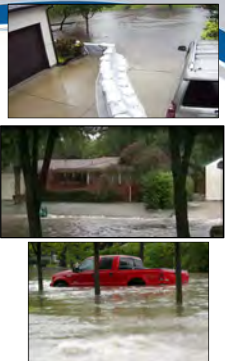
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Potential City Impacts

Damage Control for Limited Resources

- Estimate how much your work load will increase
- Develop consistent methods to assess risk
- Prepare for hand-holding with small property owners and Mom & Pop engineering firms
- Define how new regulations will be applied (FEMA vs. LFP Table)



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FEMA vs. LFP Table

Simplified Table

FEMA FLOODPLAINS	LOCAL FLOODPLAINS
Critical Facilities (Hospitals, nursing homes, childcare facilities, emergency responder, etc.)- State licensing requires location outside 100-year floodplain.	Critical Facilities - OK if outside FEMA 500-year floodplain, and meeting standard City requirements for flood projection
Renovations / Remodels - entire structure must be brought into compliance with current codes when work cumulatively exceeds 50% of the existing structure's value.	Renovations / Remodels - No Stormwater limitations to improvements or repairs.
Basements - Allowed if above flood elevation for residential or floodproofed for commercial.	Basements - Allowed if floodproofed.
Variations & Appeals - May require action by the construction & fire prevention board of appeals and the City Plan Commission.	Variations and Appeals - Handled administratively by Stormwater staff.
Flood Insurance - Required with any Federally-backed loan and some federal grants.	Flood Insurance - No City requirement. Preferred rate insurance is available and lenders can decide if they will require it.
Flood Protection - Lowest residential floors must	Flood Protection - Both residential and

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Wrap Up

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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?
 - Reflect local flood risk in other city policies & plans
 - Implementation Plan / Workbook
 - Clear documentation of how the maps and regulations affect stakeholders
 - Internal resources to enforce regulation vs. advisory mapping
- Community develops consensus for change

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QUESTIONS?

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