



Flood Insurance in New York City Following Hurricane Sandy

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Center for Catastrophic Risk
Management and Compensation

Changes in the National Flood Insurance Program (NFIP) pose challenges for New York City

- Phase out of many subsidies
- Revisions to NYC flood maps
- Uncertainty regarding premium grandfathering

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Analysis based on *Flood Insurance in New York City Following Hurricane Sandy* by Lloyd Dixon, Noreen Clancy, Bruce Bender, Aaron Kofner, David Manheim, Laura Zakaras, RAND, RR-328-NYC, 2013

Available at:

http://www.rand.org/pubs/research_reports/RR328.html

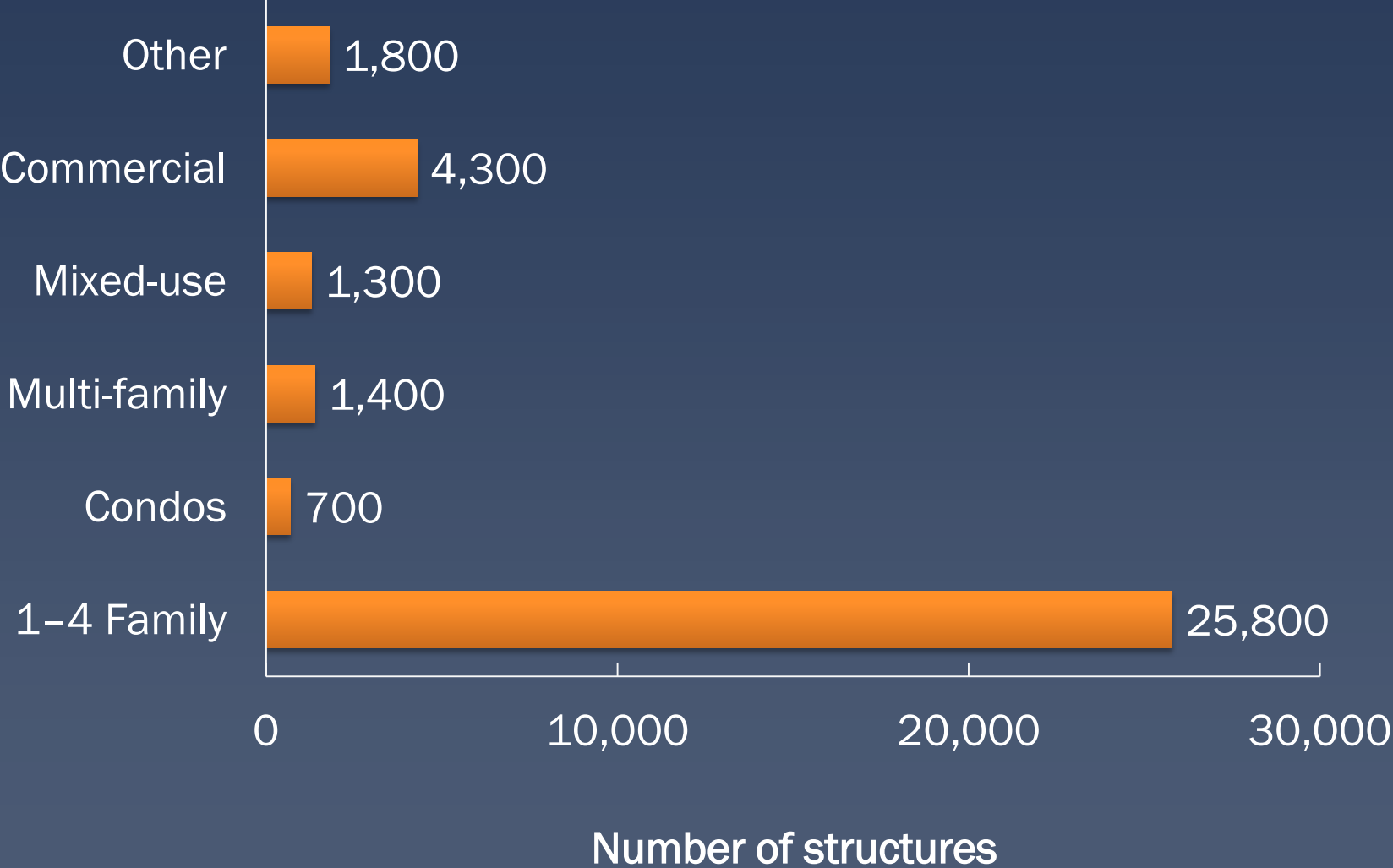
High-risk areas in current flood maps for New York City

2007 FEMA effective
FIRM flood zone



37,500 structures are in high-risk areas of existing flood maps

Most are 1-4 family homes



80% of these structures were built before
the first flood maps (1983)



55% of 1-4 family structures in high-risk areas
had flood insurance on the eve of Sandy

Roughly two-thirds of 1-4 family homes comply with the mandatory purchase requirement

	Estimate 1	Estimate 2
Homes in high-risk areas with mortgages (percent)	51	77
Homes in high-risk areas with mortgages and flood insurance (percent)	71	65

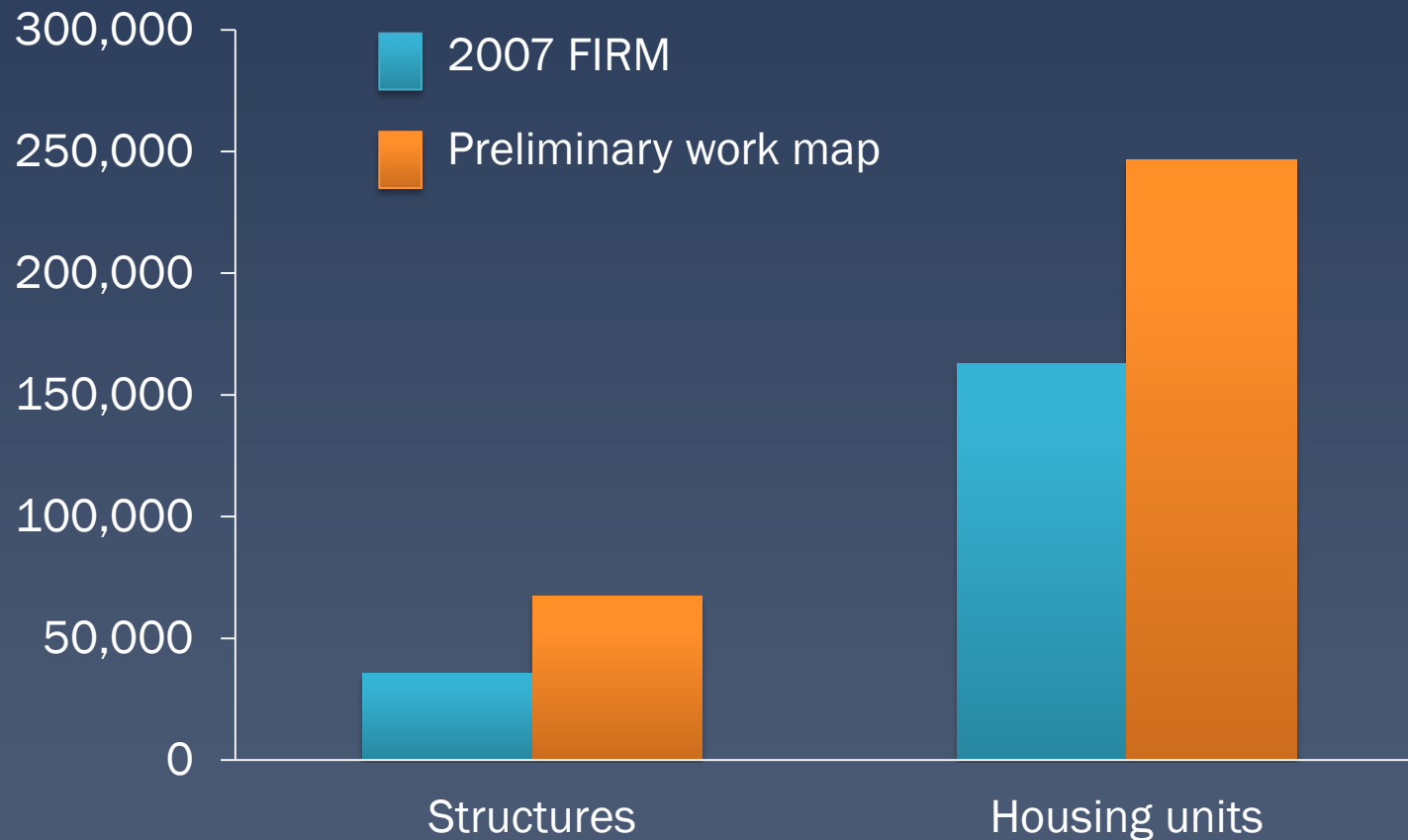
Approximately **20%** of 1-4 family structures in high-risk areas without mortgages had flood insurance on the eve of Sandy

New flood map expands high-risk areas

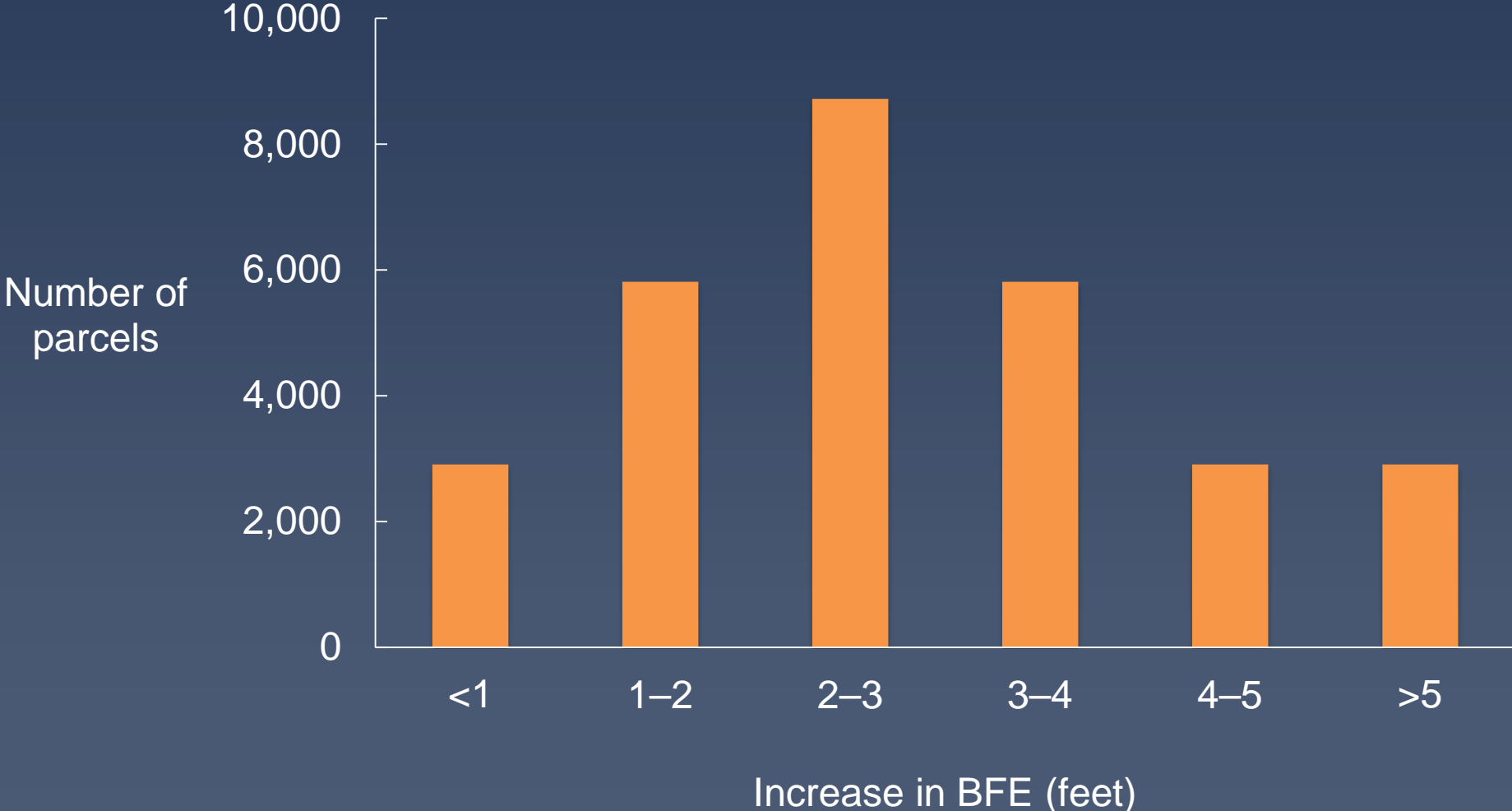
-  2013 high-risk areas that were high risk in the 2007 flood map
-  2013 high-risk areas that were **not** high risk in the 2007 flood map



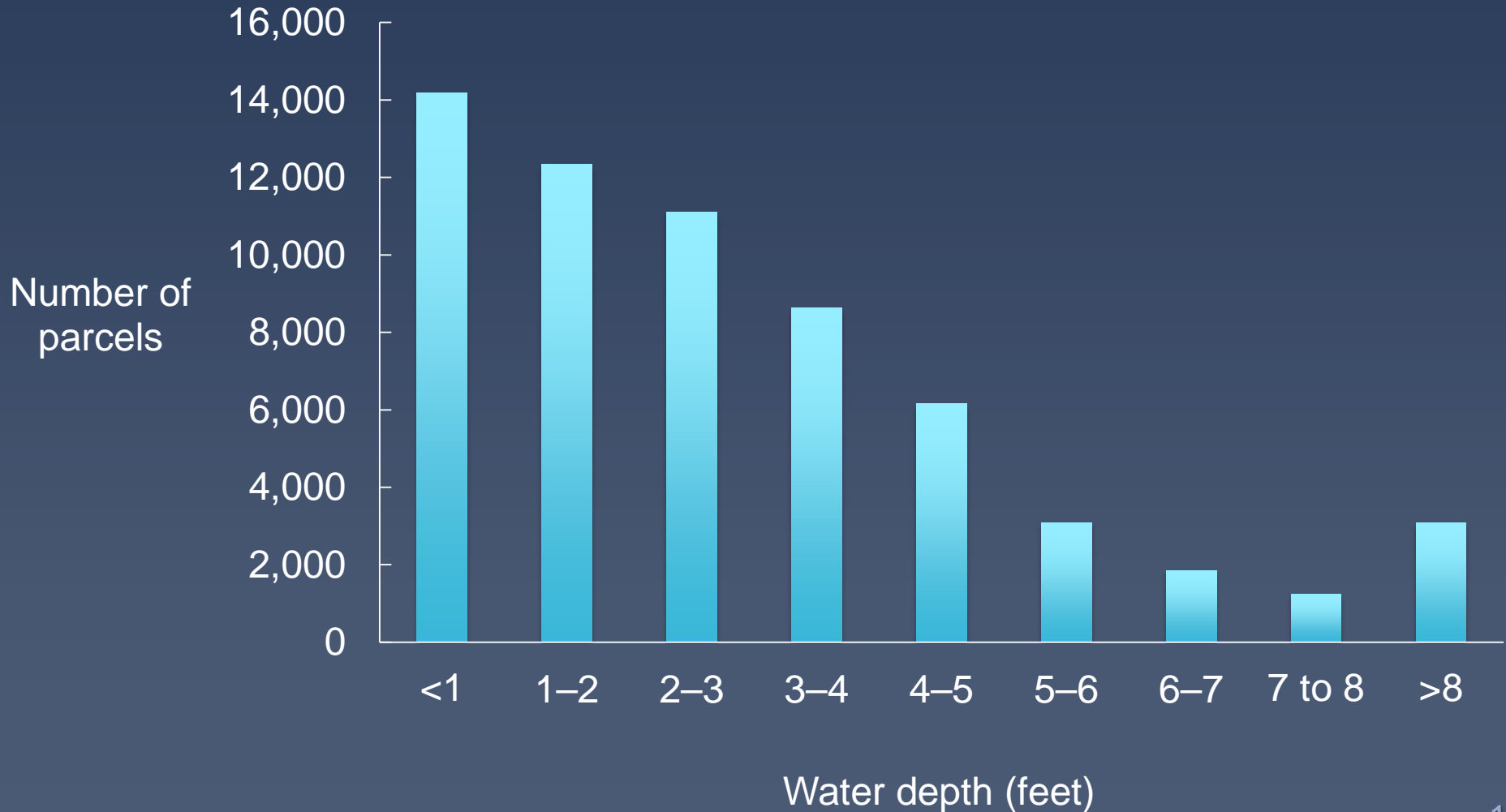
Housing units and structures in high-risk areas nearly double



Updated maps show substantial increases in base flood elevation (BFE)



Water depth in 100-year flood projected to be large for thousands of parcels



7,700 post-FIRM structures affected by map changes

Scenario	Insured as of Oct 2012	Not insured as of Oct 2012	Total
Remapped from Zone X to Zones A or V	400	2,100	2,500
Remain in Zones A or V	3,200	1,900	5,200
Total post-FIRM structures	3,600	4,100	7,700

Plausible scenarios for post-FIRM structures affected by map changes

Current Map			New Map		
Zone	Elevation	Current Premium	Zone	Elevation	Risk-Based Premium
X	--	429	AE	-1	2,365
X	--	429	AE	-9	8,045

Plausible scenarios for post-FIRM structures affected by map changes

Current Map			New Map		
Zone	Elevation	Current Premium	Zone	Elevation	Risk-Based Premium
X	--	429	AE	-1	2,365
X	--	429	AE	-9	8,045
AE	3	506	AE	1	640
AE	-5	4,100	AE	-7	5,710
AE	3	506	AE	-1	2,365
AE	-5	5,100	AE	-9	8,045

45,300 pre-FIRM structures affected by map changes

Scenario	Insured as of Oct 2012	Not insured as of Oct 2012	Total
Remapped from Zone X to Zones A or V	2,800	23,500	26,300
Remain in Zones A or V	11,600	7,500	19,100
Total post-FIRM structures	14,400	31,000	45,300

Plausible scenarios for pre-FIRM structures affected by map changes

Current Map			New Map		
Zone	Elevation	Current Premium	Zone	Elevation	Risk-Based Premium
X	--	429	AE	-5	4,100
X	--	429	AE	-13	16,291

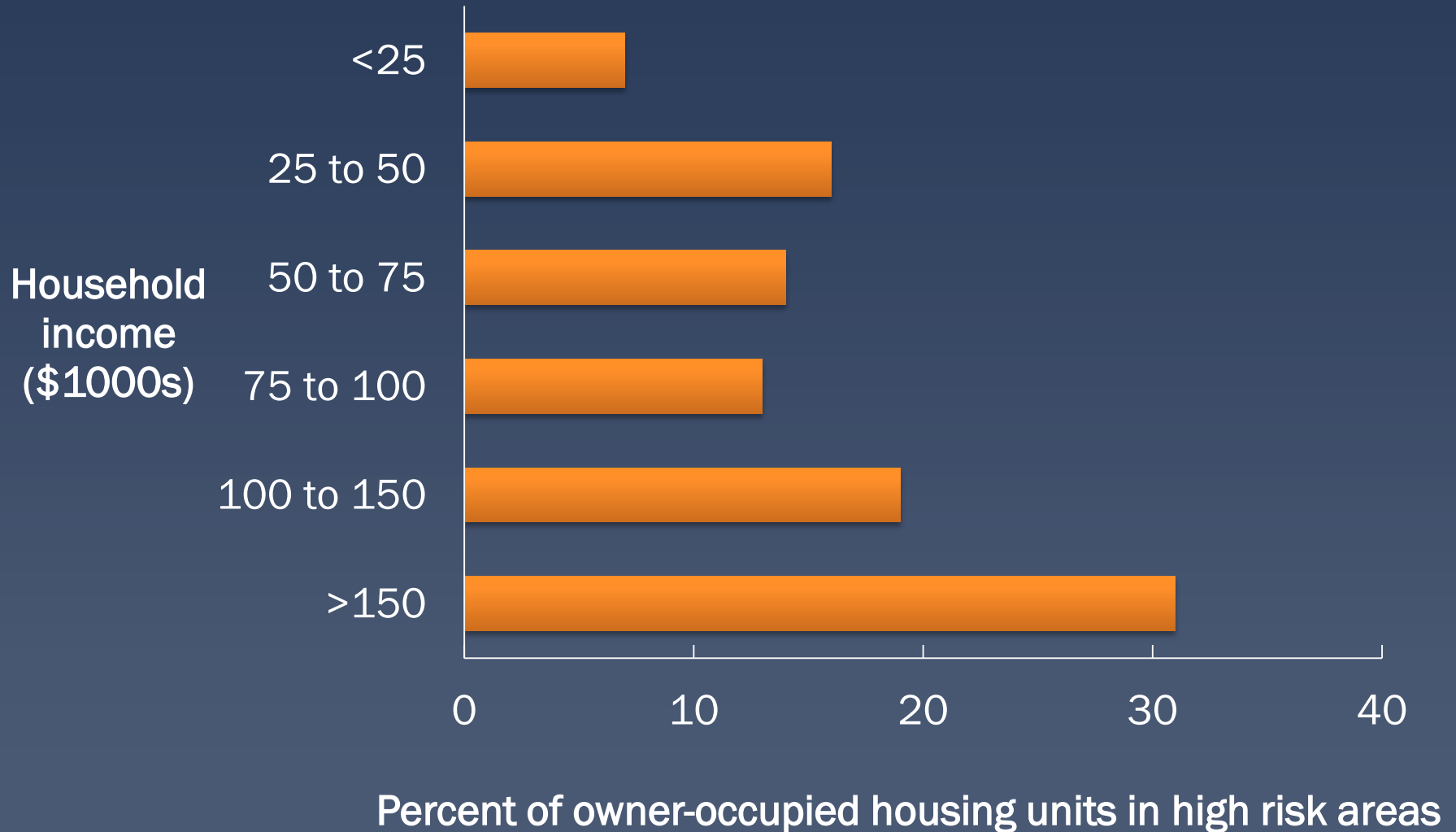
Plausible scenarios for pre-FIRM structures affected by map changes

Current Map			New Map		
Zone	Elevation	Current Premium	Zone	Elevation	Risk-Based Premium
X	--	429	AE	-5	4,100
X	--	429	AE	-13	16,291
AE	--	3,377	AE	-5	4,100
AE	--	3,377	AE	-9	8,045
AE	--	3,377	AE	-13	16,291

More information is needed to determine actual premium changes

- Better data on structure elevations and basements
- Information on whether a home is a primary residence
- Guidance on how HFIAA will be implemented

37% of owner-occupied households have incomes less than \$75,000



Property values will likely decrease as flood insurance premiums increase

- Property value would fall **\$10,000** for each **\$500** increase in premium under reasonable assumptions
- Could lead to foreclosures, short sales, and community disruption
- Current, rather than future, property owners bear burden

Effects on landlords and tenants

Renters

- Rents not expected to change much in the short run
- But in the future a number of factors will determine extent to which landlords can pass rents on to tenants

Landlords

- Will bear burden of higher premiums in the short run
- May see property values drop

The challenge ahead

- Many good reasons to move to risk-based rates
- Congress appears to be giving the go ahead for a gradual transition to risk-based rates (at least for now)
 - But treatment of map updates remains uncertain
- Over time real estate markets will adjust to higher premiums
 - But affordability issues for current owners will need to be addressed in order to control political opposition to risk-based rates



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