

# Floodplain Management in Community Plans

Zoning Administration and Enforcement Division

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# Presentation Objectives

- Overview of the National Flood Insurance Program.
- Explain Flood Zones and the 100-year flood.
- How to use the Flood Hazard Assessment Tool to determine if you are in a flood zone.
- Explain Maui County Flood Development Standards.
- Provide case study data on West Maui repetitive loss properties.
- Recommendations for CPAC

# History of the NFIP

- National Flood Insurance Program: born out of a series of highly destructive floods in the earlier part of the 20th century
- Disaster relief too costly for all taxpayers
- Beneficiaries of relief only a small subset of the population
- Private insurance could not offer affordable rates
- US government could not affordably build flood protection structures nationwide
- People continue to live in floodplains...

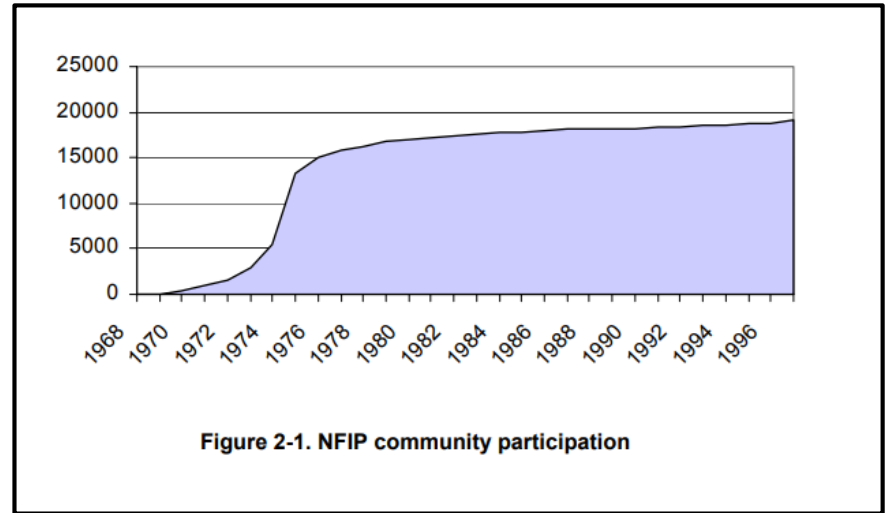


*The Great Mississippi Flood (1927)*



# History of the NFIP

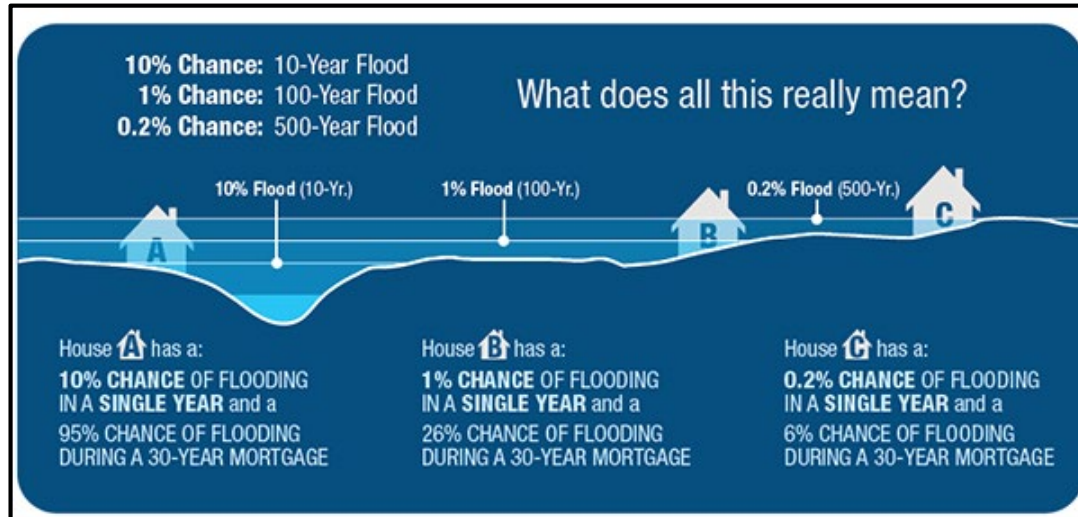
- 1968: Federal government passes National Flood Insurance Act.
- Average flood insurance policy costs: ~\$600 a year.
- For properties in high-risk areas, it can cost more than \$10,000 a year.
- There is a ~25% chance of flooding during a 30-year mortgage for high risk areas.



**FEMA 480 - NFIP Floodplain  
Management Requirements**

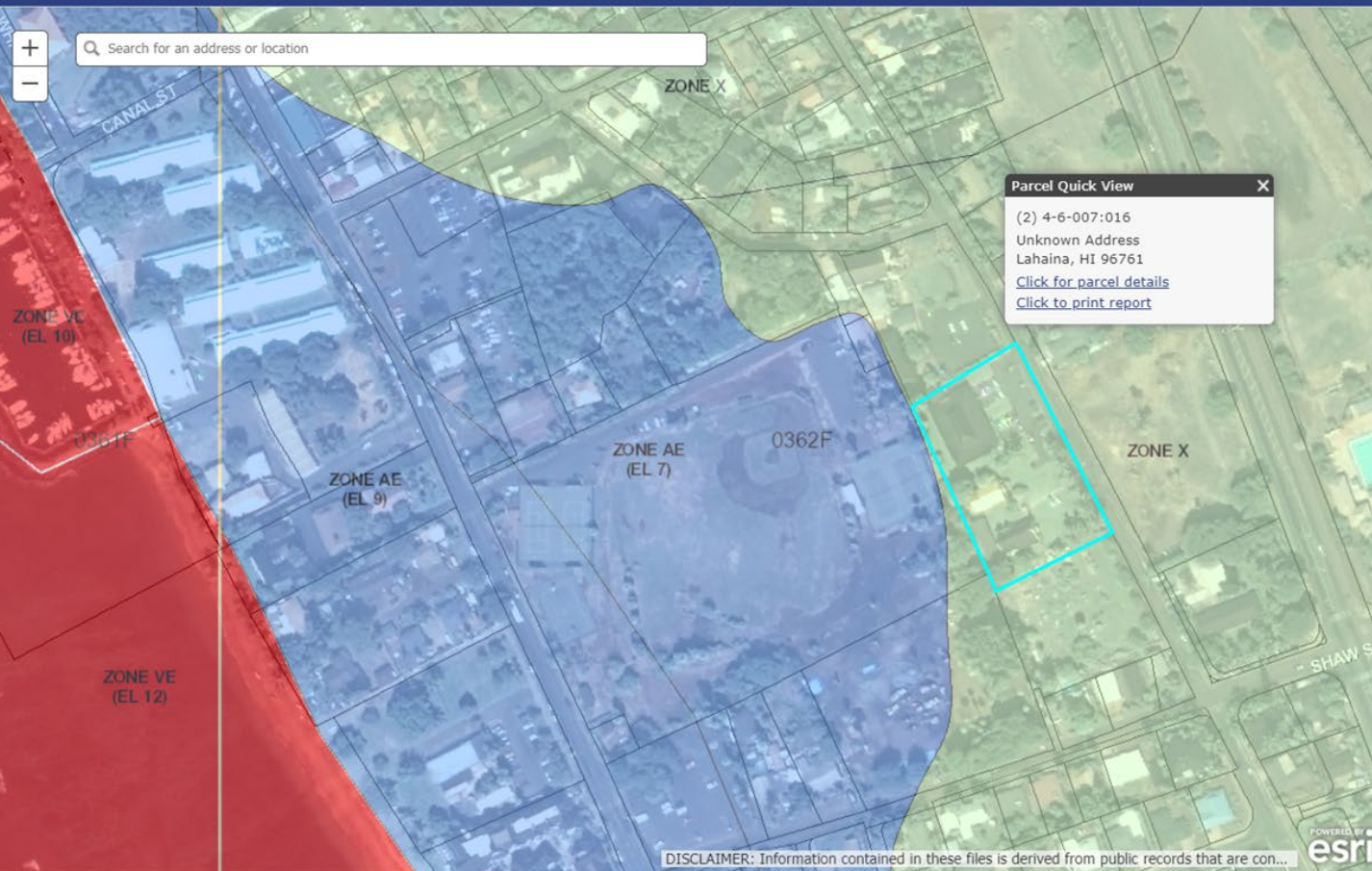
# What is a flood zone?

- An area deemed to be within the impact zone of the 100-year flood (1% occurrence each year)
- Different classifications for flood zones depending on type of flooding: coastal, sheet flow, floodway overflow, pooling, etc
- Flood Insurance Rate Maps (FIRMs) with these zones provided by FEMA and available online through DLNR's Flood Hazard Assessment Tool (<http://gis.hawaiiinfip.org/FHAT/>)





# Flood Hazard Assessment Tool



- LOMCS
  - Benchmarks
  - Coastal Transect Lines
- Preliminary DFIRM
  - Kauai County
- Historic DFIRM/FIRM
  - Honolulu County DFIRM (1/19/2011)
  - Honolulu County DFIRM (6/2/2005)
  - Maui County DFIRM (9/19/2012)
  - Maui County DFIRM (9/25/2009)
  - Maui County FIRM (various)
  - Hawaii County FIRM (various)
  - Kauai County DFIRM (9/16/2005)
- Other Layers **1**
  - County Parcels (TMKS)
  - Coastal Topography (south shore only)
  - State Regulated Dams

View flood map as:

Basemap:

Set flood map layers transparency:

0 10 20 30 40 50 60 70 80 90 100

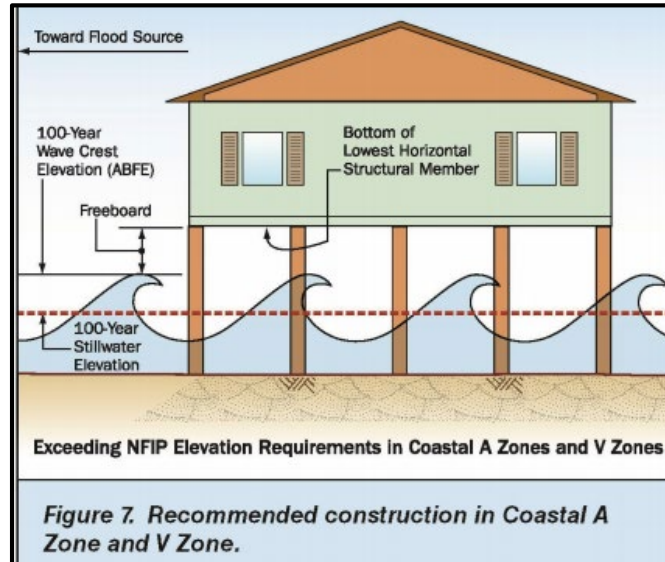
TMK Search

Enter a 9-digit tax map key:

- County numbers:
- 1 = City and County of Honolulu
  - 2 = Maui County
  - 3 = Hawaii County
  - 4 = Kauai County

# Building in the floodplain

- Base Flood Elevations - minimum elevation at which buildings must be built in order to avoid flooding
- In Maui County, we require BFE+1' (higher safety standard)
  - This lowers insurance rates county-wide
- Each zone has unique building and application requirements in order to comply with the NFIP program





# Repetitive Loss Properties



“Any insurable building for which two or more claims exceeding \$1,000 were paid by the National Flood Insurance Program (NFIP) within a ten-year period.”

- \$6.8 million has been paid in NFIP claims within Maui County since 1981.
- 37 repetitive loss properties are currently within Maui County; 10 in West Maui.
- \$4.5 million has been paid to Maui County’s repetitive loss properties.
- All 37 were not elevated when the damage occurred.

# West Maui Severe Repetitive Loss Properties

Severe Repetitive Loss (SRL): “Any insurable building for which four or more claims of at least \$5,000 were paid within ten years, or recieved two claim payments exceeding the value of the property.

- 7 properties in Maui County are SRL properties.
- 4 SRL properties are in West Maui
- 2 of the SRL properties in West Maui have flooded 5 times.
- \$1.4 million has been paid to SRL properties across Maui County.

# Why did the 10 RPL properties in West Maui flood?

- 3 coastal properties flooded due to wave action. All had bottom floors below the base flood elevation.
- 4 properties located within a FEMA defined floodway experienced stream water overtopping banks, causing flooding. All had bottom floors below the base flood elevation.
- 3 Zone X properties experienced storm water flooding due to debris clogging water outlets, or otherwise inadequate drainage. All three are not elevated.

# Recommendations for CPAC:

1. Avoid entitling lands for residential and commercial development within known flood hazard zones.
2. Rest assured lands already entitled for development must meet current flood development standards.
3. Encourage agriculture, open space, open land recreation within flood hazard zones.
4. As we develop away from the ocean, be aware of stream floodway hazards. They are conveniently mapped online at:

Flood Hazard Assessment Tool (FHAT) <http://gis.hawaiiinfip.org/FHAT/>

**Mahalo!**