FLOODPLAIN MANAGEMENT AND LEVEE ACCREDITATION

April 7, 2014

Reedsport

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TODAY'S TOPICS

- Overview of the National Flood Insurance Program (NFIP)
- Flood Hazard Mapping
- Local Floodplain Management
- NFIP Reform (2012 & 2014)
- Levee Accreditation

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National Flood Insurance Program (NFIP)

- Federal program that provides flood insurance to participating communities
- Based on agreement between local participating community and the Federal Government to manage floodplains
- Private insurers write the policies based on an agreement with the Federal Government

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Reasons for the NFIP

- Reduce emphasis on flood control; increase emphasis on sound floodplain management
- Reduce Federal disaster costs; shift burden from general taxpayers to floodplain occupants
- Provide insurance coverage not generally available on the private market

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How was the NFIP established and who administers it?

- US Congress established the NFIP in 1968, with the passage of the National Flood Insurance Act
- Reformed in 1973, 1994, 2004, 2012, 2014
- Administered by Federal Emergency Management Agency (FEMA)

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Is NFIP Participation Mandatory?

No: city participation in is voluntary however ramifications of non-participation are:

- Federal flood insurance not available
- Loans from federally-backed institutions may not be made on structures in SFHA
- Federal grants to repair public infrastructure and private insurable buildings in SFHA not available

Oregon Goal 7 requires flood-prone communities to participate in the NFIP, or to implement a similar program

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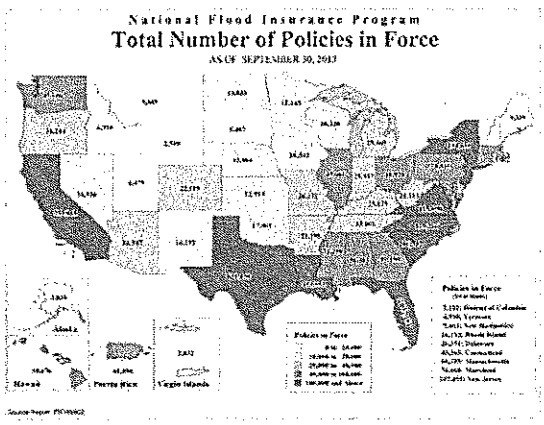
THE NFIP NATIONALLY
(AS OF JULY 2013)



- 22, 042 participating communities
- 55 million flood insurance policies
- $1.3 Trillion in flood coverage
- Average premium in US $689

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OREGON STATISTICS

Category	Oregon	% of Region X
# of Participating Communities	259	35%
# of Policies in Force	32,416	40%
Average Policy Cost	$661	
Total Claims (1978 -2013)	5,248	26%
Average Claim Paid	$17,495	

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WHAT IS FLOODPLAIN MANAGEMENT?

A comprehensive approach to reduce flood losses and protect natural functions

Two principle strategies:

- Structural
  - Dams, levees, floodwalls, channel alterations, on-site detention
- Non-structural
  - Land use regulation, Construction standards, Insurance, Education

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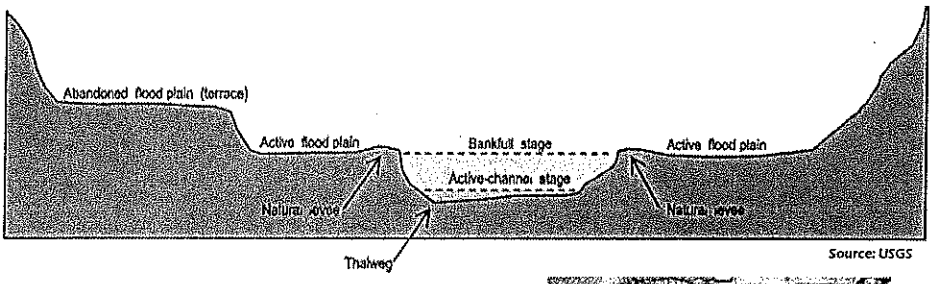
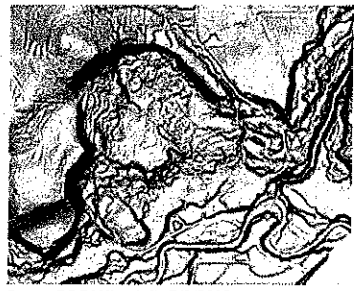
FLOODPLAIN



Source: USGS

Floodplains are natural landscape features, built by rivers.



Source: DOGAMI website 7/9/2009

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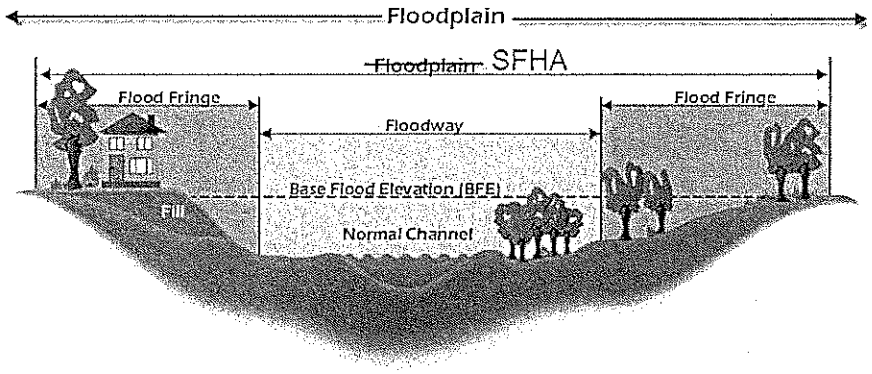
FEMA
SPECIAL FLOOD HAZARD AREA

is a subset of the natural floodplain



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BASE FLOOD

- Sometimes referred to as the 100-year flood
- Has a1% chance of occurring in any given year
- Base Flood Elevation is the expected elevation of the crest of the base flood

Flood Frequency Chart

Flood frequency (years)	Chance of flooding in any given year	Percent chance of flooding during 30-year mortgage
10	10 out of 100 (10%)	96%
50	2 out of 100 (2%)	46%
100	1 out of 100 (1%)	26%
500	0.2 out of 100 (0.2%)	6%

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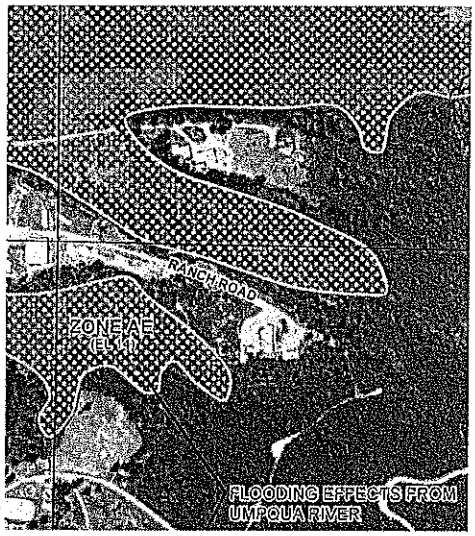
SPECIAL FLOOD HAZARD AREA (SFHA)

- The area depicted on the Flood Insurance Rate Map as being covered by floodwaters from the base flood
- The minimum area subject to floodplain management regulations under the NFIP



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HOW THE NFIP WORKS

Three basic parts to the NFIP

- Mapping
- Insurance
- Regulations

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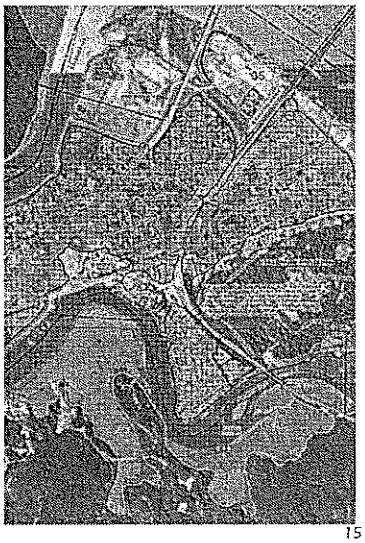
MAPPING

Flood Insurance Rate Map

- Basis for regulating development
- Used to determine flood insurance purchase requirement
- Used to determine insurance rating



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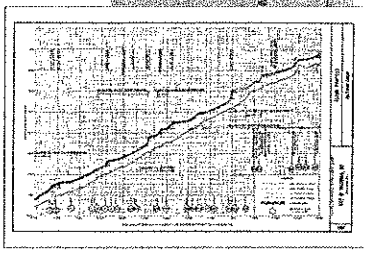
THE FLOOD INSURANCE STUDY (FIS)

- A report prepared by FEMA that summarizes an analysis of the flood hazards in a community
- Used to prepare the FIRM
- The appropriate tool for determining a BFE at a site for regulatory purposes



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FLOOD INSURANCE

- Available only in communities participating in the NFIP
- Required for federally-backed mortgages and grants when structure is located in SFHA
- Can be purchased from many private insurance agents

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FLOOD INSURANCE RATES

Two rate categories:

- **Post-FIRM** based upon actuarial risk tables based on elevation of lowest floor relative to the base flood elevation
- **Pre-FIRM** subsidized by the NFIP; rate does not take into account elevation of lowest floor

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REGULATIONS

- Participating communities must adopt and enforce floodplain management regulations that meet or exceeds standards found in 44 CFR 60.3
- Continued NFIP eligibility based on maintaining compliance, based on enforcement of the provisions of local Floodplain management code
- Compliance monitored via an audit process called a Community Assistance Visit (CAV)

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REGULATIONS

- NFIP minimum standards are complex
- Two basic principles:
  - Ensure that the lowest fully enclosed areas of new or substantially damaged buildings located in the Special Flood Hazard Area are at least one foot above Base Flood Elevation
  - Ensure that new or replacement water supply, sanitary systems, other utilities systems, and structures (culverts, bridges, etc.) are able to withstand inundation without causing damage or being damaged.

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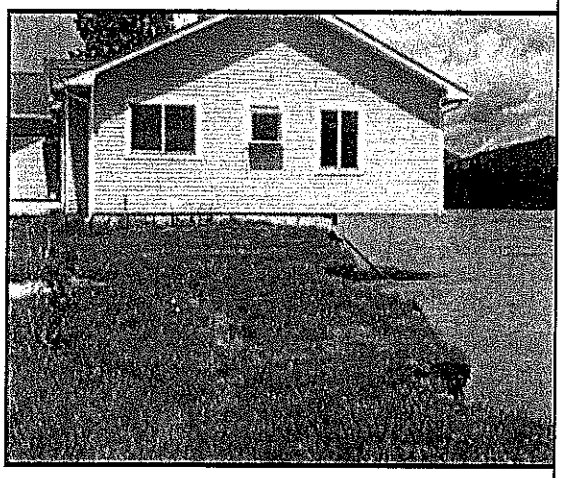
ROLES AND RESPONSIBILITIES

- Community
- State
- Federal



Clark Fork River, outside of Plains, Montana. Originally house was 30-40 feet from river bank and 1"above BFE

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State

- Ensure that communities have the legal authorities necessary to adopt and enforce floodplain management regulations
- Establish minimum state regulatory requirements consistent with the NFIP
- Provide technical assistance to local governments including: ordinance review, mapping and the adoption process
- Coordinate activities of various state agencies that affect the NFIP
- Monitor local compliance

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Community

- Issue or deny floodplain development permits in accordance with local regulations
- Inspect development to assure compliance with the local regulations
- Maintain records of floodplain development
- Assist FEMA in preparation and revision of flood maps
- Assist residents in obtaining information on flood hazards, map data, flood insurance and proper construction measures

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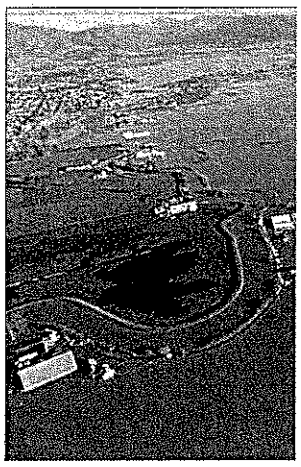
LEVEE

manmade structure, designed and built using sound engineering practices to contain, control or divert flow of water to temporarily reduce flood risks



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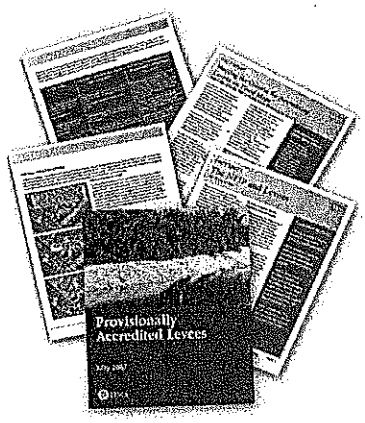
LEVEES: FEMA'S ROLE

- Map levee-related flood risk
- Accredit levees for mapping purposes only based on the *certification documentation provided by the community or another interested party*
- FEMA does not own, operate, maintain, inspect, or certify levees or flood control systems



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REEDSPORT EFFECTIVE FIRM

63 NFIP policies; 5 in the SFHA

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PROVISIONALLY ACCREDITED LEVEE

Provisionally Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations by July 26, 2009. If the community or owner does not provide the necessary data and documentation or if the data and documenation provided indicate the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index.shtm.

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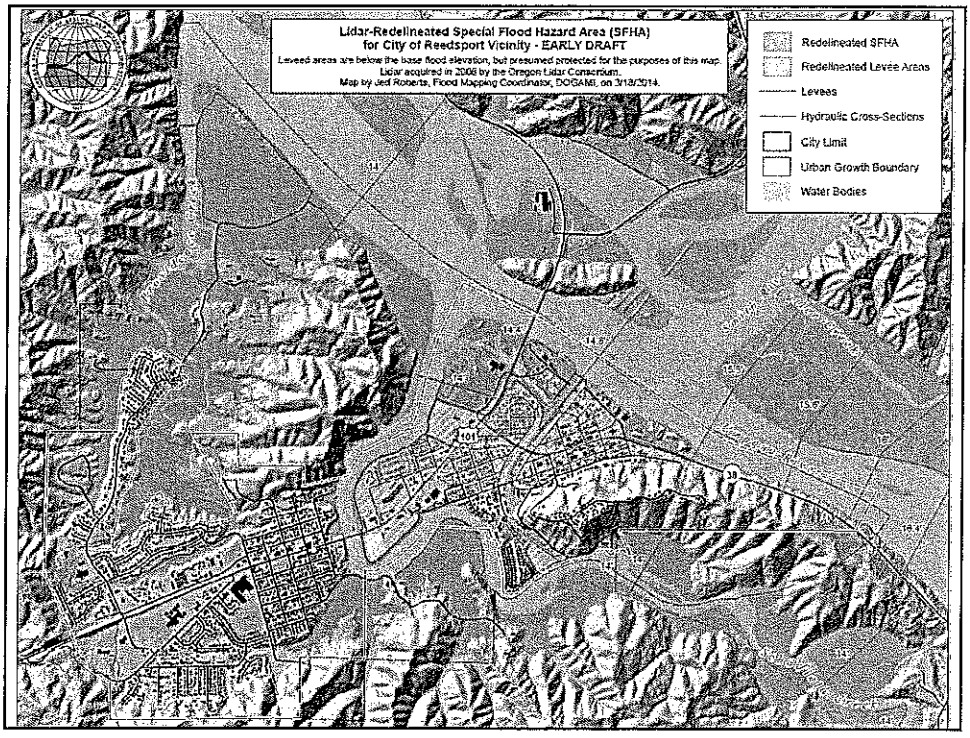

No Time to Waste

- Jed Robert's of DOGAMI's visit last month indicates that remapping in Reedsport is eminent (next 1 - 2 years)
- Levee accreditation must begin ASAP for levees to show protection from base flood

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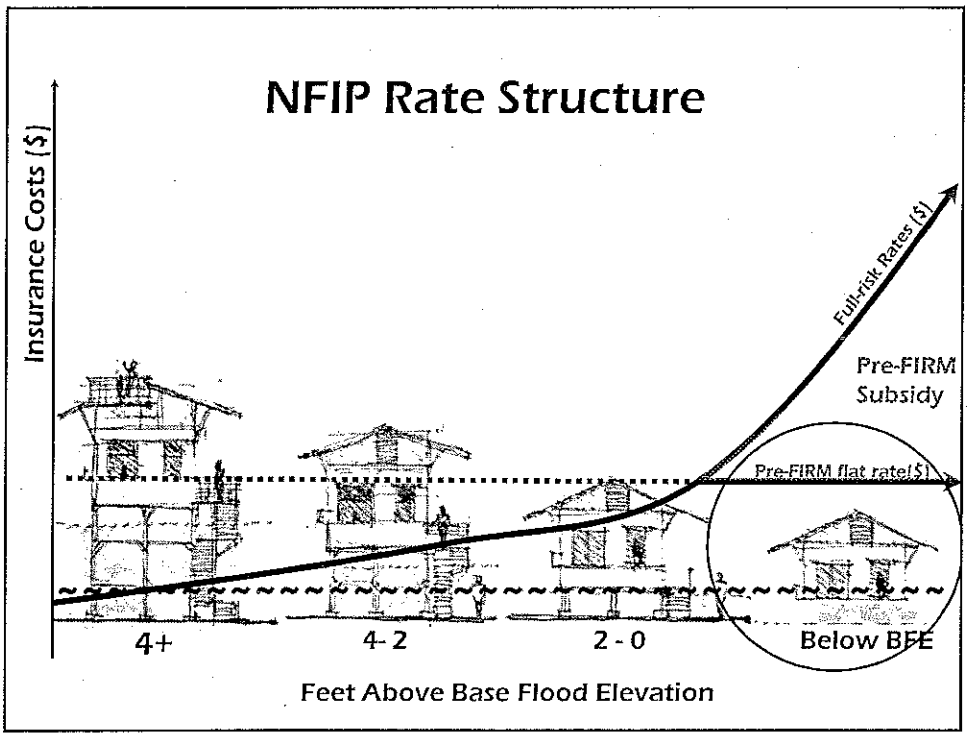
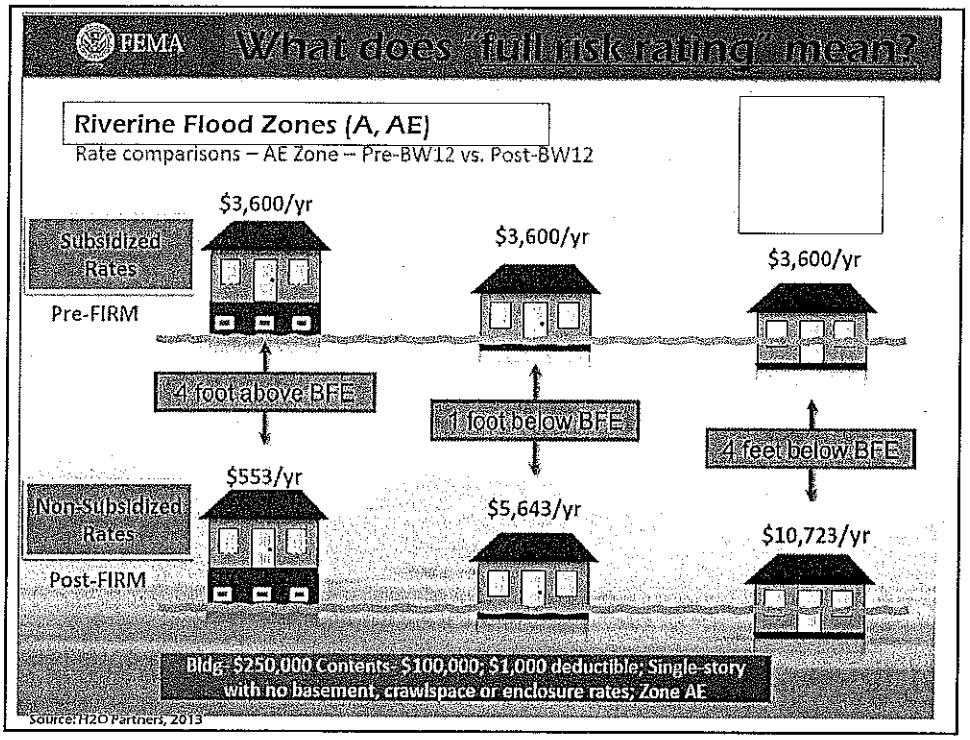
Biggert-Waters NFIP Reform (2012)

- Authorized NFIP until 9/30/2017
- Requires that FEMA repay $24 billion loan from the Treasury and build a reserve fund
- **Directs FEMA to phase out premium subsidies on pre-FIRM buildings located in Special Flood Hazard Area**

GRIMM-WATERS REFORM (2014)

- Reinstated grandfathering (which was to be phased out under Biggert-Waters 2012)
- Requires affordability study
- Restricts premium increases to 18% per year for residential and 25% per year for commercial and non-primary residences
- Adds $25 policy fee for residential and $250 for commercial and non-primary residential





NFIP REFORM OF 2012 & 2014

Consequences of new maps without levees:

- Newly included pre-FIRM buildings would start at pre-FIRM subsidy and then increase 18 - 25% annually until NFIP full actuarial rate is reached
- Newly included post-FIRM buildings would be grandfathered back to old map (PRP rate) then face an 18 - 25% annual cost increase until NFIP full actuarial rate reached

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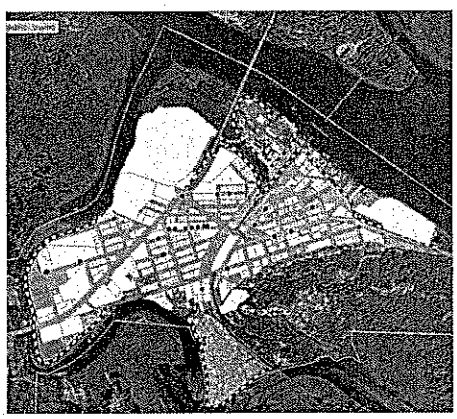
Parcels with Improvements - Without Levee Scenario

- $48 million in improvements, much of which would need flood insurance
- 556 parcels with improvements; most with pre-FIRM structures
- Could cost $1 to $3 million a year to insure these structures at full actuarial rates



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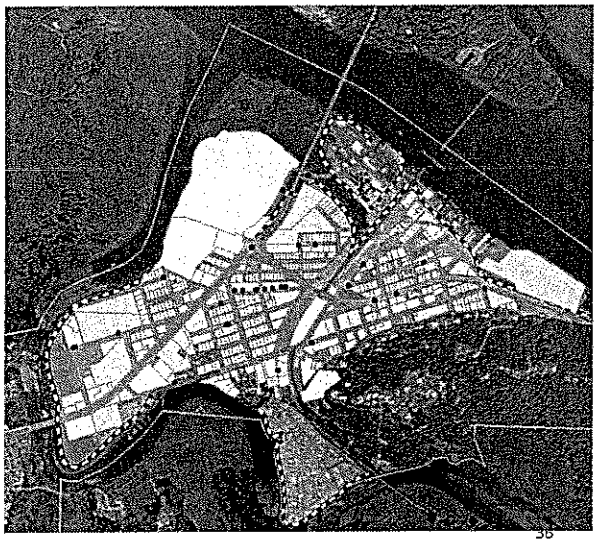
Parcels with Improvements - Without Levee Scenario

- 35% of improvements have out-of-town owner addresses
- Some may be non-primary residences



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Parcels with Improvements - Without Levee Scenario

Some of these may be low income housing

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NFIP Levee Regulations

Title 44, Chapter 1, Code of Federal Regulations

- Paragraph 65.2(b), "Certification Definitions"
- **Section 65.10, "Mapping of Areas Protected by Levee Systems" (Accredited or not)**
- Section 61.12, "Rates Based on a Flood Protection Project Involving Federal Funds" (A99)
- Section 65.14, "Remapping of Areas for Which Local Flood Protection Systems No Longer Provide Base Flood Protection" (AR)

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65.10 Accreditation

FEMA's process to review and accept certification data and documentation and to update the Flood Insurance Study . To be accredited by FEMA, a levee must meet ALL Section 65.10 requirements, including:

- General Requirements—65.10(a)
- Design Criteria—65.10(b)
  - 3 feet of freeboard required
- Operation Plans and Criteria—65.10(c)
- Maintenance Plans and Criteria—65.10(d)
- Certification Requirements—65.10(e)

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Certification

- Certification – statement from a registered professional engineer or other party that attests: the accuracy of data,
- the performance of analysis conducted correctly with sound engineering methods,
- that the design of structural works is in accordance with sound engineering practices, and
- that built structure(s) is in accordance to the as-built plans being certified, is in place, and is fully functioning. Certification does not constitute a warranty or guarantee of performance.

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