

RiskMAP
Increasing Resilience Together



FEMA Risk MAP Program

Watershed University

Eric Simmons

April 28, 2016

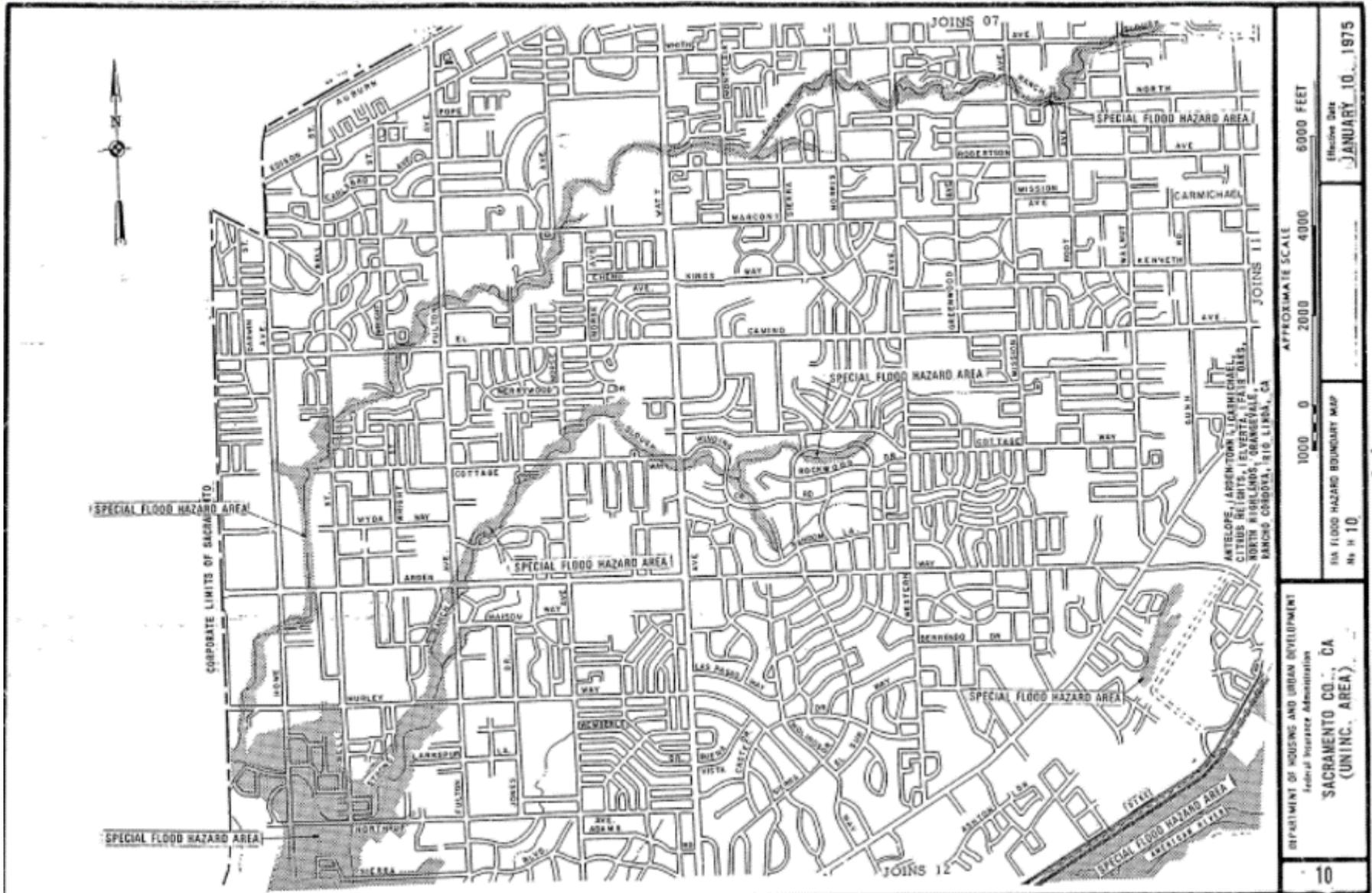


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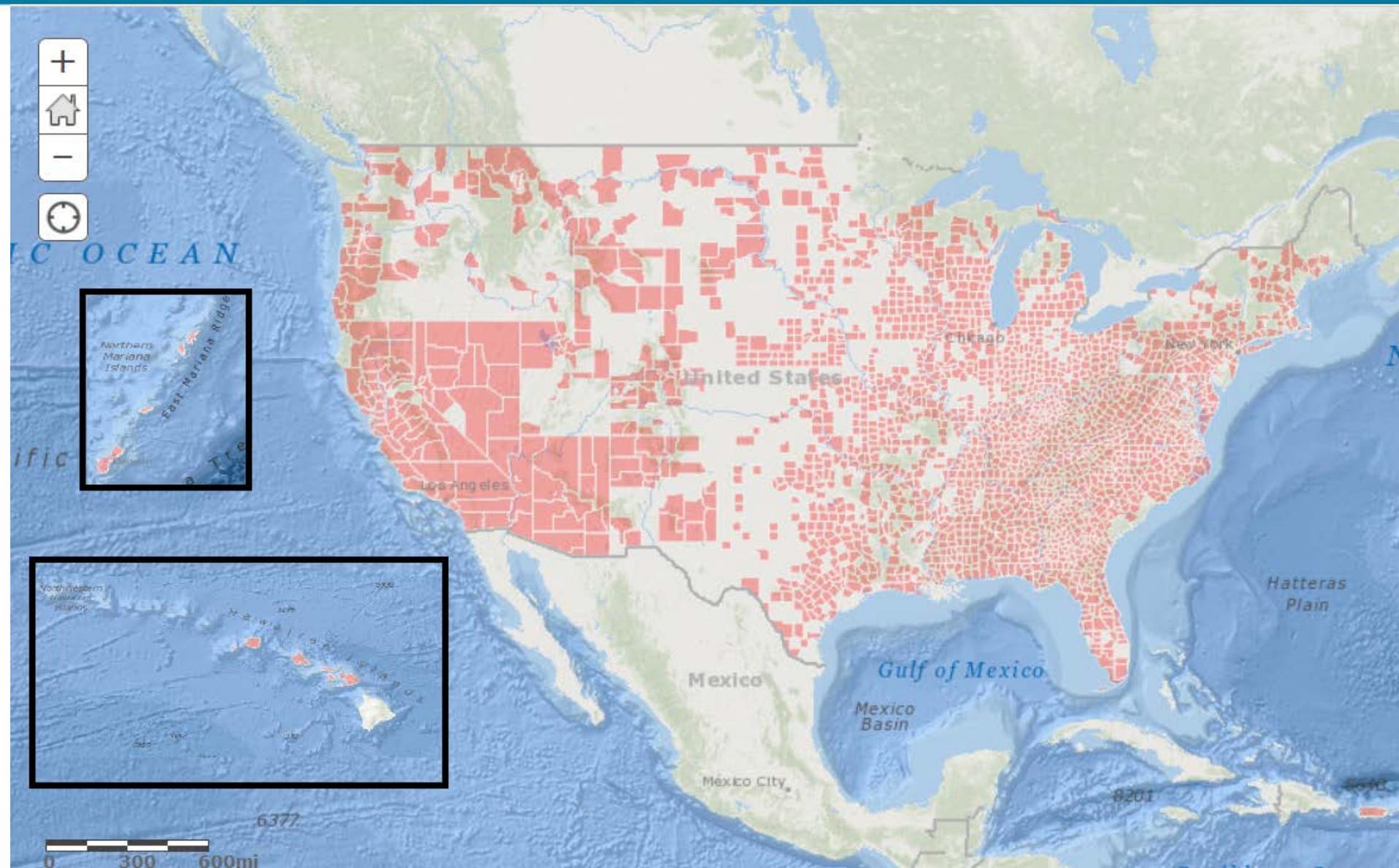
Discussion Topics

- **Program Background**
 - Existing Tools & Digital Data
 - Risk MAP Program Overview
- **News and Upcoming Highlights**
 - Recent Laws & TMAC
 - Changes in Risk MAP

Earliest Flood Maps (e.g., Sacramento)

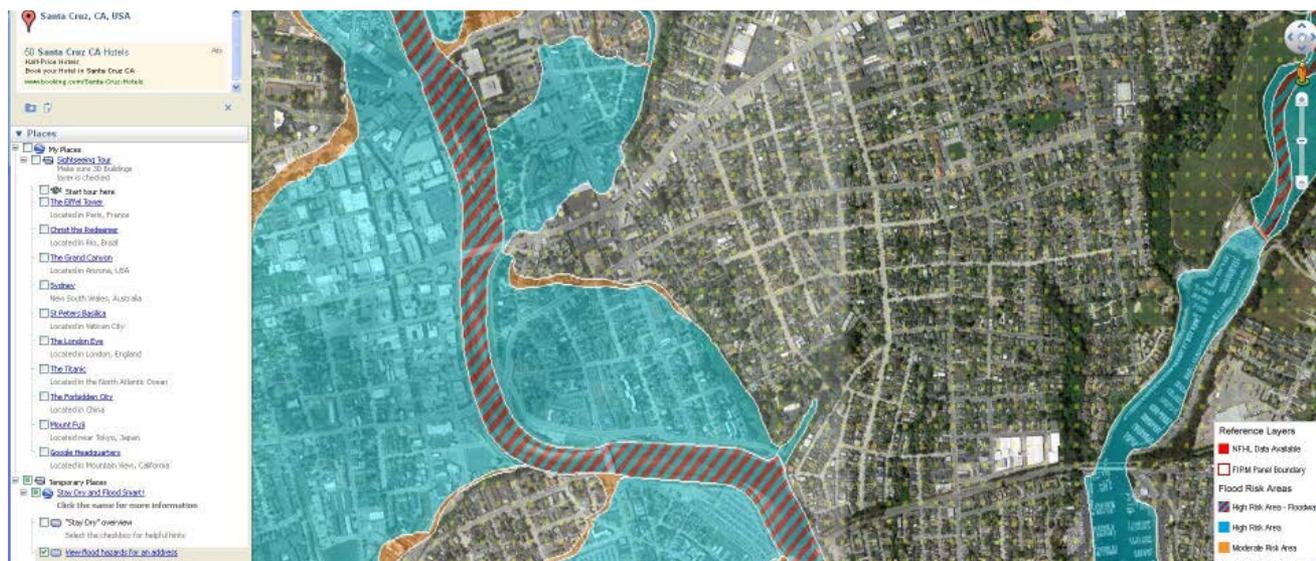


Modernized Flood Hazard Mapping



National Flood Hazard Layer (NFHL)

- ▶ **FEMA Map Service Center Website:** <http://msc.fema.gov/portal>
- ▶ **GeoPlatform Map Viewer:** <http://fema.maps.arcgis.com/home/>
- ▶ **Web Map Service (e.g., NFHL in Google Earth)**
- ▶ **Your own GIS.** For more information search: “data.gov nfhl”

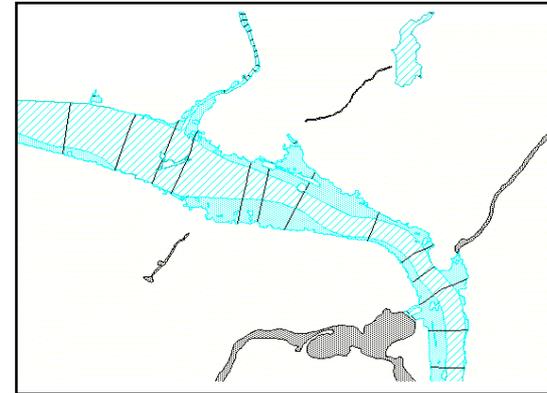


NFIP Flood Map: Basic Components



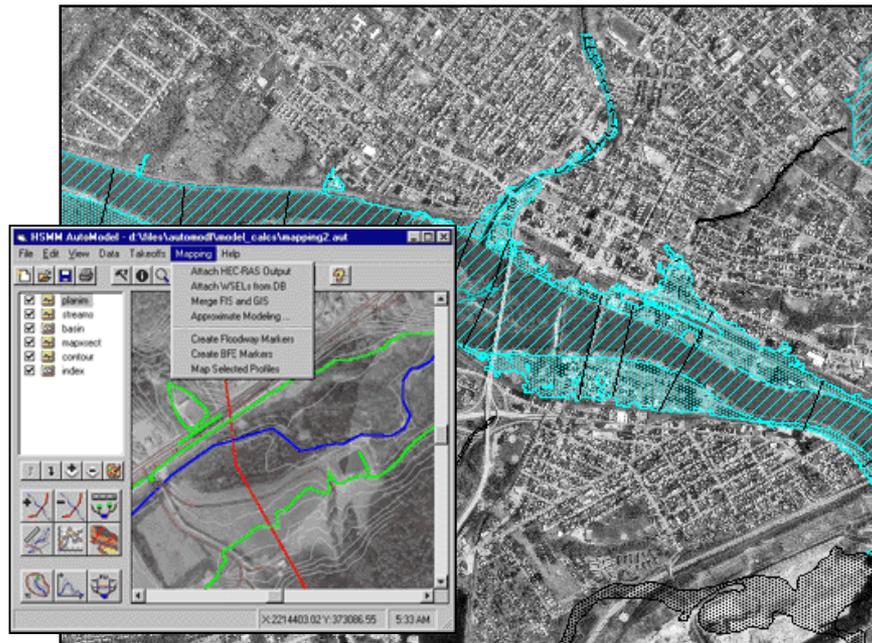
Base Mapping

+



Flood Hazard Data

=



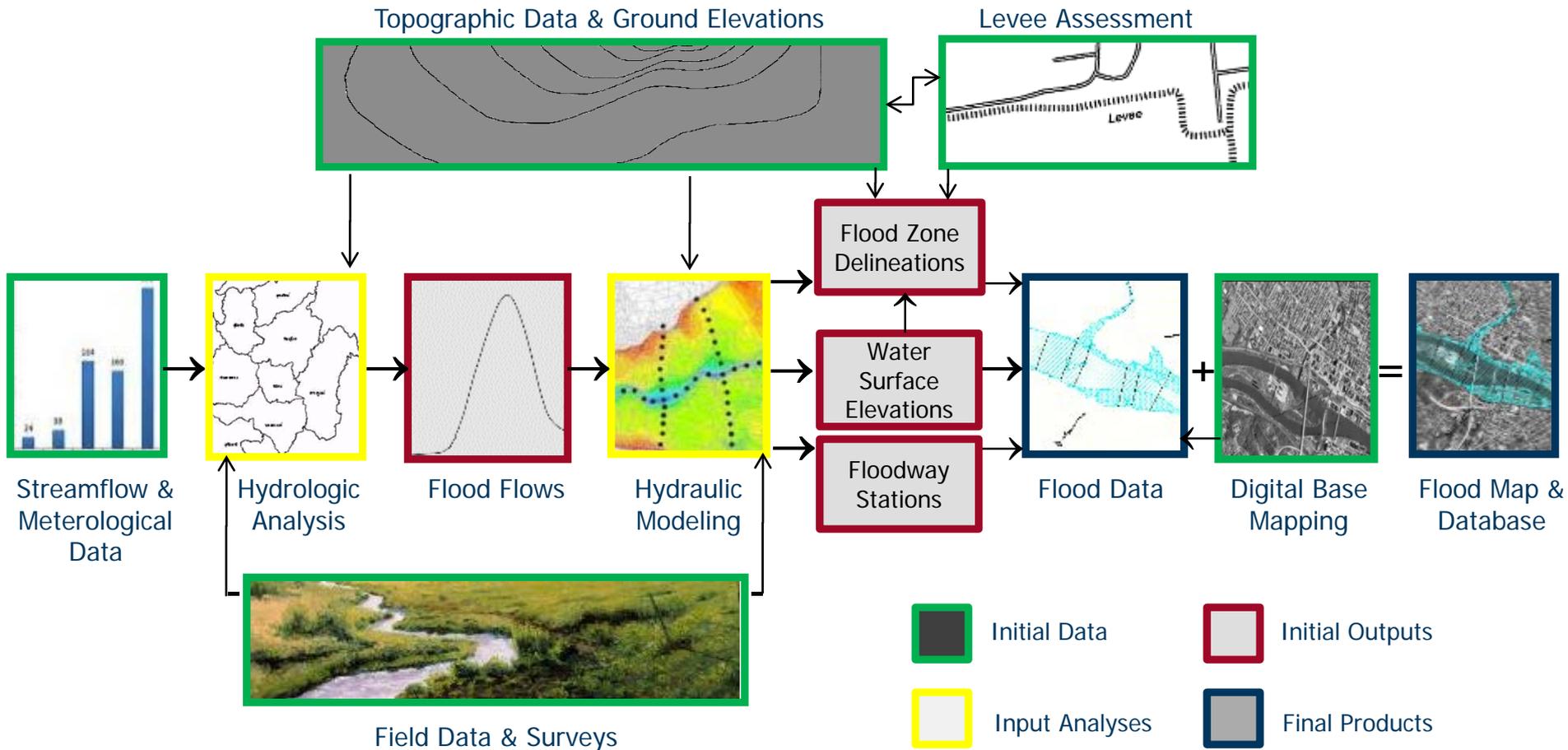
Digital
FIRM



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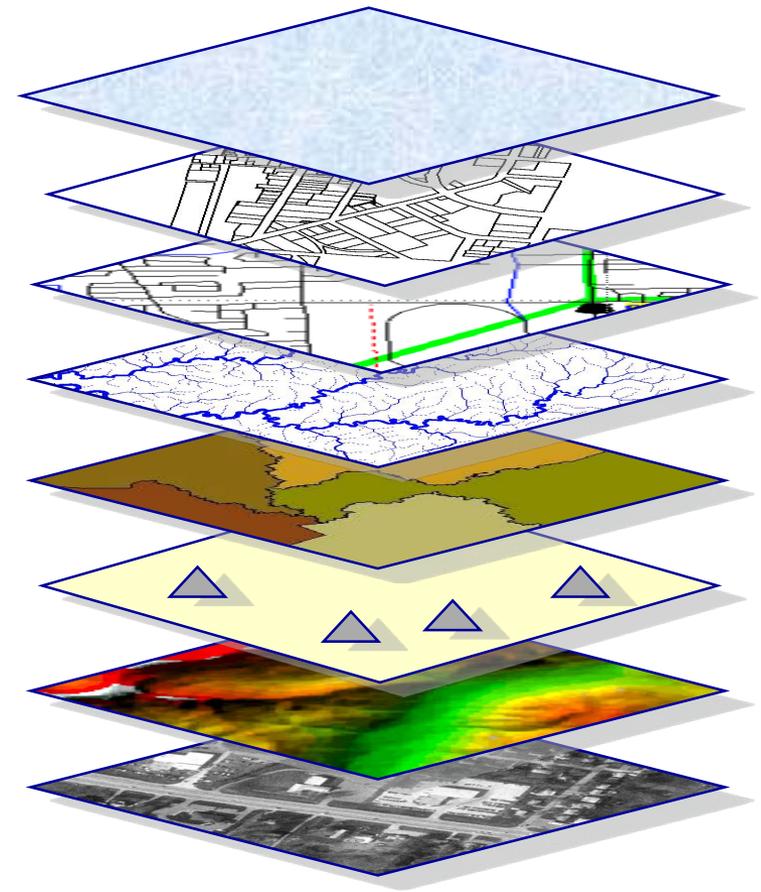
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Factors Impacting Riverine Flood Hazard Maps



NFHL/FIRM Data and GIS Attributes

- Flood zone boundaries & polygons
- BFE lines and elevations
- Regulatory floodways
- Cross section locations
- Hydraulic baselines (streamlines)
- Hydrologic structures
- FIRM panel boundaries
- Base mapping (streets, etc.)
- Political/Admin. jurisdictions



New Format Flood Insurance Studies (FISs) & Flood Insurance Rate Maps (FIRMs)

FLOOD INSURANCE STUDY
FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 2

FLOOD COUNTY, STATE AND INCORPORATED AREAS



COMMUNITY NAME	COMMUNITY NUMBER
CITY OF COASTLAND	123456
FLOOD COUNTY UNINCORPORATED AREAS	123457
TOWN OF FLOODVILLE	123458
CITY OF METROPOLIS	123459
VILLAGE OF UPLAND*	123460

*No Special Flood Hazard Areas Identified



EFFECTIVE:
DECEMBER 31, 2011

FLOOD INSURANCE STUDY NUMBER
12345CV000X
Version Number: 1.1.1.1



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

SONOMA COUNTY, CALIFORNIA
and Incorporated Areas

PANEL 982 OF 1150




Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
PETALUMA, CITY OF	060379	0982	G
SONOMA COUNTY	060375	0982	G

Revised FIS Reports and digital FIRMs will continue to fulfill regulatory requirements and support the NFIP

What is Risk MAP?

Through collaboration with State, Local, and Tribal entities, Risk Mapping, Assessment, and Planning (Risk MAP) will deliver quality data that increases public awareness and leads to action that reduces risk to life and property



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Risk MAP Process



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Flood Risk Products after Flood Insurance Study

Changes Since Last FIRM

- Shows areas of change
- Improved outreach related to flood zone revisions

HAZUS Risk Assessment & Flood Risk Layer

Enables communities to better understand risk by reference to existing structures and predicted damage

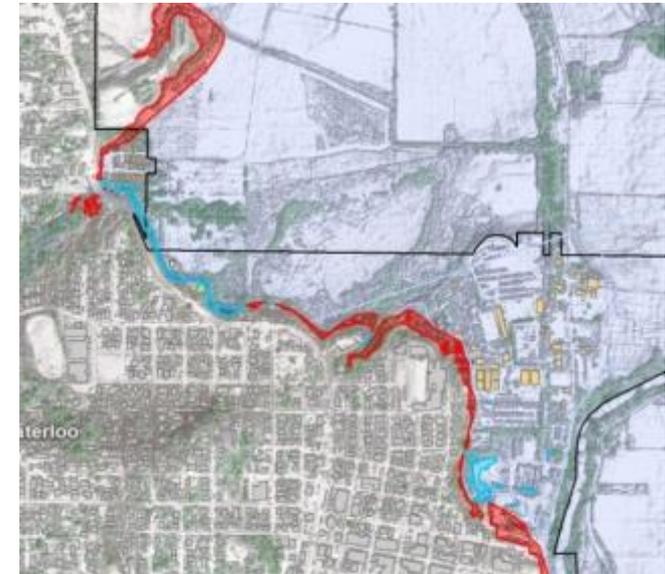
Legend

SFHA

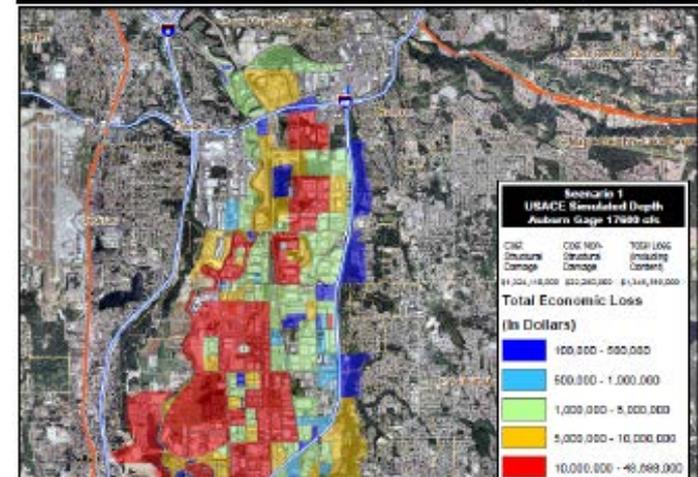
- SFHA Added
- SFHA Removed
- SFHA Unchanged

Structures

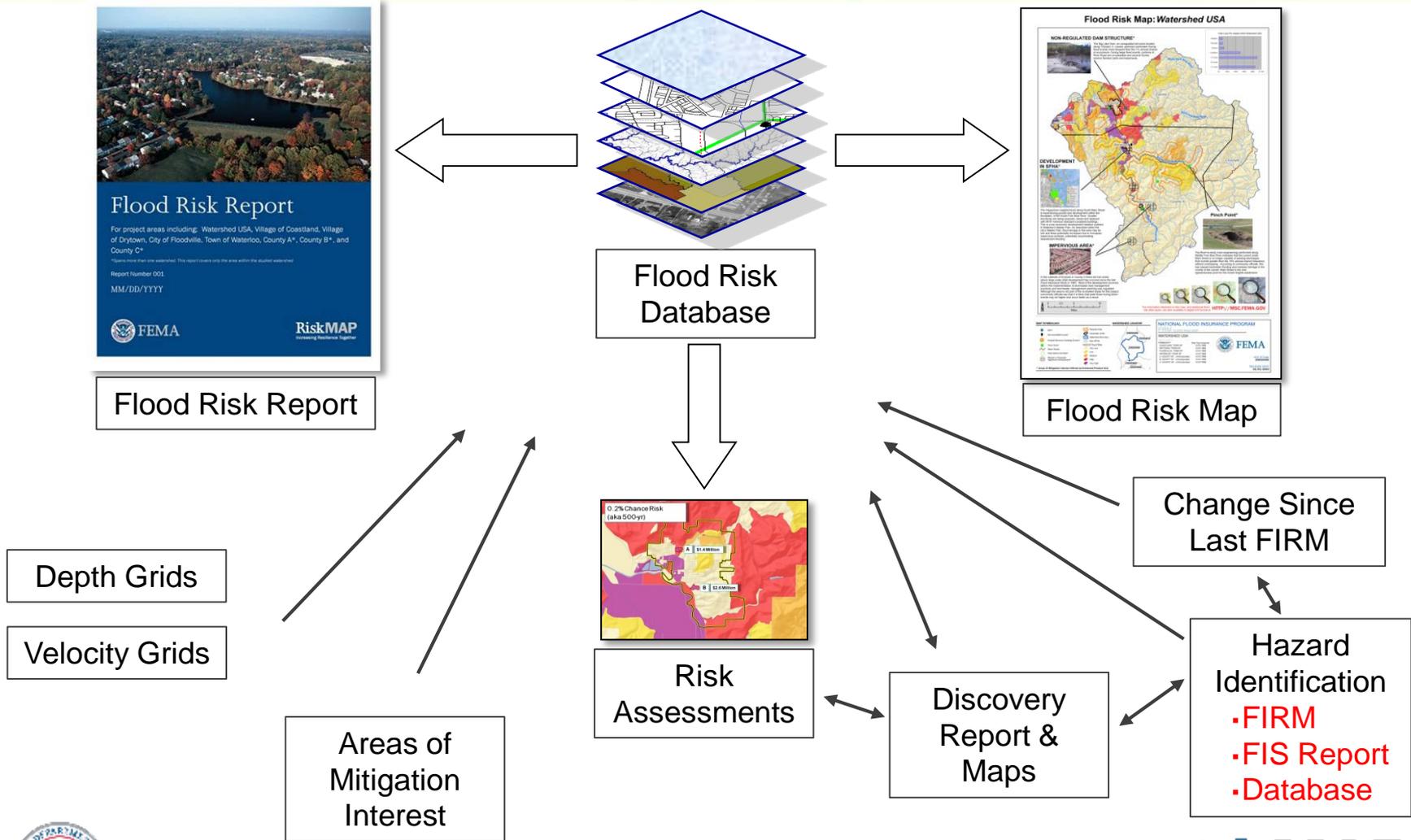
- Now In SFHA
- In SFHA
- No Longer in SFHA
- Not In SFHA



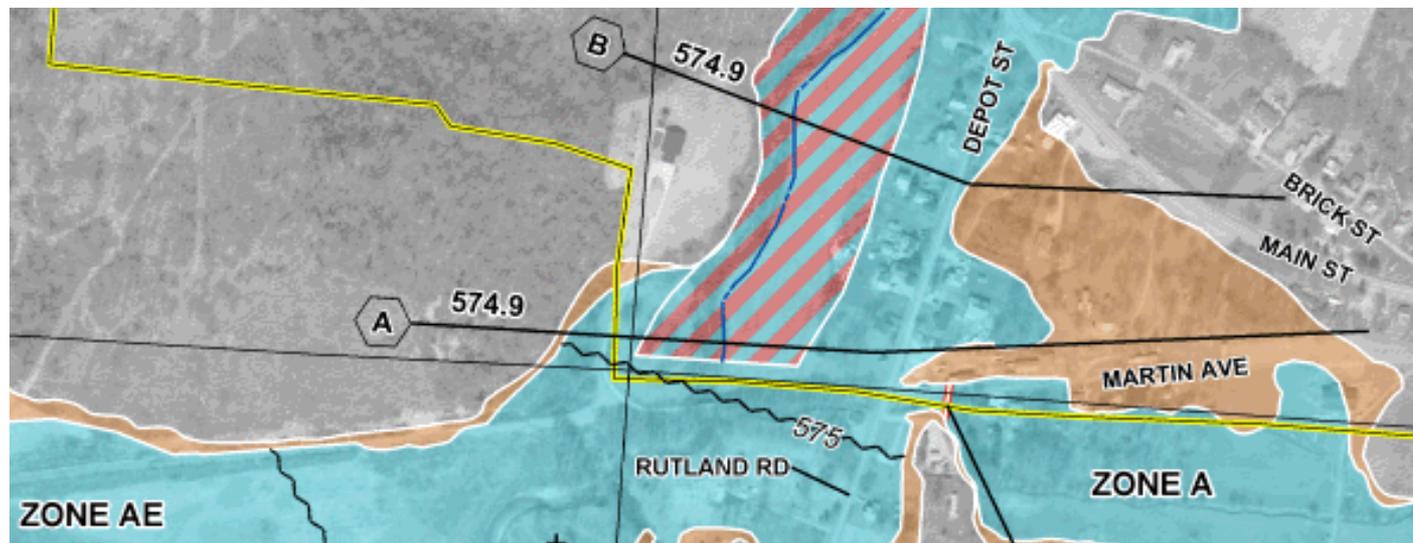
HAZUS Estimation of Direct Building Economic Loss
Scenario 1: USACE 17,600 cfs Scenario for Green River Valley, King County, WA



Risk MAP Flood Products



Updating Flood Insurance Rate Maps



- FEMA Region IX has 93 active mapping projects in California
- CTPs are a key component of the Risk MAP Program
- Nearly 100 levee mapping projects initiated nationally since 2013; 200 additional studies need resources in 2016 and beyond
- FEMA's hazard mapping focus past 5 years has been coastal

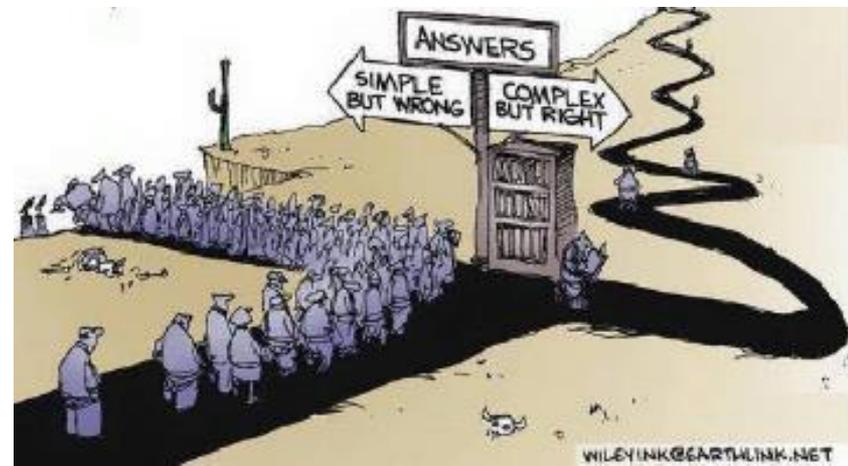
BW-12 and HFIAA

▶ July 2012 – Biggert Waters

- Reauthorized the NFIP for additional 5+ years
- New insurance policies reflect full risk rate (subsequently repealed); 25% increase yearly for existing, subsidized policies
- Creation of Technical Mapping Advisory Council

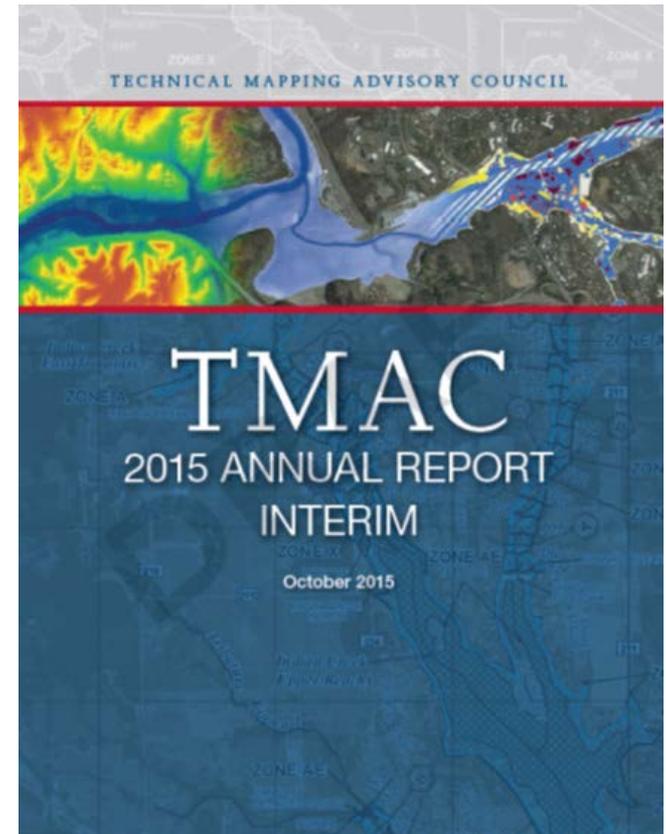
▶ March 2014 – Homeowners Flood Insurance Affordability Act

- Law repeals and modifies certain provisions of BW-12
- Lowers the rate of increases on some insurance policies
- Implements a surcharge on all policyholders
- New Flood Insurance Advocate



Technical Mapping Advisory Council (TMAC)

- **TMAC provided recommendations on how to improve the flood mapping program, including the accuracy and quality of FIRMs**
- **Two reports to FEMA in October 2015**
 - Annual Report (29 recommendations)
 - Future Conditions Report – best available climate science to assess flood risk
- **“TMAC’s work is not done and they are actively working to set an agenda for another year’s worth of effort...”**



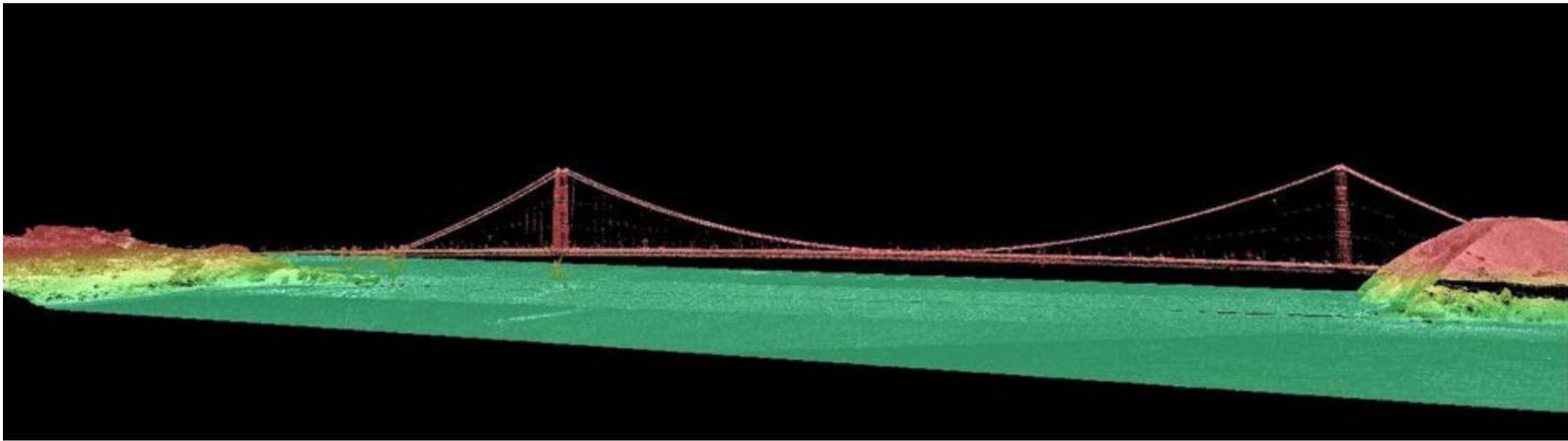
Revised Coastal Mapping: www.r9coastal.org

- **Restudy of Nation's populated coastline initiated**
- **Restudy of Hawaii has been completed**
- **San Francisco Bay**
 - Preliminary maps for all nine counties have been issued
 - Five out of nine counties have been finalized
 - Alameda, San Mateo, Santa Clara & San Francisco not yet finalized
- **Open Pacific Coast**
 - Preliminaries issued Del Norte to San Luis Obispo (10 counties – Phase 1)
 - Santa Barbara to San Diego (5 counties) preliminary later this year (Phase 2)



Increased FEMA Investment in LIDAR

- **FEMA is an investor in 3D Elevation Program (3DEP), a national program managed by the USGS to acquire high-resolution elevation data**
- **Partnerships with funding from Federal agencies, States, local governments and other stakeholders**
- **High resolution elevation data improves accuracy of flood mapping, enables risk reduction and provides numerous benefits**



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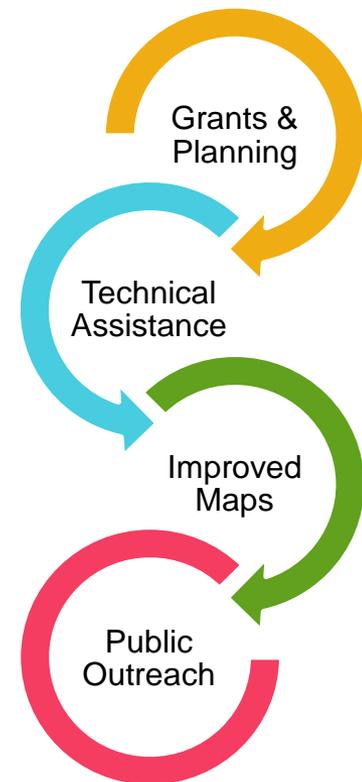
Risk MAP Discovery Process



Discovery is FEMA’s process of data mining, listening, and documenting local needs with the goals of risk reduction, future studies, and continued coordination

Example: Tehama-Shasta Discovery

- ▶ **8 HUC-8 watersheds covering 14 communities in Northern California: Butte, Tehama, Shasta and Siskiyou Counties**
- ▶ **What do communities get out of Discovery?**
 - FEMA and partner agency resources
 - Best practices, tools and lessons learned
 - Energized discussion to address needs
- ▶ **Who:**
 - Floodplain management officials
 - Emergency management staff
 - State agencies (OES, DWR, CalFire...)
 - Other Federal Agencies



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Discovery in Risk MAP

➤ When

- Before a Risk MAP study is scoped or funded

➤ Why

- Promotes future loss reduction efforts
- Increases visibility of flood information
- Increases education and mitigation involvement
- Informs whether a Risk MAP study will occur

➤ Next Steps

- Flood hazard study and/or risk assessment?
- Mitigation planning support or technical assistance?
- Grants? Floodplain management training?



Risk MAP Providers

- ▶ **FEMA's current procurement framework reflects a focus on technical credibility, engagement with local officials, and moving communities to take mitigation action**



Production
and Technical
Services



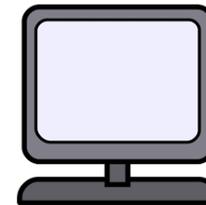
Community
Engagement
& Risk
Communication



Cooperating
Technical
Partners



Program
Management



Customer
and Data
Services



LOMA &
LOMR-F
(MT-1)
Processing

Mapping Policy & Guidelines

▶ 2015 Updates

- Key Decision Points
- Zone AR/A99 eligibility
- USGS elevation data standards
- ESA requirements for CLOMRs

▶ 2016 and beyond

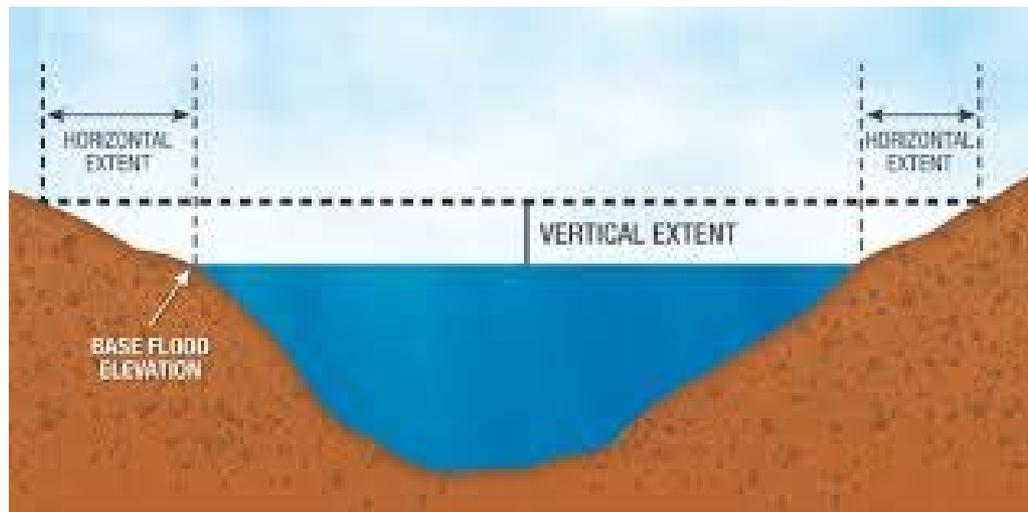
- Reforms from BW12 and HFIAA
- TMAC 1st year recommendations
- Finish guidance transformation



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Federal Flood Risk Management Standard

- ▶ President signed Executive Order 13690 on January 30, 2015
- ▶ Briefings and comment period offered in 2015
- ▶ WRC issued final FFRMS Guidelines
- ▶ Federal agencies will update policies, procedures and/or regulations to implement the Executive Order



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