

FEMA's Mapping Program Past, Present, and Future

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June 19, 2018



October 1975

Vince DiCamillo starts his professional career at Dames & Moore, contractor for the US Department of Housing and Urban Development (HUD), supporting the relatively new National Flood Insurance Program (NFIP)



So what is going on in the world and the NFIP in October 1975.....

October 1975



Gerald Ford was President
Former President Nixon had
resigned just 14 months earlier.

The median annual income was about \$12,600

A new house cost around \$48,000

The Minimum Hourly Wage was \$2.10

A new car cost around \$3,800

A Gasoline of Gas was \$0.59

A Few Facts for October 1975



Best Selling Car in US
Oldsmobile Cutlass



Top Movie of 1975
was *One Flew Over
the Cuckoos Nest*

JAWS was also a top
movie that year....

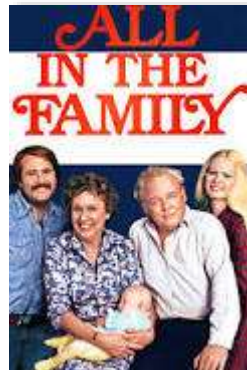


A Few Facts for October 1975



Top song of October 1975 –
Fame by David Bowie

Top TV Shows



Saturday Night Live started
on October 11, 1975....



A Few Facts for October 1975



STARR II/Stantec's Mike Anderson becomes a stunt double for Opie in the Andy Griffith Show before running off to college as the youngest freshman ever!



Technology in October 1975



Telephone – Often shared by multiple employees

Computer – only a mainframe with dumb terminals



No PCs



No Laptops



High Tech was a fax machine!



Technology in October 1975



Cell Phone
1975

Now you know I am old, and corny.....

NFIP in 1975



- Emergency Program Well Underway (Emergency Phase) – Expected to be 10 years....
- Communities are Entering the Regular Program (Regular Phase)
- Program's Existence Constantly Under Fire – Many Opposition Groups
- NFIP Administered as part of HUD – FEMA wasn't born yet

Flood Maps Have Evolved



Block Boundary



Curvilinear



First FIRM



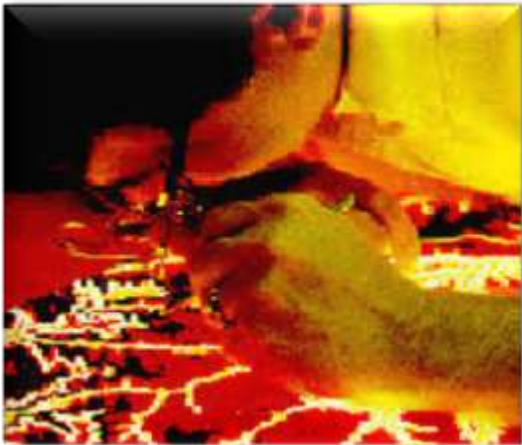
Map Initiatives FIRM



Today's Digital FIRM

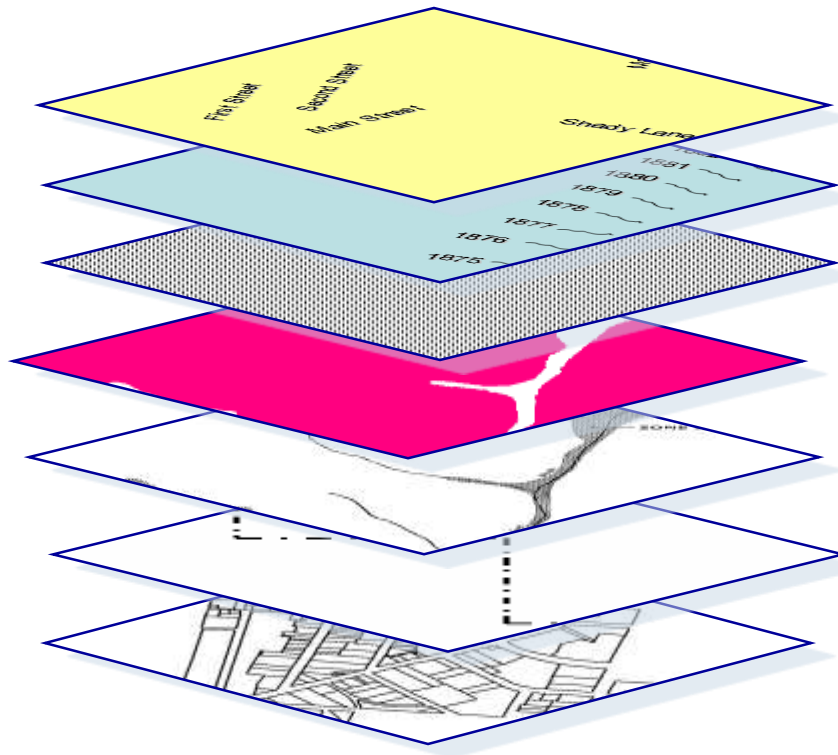
Mapping Technology in 1975

Manual, Labor Intensive Process – Scribing
required skilled cartographers



Mapping Technology in 1975

The Making of Flood Insurance Rate Maps



Street Names/Labels

Base Flood Elevations

Screens

Hold Outs for Screens

Flood Boundaries

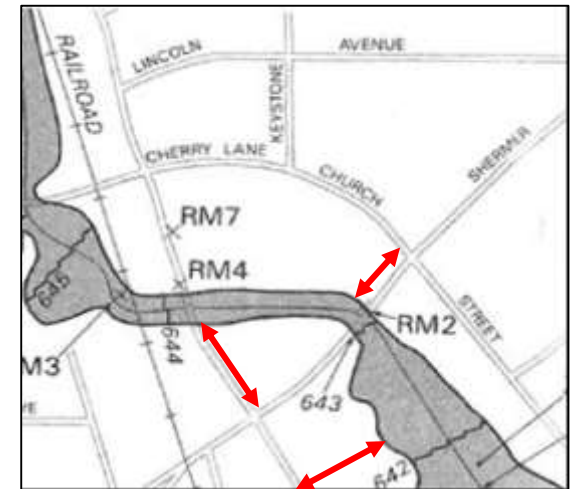
Corporate Limits

Base Map

Mapping Technology in 1975

The flood map accuracy was tied to the accuracy of the base map.

- The Overall spatial accuracy was not important.
- Relative accuracy tied to closest street or physical feature.
- Base maps we often selected based on completeness of streets, street names, and corporate limits



Flood Hazard Data in 1975



One county-wide
H&H study



Today



Data Storage in 1975



Anyone need a warehouse?

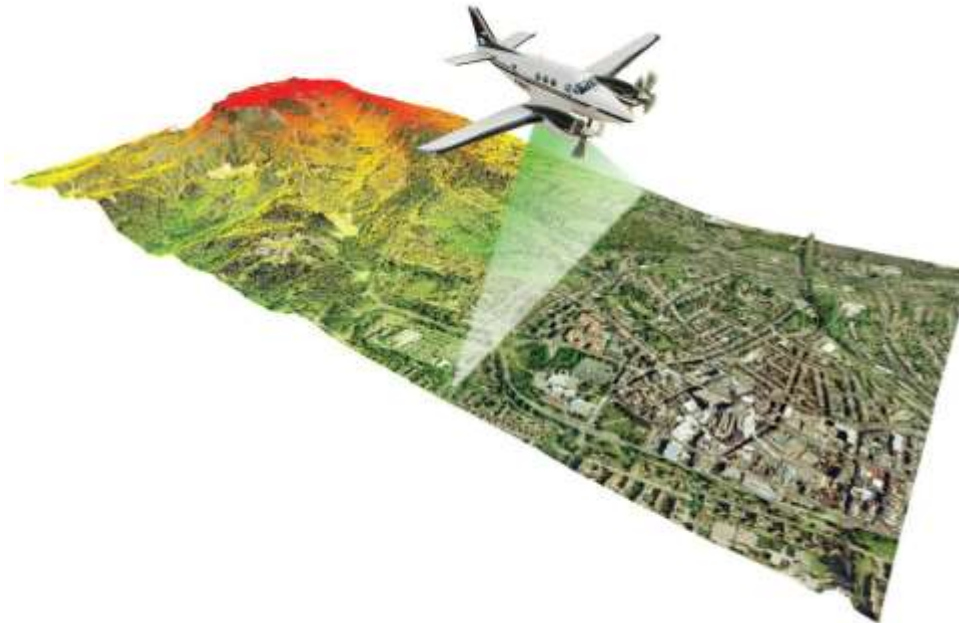


Today



Evolution of Technology & Mapping

Improvements in computing power, modeling software, and the availability of high resolution digital terrain data have revolutionized flood hazard and flood risk data development



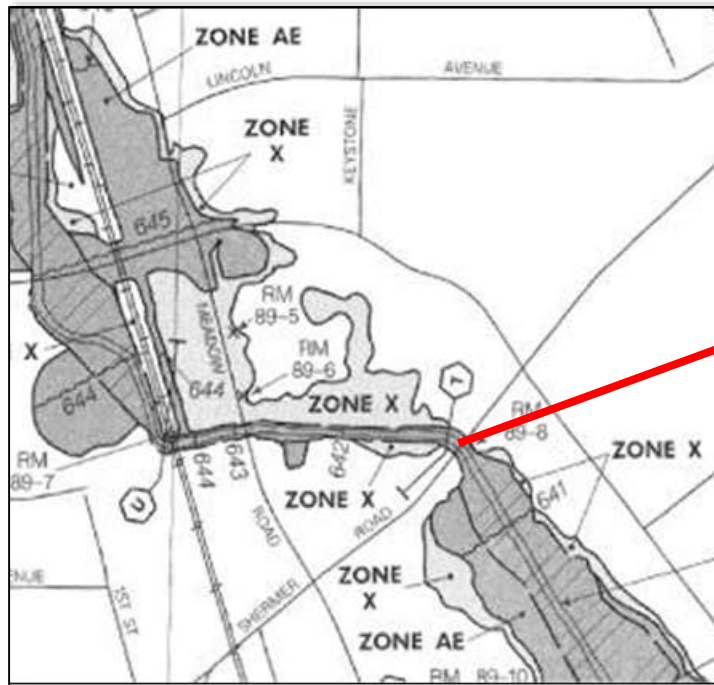
Evolution of Technology & Mapping

1975 – Once created the paper Regulatory Map was the central source for flood hazard data used for insurance rating and floodplain management

Today – The data is the central source for flood hazard and flood risk data and is used to create Regulatory Maps, and other flood risk products and outputs that support flood insurance rating, floodplain management, and risk communication

Evolution of Technology & Mapping

Paper Map Centric



Data Behind the Map

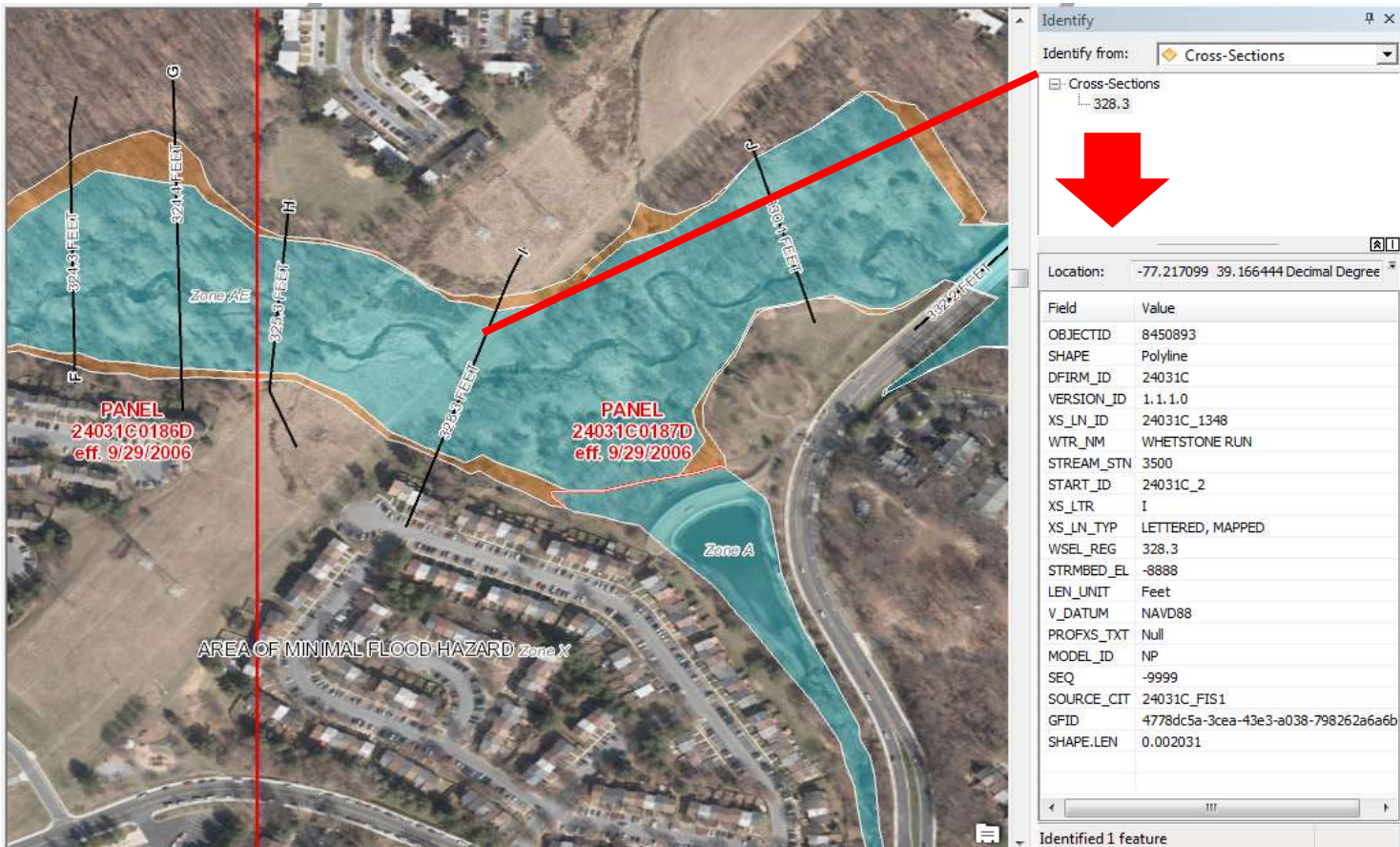


Find your location



Evolution of Technology & Mapping

Data Centric Map



Recap

- NFIP has always been under fire
- Technology has revolutionized flood risk data development and mapping
- The formats of flood maps have changed over time and now flood risk data allow outputs in many formats and visualizations.
- Vince is old

Where do we go from here?

Flooding is still our Number 1 Peril



Drivers Toward Change

- GAO, OMB, OIG Reports
- TMAC
- Risk Rating Redesign
- FEMA Strategic Plan - Moonshots
- Risk MAP Recalibration / Evolving Risk MAP
- Customer Experience (CX) for Communities

FLOODTOOLS™

+ FLOOD RISK MAP + LOSS CALCULATOR + FLOOD Ed + GET A QUOTE

Map My Risk

Please explain flood maps to me

CHOOSE BASE MAP

ZOOM

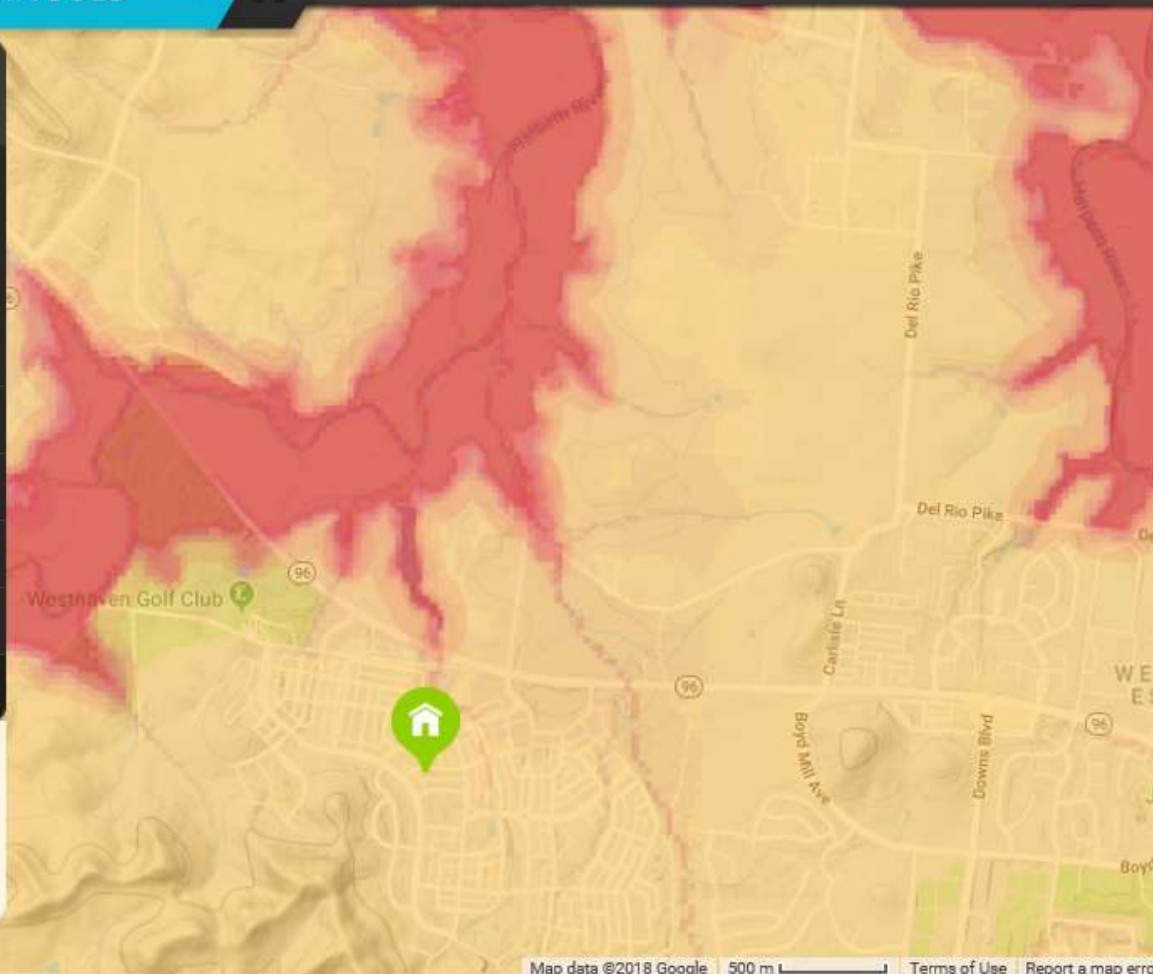
- ☒ Map View
- ☐ Terrain View
- ☐ Satellite View
- ☐ Labels

- Floodplains
- Historical Floods
- Other Hazards
- Hurricanes
- Flood Risk

Legend

Higher Risk

Lower Risk



Google

Address (change) :

225 Prospect Avenue Franklin, TN 37064

Elevation: 271 ft

Your Flood Risk Is:



How is my risk calculated?

Flood Losses

In Your Community:*

\$3,935,262

Flood Claims

In Your Community:*

341

Average Claim

In Your Community:*

\$11,540

Active Policies

In Your Community:

254

*In the past 10 years

Get a Flood Risk Report PDF

What do I have to lose?

Get a Flood Insurance Quote

Look up a new address 225 prospect ave franklin tn

GO

PROGRESSIVE

PROGRESSIVE FLOOD

Underwritten by Occidental
Fire & Casualty Company of North Carolina

Home

Quote

Search

FAQ

Tuesday, June 5, 2018

Contact Us

If you have any
questions, please
contact:



LUCY BACHLOTT
AXCEL INSURANCE AGENCY
INC
(888)391-8533 / [Email](#)

Flood Insurance Premium

Let's see if you're eligible for an instant quote

What kind of home do you live in?

- Select One -

Is your home over water?

- Select One -

Building Purpose?

- Select One -

Is this your primary home?

- Select One -

Are you renting this home or do you
rent this home to someone else?

- Select One -

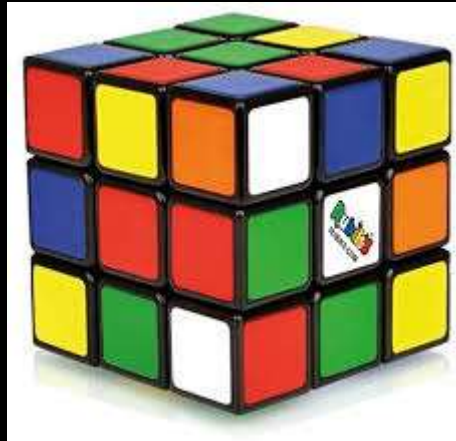
Are you aware of any flood insurance claims
that have been reported for this home?

- Select One -

[Continue](#)

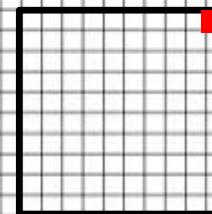
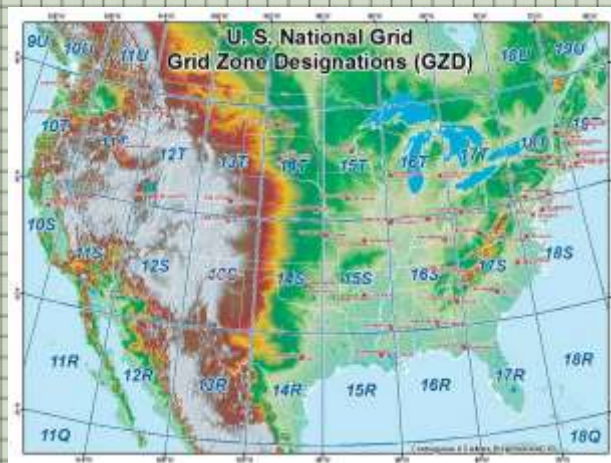
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Hey Siri?



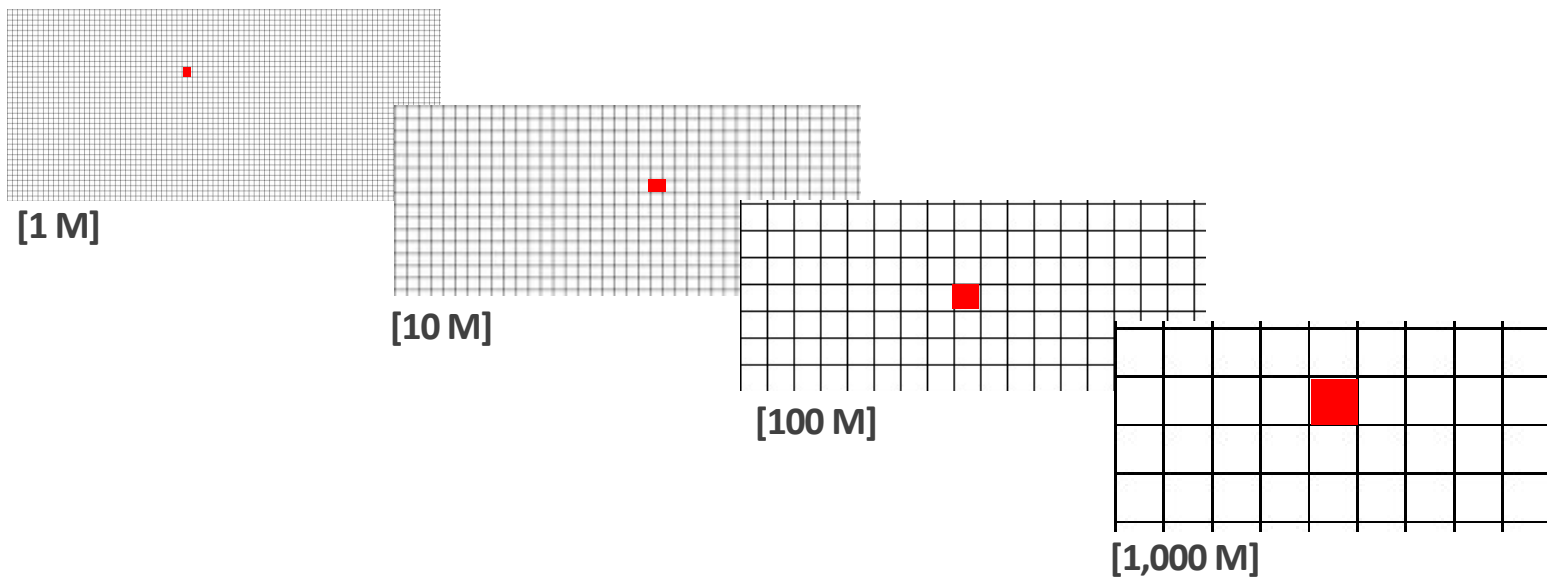
US National Grid

1 meter cell size, tiles up to 100K sampling. (UTM based)

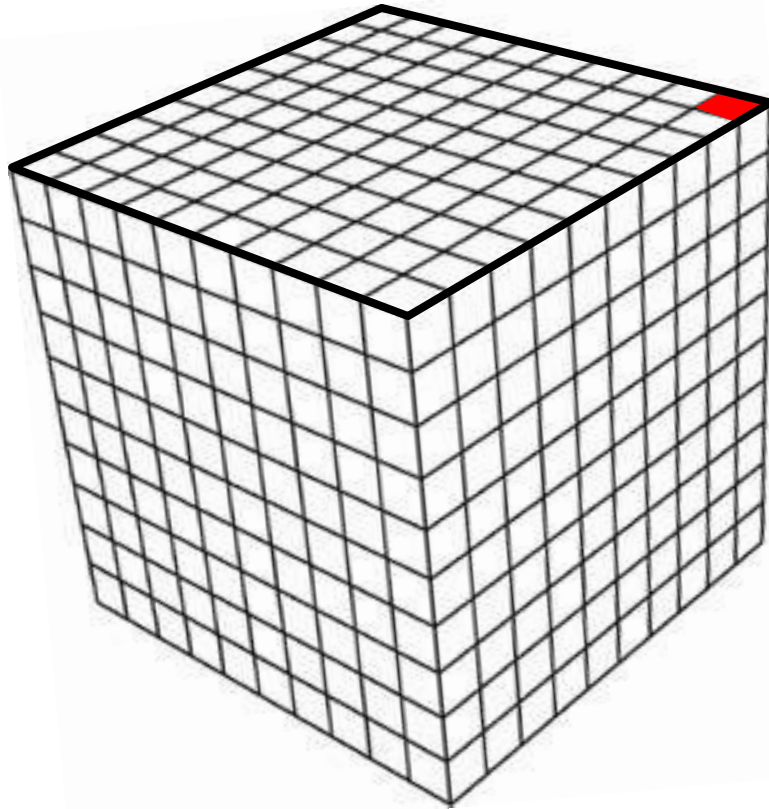


US National Grid

1 meter cell size, tiles up to 100K sampling. (UTM based)



Integrated Flood Risk Data



Flood Zones
Flood Type (Costal, Riverine, Pluvial)
Multi-Frequency Water Surface Elevations
Multi-Frequency Flood Depths
Multi-Frequency Flood Velocities
Annualized Flood Depths and Risks
Changes Since Last FIRM (versioning)
Other Non-Regulatory Results
Future Conditions
Analysis Type (e.g. Base Level, Approx, Detailed)
CNMS Linkages (e.g. Validation & Assessment Status)
Study Source, FIS Info, and Metadata

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