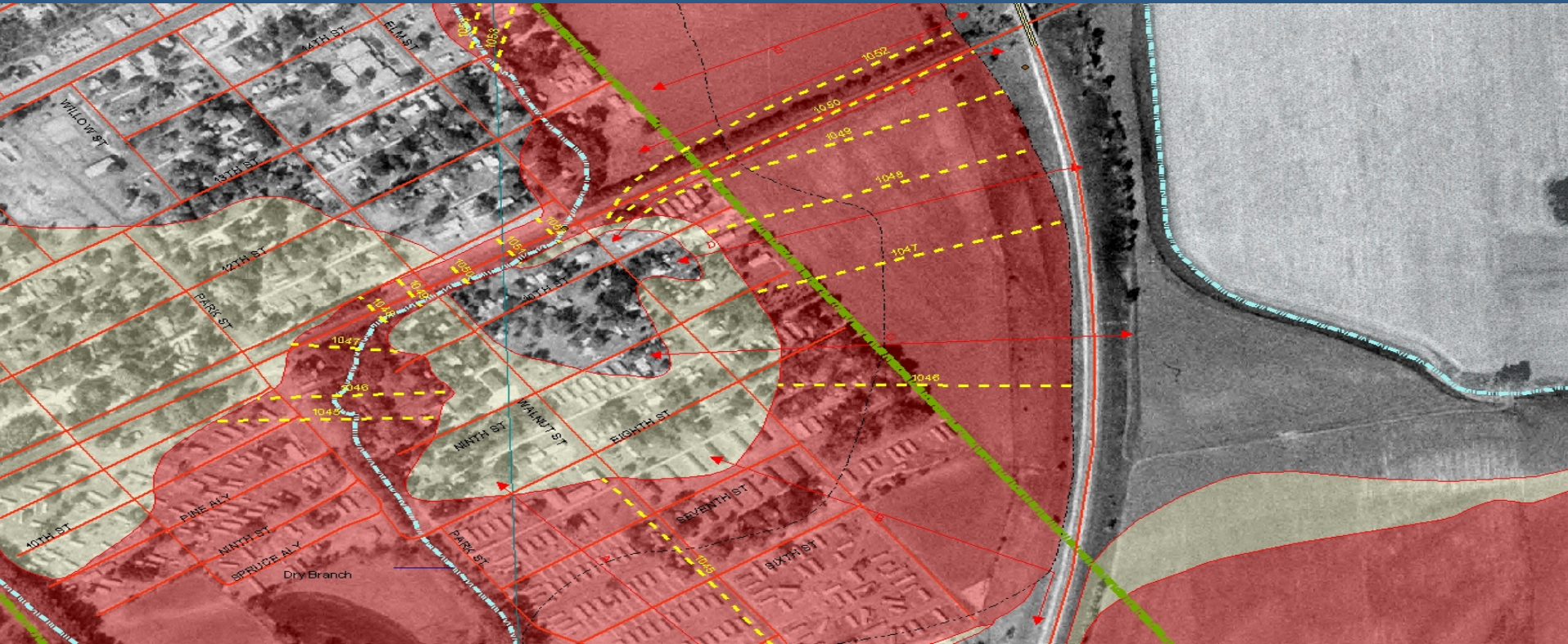


Map Modernization and DFIRMs



Dr. Shane Parson, PE, CFM

URS Corp.

- **Insurance portions of this presentation were originally given at ASFPM Conference by**
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- **Map Modernization Life Cycle**
- **Preliminary Release Issues**
- **Insurance Issues**
- **DFIRM Features**
- **Questions**

Flood Map Study Lifecycle

Adoption

- Stakeholder, Media & Public Outreach

Preliminary Release

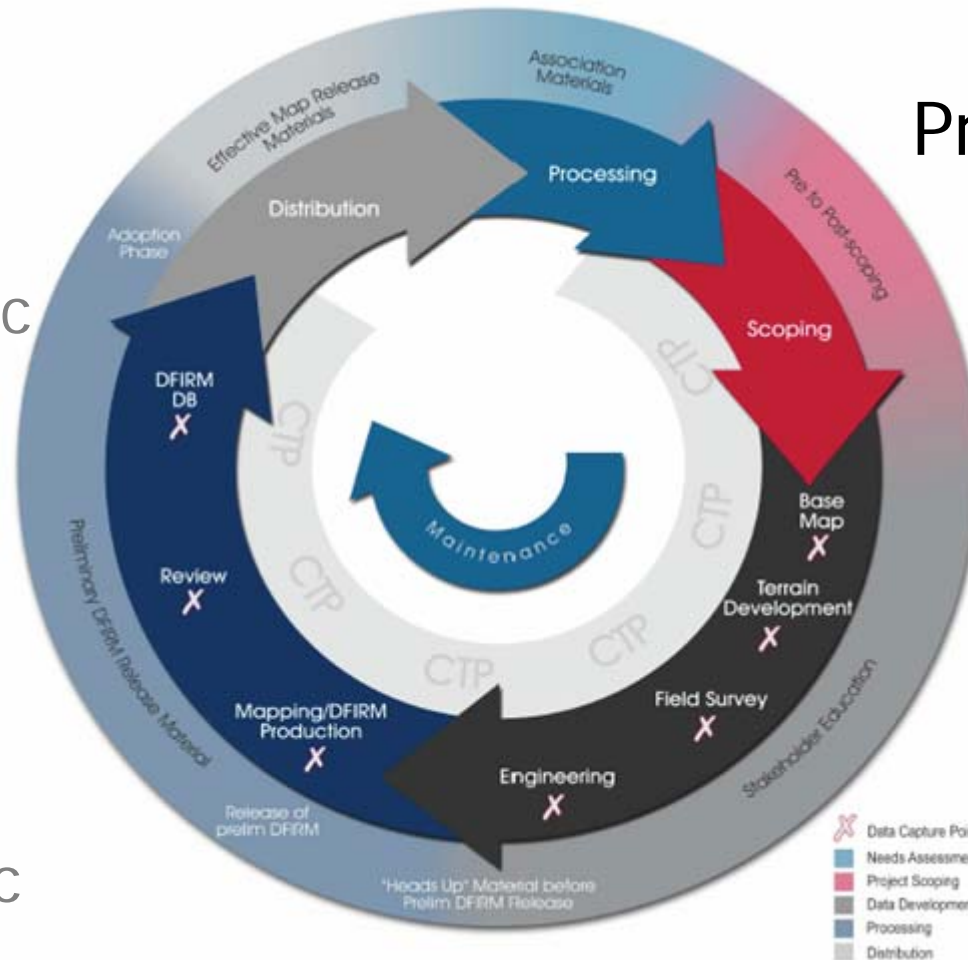
- Stakeholder, Media & Public Outreach

Project Scoping

- Initial Involvement

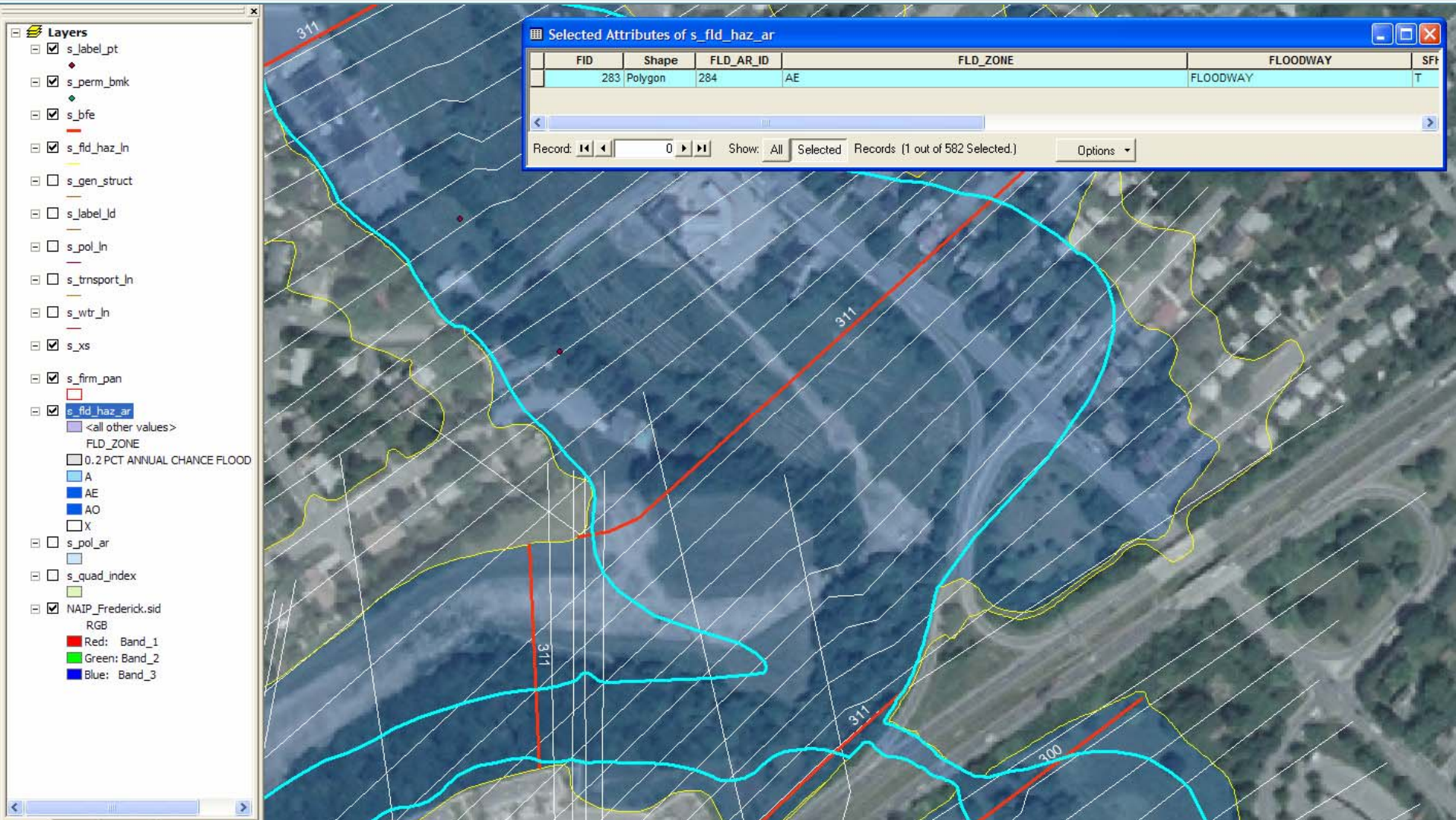
Data/Map Development

- Stakeholder Outreach

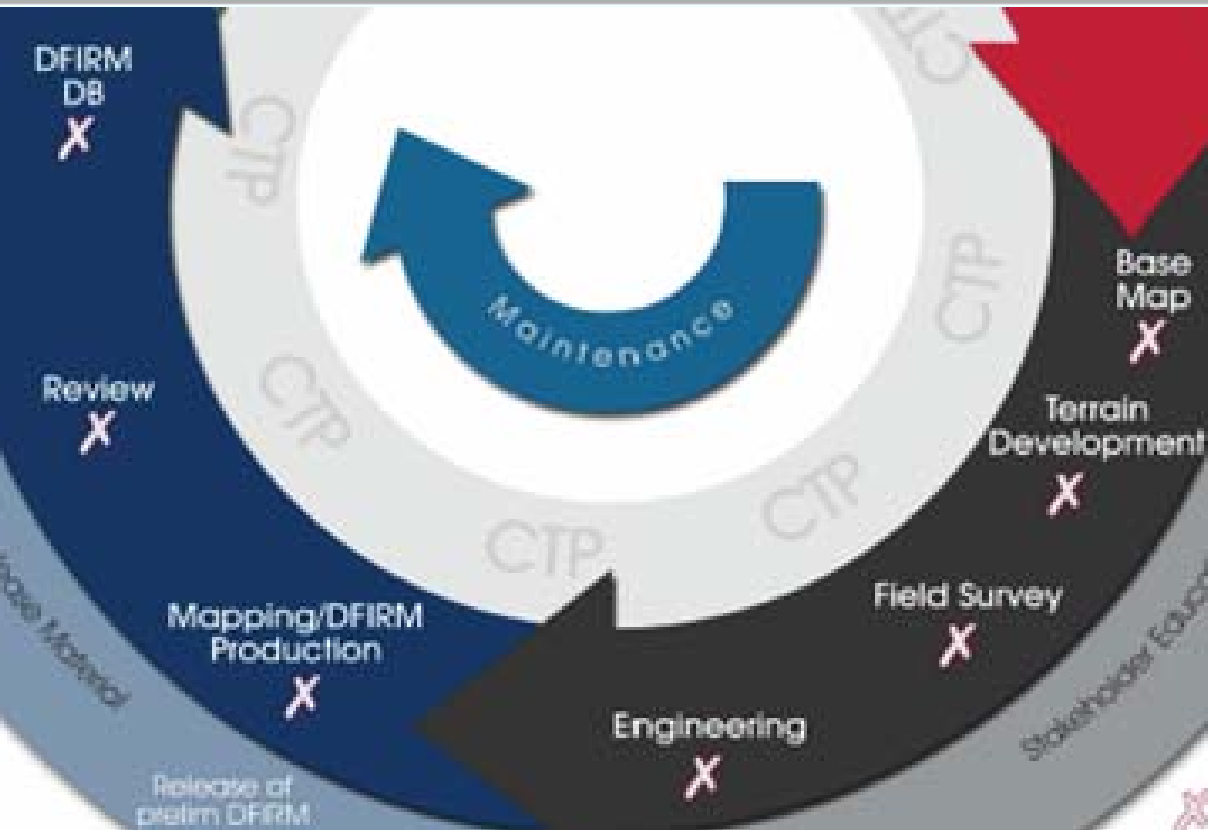


Goal - DFIRM

Flood Map
Modernization



- Opportunity for public comment on draft DFIRM and FIS
- Local Government Issues – Data and quality
- Public Issues – Is my property in or out?



Data Check

- Base Map
- Elevation Data
- Field Survey
- Engineering
- DFIRM Production

Does the draft DFIRM use the best available data and match the expectations from the Map Activity Statement?

- How are you as a homeowner affected?
- New maps promote public safety
- If you feel there has been an error, you can file a protest or appeal.
- When do the maps become effective?
- Here's where to go for more information.

Preliminary Release - Public Issues

Flood Map
Modernization

IF MAPS SHOW...	THESE REQUIREMENTS, OPTIONS AND SAVINGS APPLY
Change from low or moderate flood risk to high risk	<p>Flood insurance is mandatory. Flood insurance will be federally required for most mortgage holders. Insurance costs may rise to reflect the true (high) risk.</p> <p>Grandfathering offers savings. The National Flood Insurance Program (NFIP) has “grandfathering” rules to recognize policyholders who have built in compliance with the flood map or who maintain continuous coverage. An insurance agent can provide more details on how to save.</p>
Change from high flood risk to low or moderate risk	<p>Flood insurance is optional, but recommended. The risk has only been reduced, not <i>removed</i>. Flood insurance can still be obtained, at lower rates. Twenty-25 percent of all flood insurance claims come from low- to moderate-risk areas.</p> <p>Conversion offers savings. An existing policy can be converted to a lower-cost Preferred Risk Policy.</p>
No change in risk level	<p>No change in insurance rates. Property owners should talk to their insurance agent to learn their specific risk and take steps to protect their property and assets.</p>

- Need to understand the risk
 - Flooding happens anywhere.....at anytime
 - Most homeowners insurance doesn't cover flood
 - Flooding is the #1 natural disaster in the US
 - More than 50% of all flood disasters are not presidentially declared
 - 20-25% of flood insurance claims come from low- to moderate-risk areas



Low to High Risk Area – Grandfathering

- Flood risks are real and changing
 - Floods are the most common natural disaster in the US
 - There is a 26% chance of experiencing a flood during a 30-year mortgage and only a 9% chance of experiencing a fire
- New Maps are Being Developed
 - Accurately depict your flood risk
 - Help you make informed decisions
 - Home and business owners insurance does not cover flooding.

Low to High Risk Area

- Timing is everything
(Grandfathering)
 - Lower cost options are available
 - Buy a policy before map is adopted
(e.g Preferred Risk Policy - PRP)
 - Show building was built in
compliance at time of construction
 - Makes you eligible for a lower rate;
keeps costs DOWN

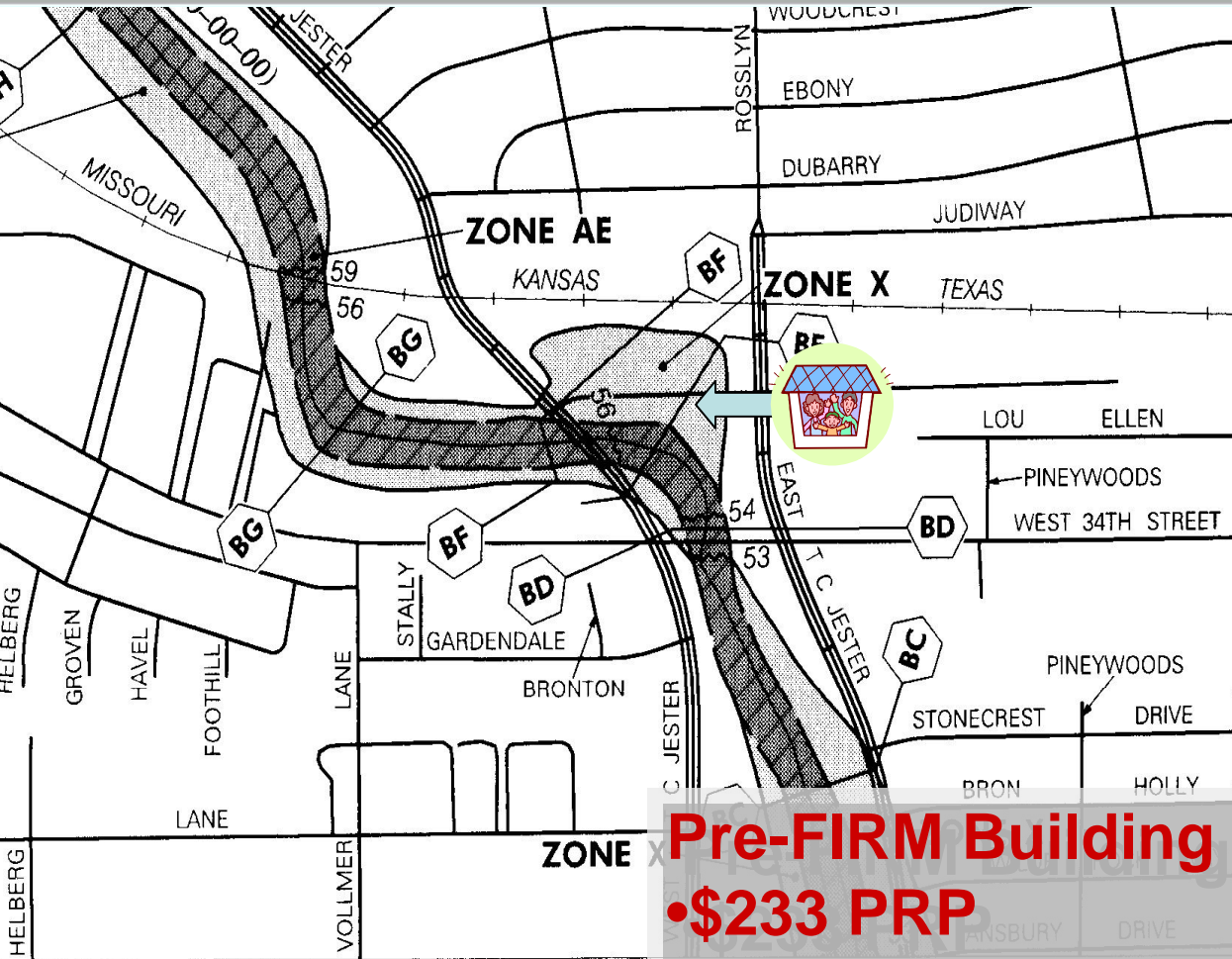


- Purchases a policy before the map changes; e.g. Preferred Risk Policy* if in B, C, X zone;
- Has a policy and keeps the prior zone and base flood elevation as long as continuous coverage is maintained; or
- Use the zone that provides the lowest rate

*Note: At the first renewal, the PRP must be re-written with standard X rates; the ZONE is grandfathered in.

Loyal Customer Example

Flood Map
Modernization



29°48'4"

95°26'15"

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

HARRIS COUNTY,
TEXAS AND
INCORPORATED AREAS

PANEL 655 OF 1135

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY	NUMBER	PANEL	SUFFIX
HOUSTON, CITY OF	480296	0655	J

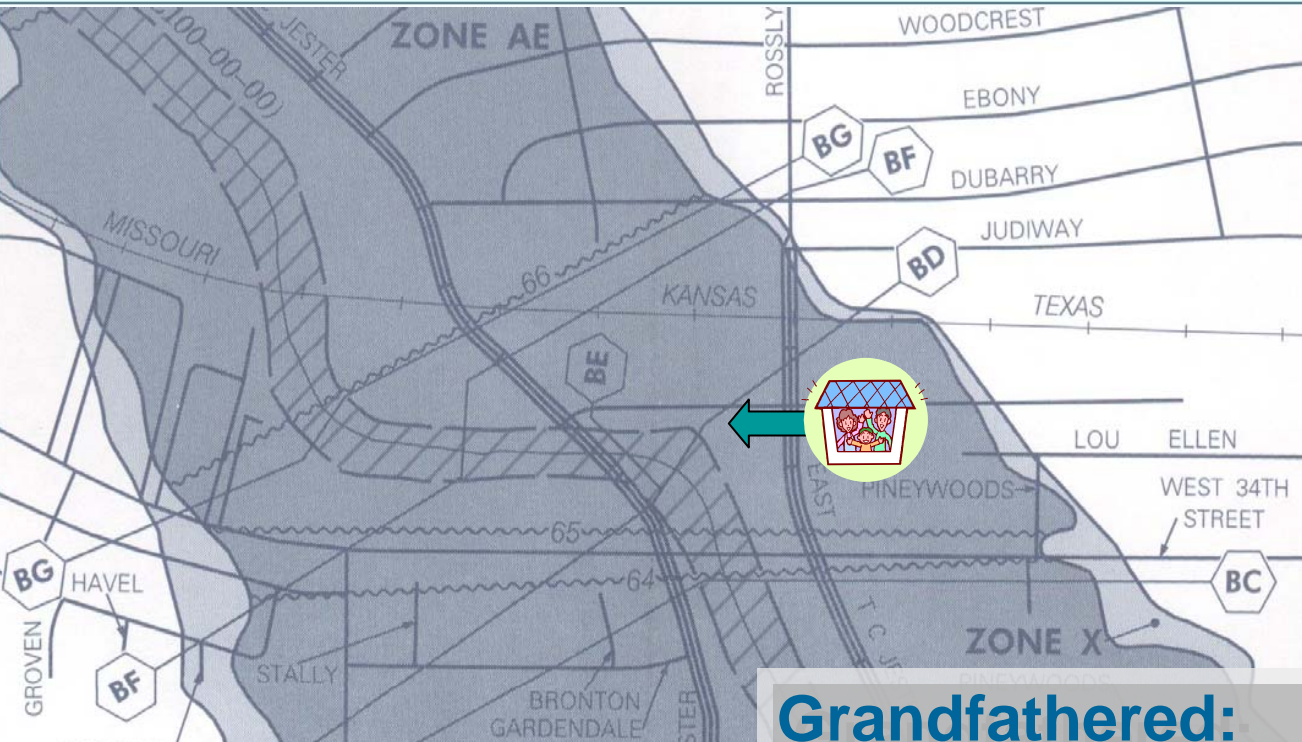
MAP NUMBER
48201C0655 J

MAP REVISED:
NOVEMBER 6, 1996



Federal Emergency Management Agency

Loyal Customer Example



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP


HARRIS COUNTY,
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CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
HOUSTON CITY OF	48296	0655	K

MAP NUMBER
48201C0655 K

MAP REVISED:
APRIL 20, 2000



Federal Emergency Management Agency

Not Grandfathered:

- \$967 SFIP (AE Zone)
- \$2901 in 3 years

Grandfathered:

- \$233 PRP (1st year)
- \$674 SFIP- X (yr 2-3)
- \$1581 in 3 years

1996 Zone AE *BFE: 56' LFE: 57'*

Flood Map
Modernization



NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

HARRIS COUNTY,
TEXAS AND
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PANEL 655 OF 1135
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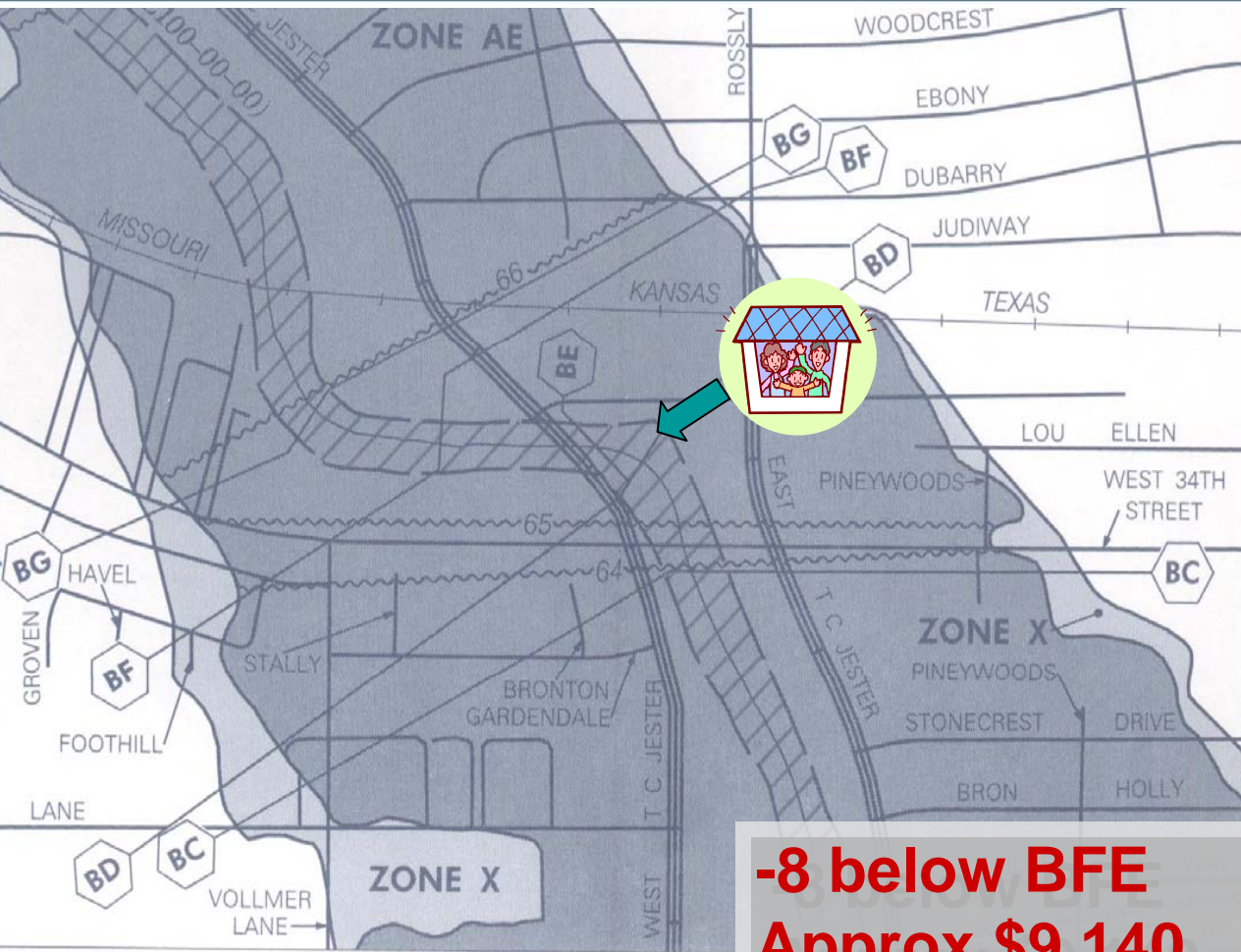


Federal Emergency Management Agency

2000 Zone AE

BFE: 65' LFE: 57'

Flood Map
Modernization



-8 below BFE
Approx \$9,140

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP


**HARRIS COUNTY,
TEXAS AND
INCORPORATED AREAS**

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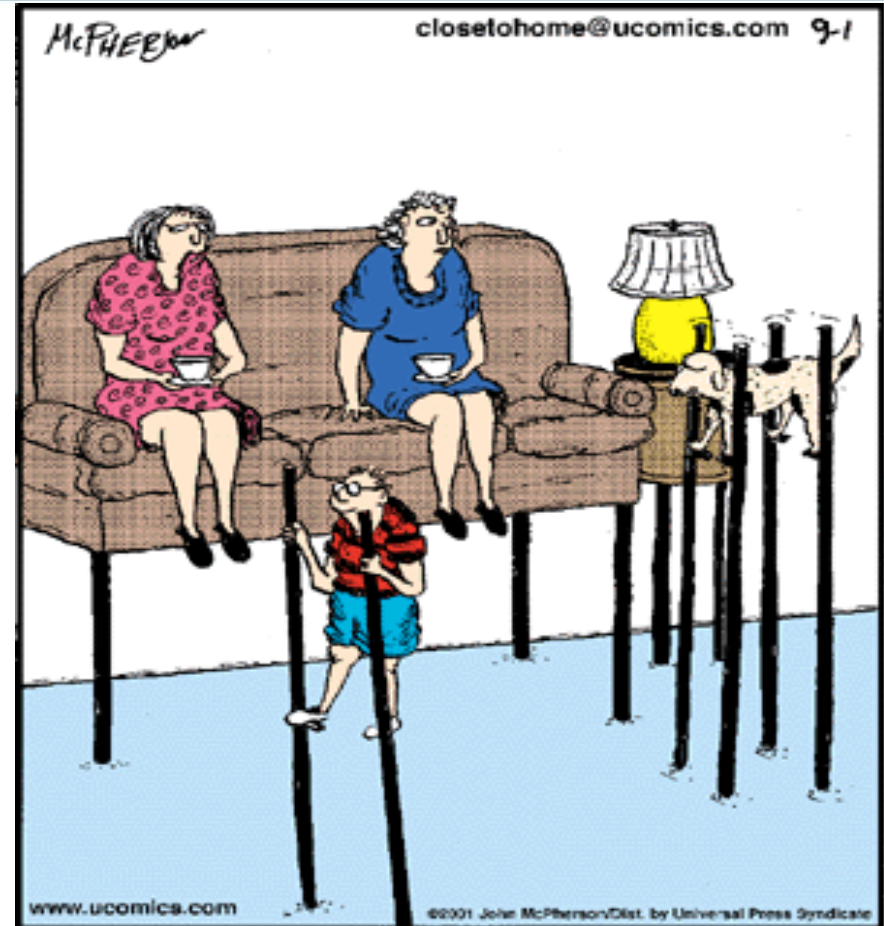


Federal Emergency Management Agency

High to Low or Moderate-Risk Area

- No Longer Required – But FloodSmart
 - Your flood risk is reduced, *NOT* removed
- Stay Protected and Save (Conversion)
 - Rewrite policy to PRP using original effective date PLUS receive a refund
 - Stay protected and get money back

- For properties moving from high to low-moderate risk zones
- Created to encourage policyholders to maintain coverage (*"Risk is reduced; not removed"*)

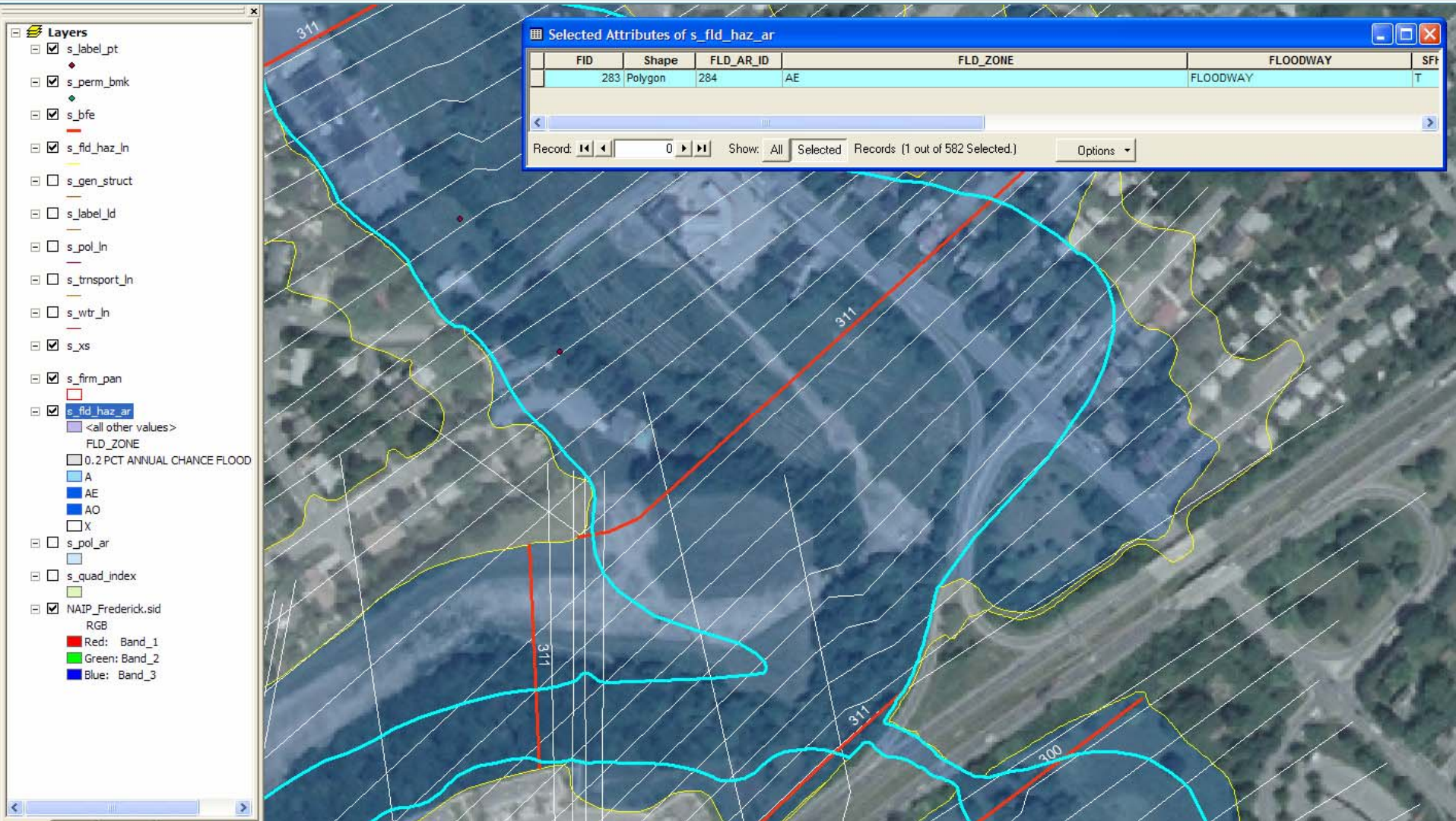


"Jerry looked into flood insurance but says it's too darned expensive."

No Change

- If no current flood insurance policy:
 - Your homeowners insurance does not protect you against floods!
 - Floods happen anytime.....anywhere
 - There is a 30-day wait; so don't wait!
- If owns a current flood insurance policy:
 - Your home and its contents are a major investment; insure them to value

DFIRMs



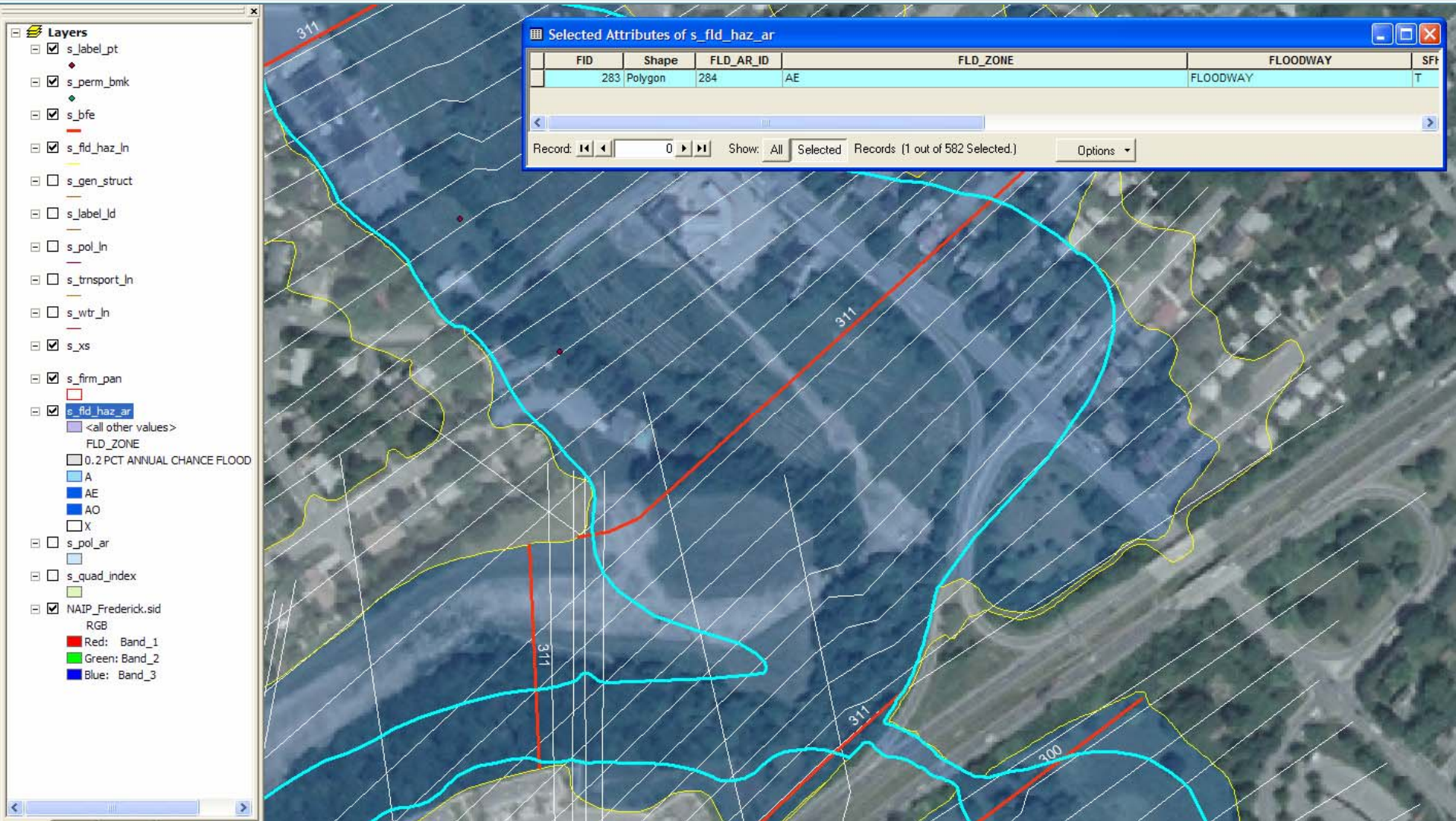
- **Spatial Database**
 - All elements of a FIRM
 - Snapshot in time
- **Study Database**
 - Data about the spatial elements
 - Data about the process of developing the DFIRM

DFIRMs – Spatial Data

- Layers
 - s_label_pt
 - s_perm_bmk
 - s_bfe
 - s_fid_haz_in
 - s_gen_struct
 - s_label_id
 - s_pol_in
 - s_trnsport_in
 - s_wtr_in
 - s_xs

- s_firm_pan
- s_fid_haz_ar
 - <all other values>
 - FLD_ZONE
 - 0.2 PCT ANNUAL CHANCE FLOOD
 - A
 - AE
 - AO
 - X
- s_pol_ar
- s_quad_index
- NAIP_Frederick.sid
 - RGB
 - Red: Band_1
 - Green: Band_2
 - Blue: Band_3

DFIRMs



- Information Tables (L_ Tables)

Study Information	auxiliary data	communities
Engineering models	LOMCs	routing
revisions to each panel	DDF and IDF curves	outflow data
Recurrence intervals	cross sections	

- Spatial Tables (S_Tables)

raster tiling index	base flood elevations lines	coastal BRS units
coastal gages	coastal transect lines	DFIRM map panels
flood ins. risk zones	boundaries of risk zones	flood cont. structures
labels, leader lines	LOMRs	hydrologic network
overbank flow lines	bench marks	frontal dune features
sections	townships and ranges	political boundaries
rain gages	profile baseline	stream centerline
USGS quad maps	river mile markers	shoreline in model
station points	subbasins	transport. features
non-rain gages	H&H features	cross-section lines

New maps, new formats, new zones, new regulations

Same challenge – Purchasing Insurance

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