



Natural Hazards Program (Goal 7 - FEMA Program)

Presented to:

Land Conservation and Development Commission

February 1, 2006

Salem, Ore.

Presented by:

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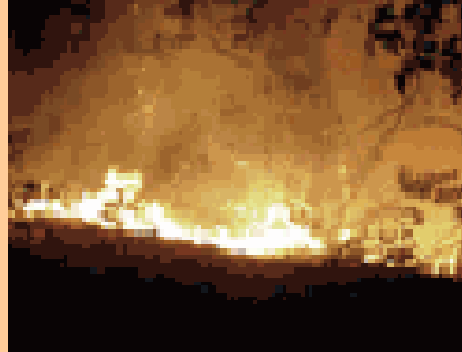
Introductions

- **Mark Darienzo, Map Modernization Coordinator, Oregon Department of Land Conservation and Development**
- **Ian Madin, Chief Scientist, Oregon Department of Geology and Mineral Industries**
- **Krista Mitchell, Project Coordinator, University of Oregon - Natural Hazards Workgroup**
- **Cy Smith, State GIS Coordinator, Oregon Department of Administrative Services - Geospatial Enterprise Office**

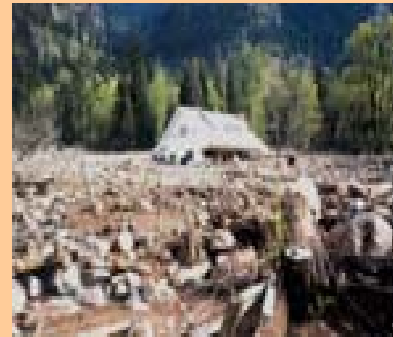
Outline

- GOAL 7 – the framework
- Floodplain Management – the “NFIP Coordinating Agency”
- Flood Map Modernization
- Interagency Coordination – All Hazards





Goal 7 – Natural Hazards The Framework



Goal 7: Areas Subject to Natural Hazards



***To protect people and
property from natural
hazards***



Natural hazards =



floods, landslides, earthquakes,
tsunamis, coastal erosion,
& wildfires



Oregon's Natural Hazards

- Drought
- **Earthquakes** **Goal 7**
- **Floods** **Goal 7**
- **Landslides** **Goal 7**
- Volcanic eruptions
- **Wildfires** **Goal 7**
- Wind events
- Winter storms
- **Coastal erosion** **Goal 7**
- **Tsunamis** **Goal 7**

History of Goal 7

- One of the 19 statewide planning goals
- Original adoption, 1974
- All city and county comprehensive plans contain a Goal 7 element
- Goal 7 has been amended once, 2001
- No associated administrative rules
- Applies statewide, overlaps w/ Goals 17 & 18

2001 Amendment – Why?

- Goal analyzed post 1996/1997 flood and landslide events (per Governor's request)
- Based on findings, needed to:
 - Update goal language
 - Provide better direction to locals
 - Address response to new information
 - Suggest possible mitigation strategies



Response to New Hazard Information

STEP 1:

“New hazard inventory information provided by federal and state agencies shall be reviewed by the Department in consultation with affected state and local government representatives”



Response to New Hazard Information

STEP 2:

“After such consultation, the Department shall notify local governments if the new hazard information requires a local response.”



Response to New Hazard Information


STEP 3:

“Local governments shall respond to new inventory information on natural hazards within 36 months after being notified by the [DLCD], unless extended by the Department”

So what does “respond” to new information mean?



Response to New Information

-  Evaluate risk to people/property based on new info.
- Go through a public process
- Adopt or amend plan policies and implementing measures as necessary (or document why no new/amended policies or measures are required)



Things that need to be considered...

- The hazard – frequency, severity, location
- Impacts to existing and future development
- Types/intensities of land uses
- How to avoid or mitigate for the hazard
- Possible approaches to using the information

Goal 7 Consultations – DLCD's Proposed Approach

- Establish guidelines for submittal of new data
- State level – use Interagency Hazard Mitigation Team or subcommittee of this established group
- Local level – League of Oregon Cities, Association of Oregon Counties, affected jurisdictions to be determined case-by-case
- Test Case Proposed – Coastal Hazard Studies

Providing Technical Assistance



DLCD's Role in Floodplain Management



**Oregon's "NFIP"
Coordinating Agency**

Why DLCD?

FEMA recognized:

- Established relationship with all local governments in Oregon via ORS 197
- Goal 7 – requires NFIP compliant ordinance as minimum local response to flood hazards (all Oregon counties & 219 cities participate in NFIP)
- History of promoting sound land use planning in general and also higher regulatory standards specific to addressing flood hazards

History of CAP-SSSE Grant

- 75% federal, 25% state match
- Funds “NFIP coordinator” position
- Limited budget to support small projects, other program expenses
- Increasing grant dollar over last several years – enough to keep pace with inflation

Purpose of the NFIP



FEMA

Reduce economic loss caused by floods

- Creates a partnership between local governments and federal government (via FEMA)
- **Map** the flood risk
- Set **Minimum standards** for construction
- Provide for **Flood Insurance**, mandatory requirements
- Promotes localized floodplain management

NFIP

NFIP

Structure of Program

**Floodplain
Regulations**

**Risk
Rating**

Compliance / Rating

**Hazard
Identification**

**Flood Loss
Reduction**

**Flood
Insurance**



Every year, floods result in more loss of life and property in our nation than is caused by any other natural hazard.



When Will It Flood?



Flood Frequency	Chance in any Year	% chance over 30yr mortgage
10	10 out of 100	96%
50	2 out of 100	46%
100	1 out of 100	26%
500	.2 out of 100	6%

Myth: “100-year” floods only happen once in a lifetime.

Reality: In the “100-year” floodplain, there is a 26% chance of flood damage over the course of a 30 year mortgage. Compare this to a 4-9% chance of fire damage.

CAUTION

CAUTION

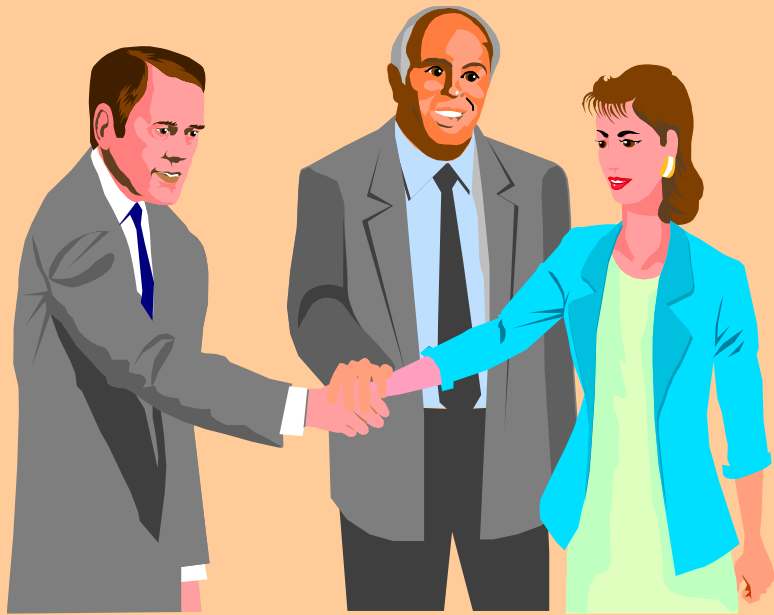
Myth: Flood insurance is not important outside of “high-risk” areas.

Reality: Nationwide, 25-30% of flood insurance claims are for properties in “low-risk” areas.

FEMA flood maps are snapshots in time, may not reflect current situation.



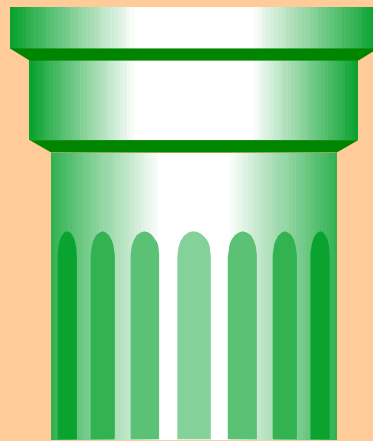
A Mutual Agreement between local communities and the federal government



- In exchange for adopting and enforcing a Flood Hazard Prevention Ordinance, federally-backed flood insurance is made available to property owners throughout the community.

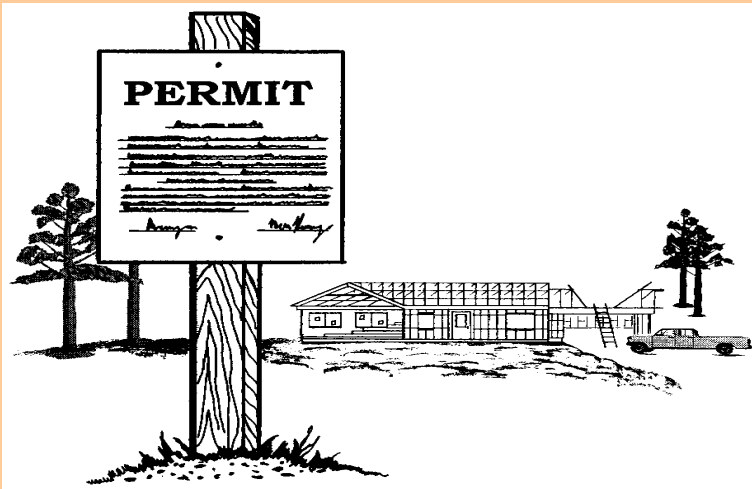
The local community has the primary responsibility for implementing the NFIP

Local officials



Implement Floodplain Ordinances &
State Building Codes

Local Development Permits



A local permit is required, along with forms and plans, for all floodplain development, including:

- ◆ New construction and substantial improvements
- ◆ Manufactured homes & RVs
- ◆ Filling, mining, dredging, grading, excavating
- ◆ Roads, bridges, culverts
- ◆ Stream alterations
- ◆ Storage of materials

DLCD's "NFIP" Role

- Community NFIP Assessments
- Ongoing Coordination with FEMA Region 10
- Workshops/Other Forums for NFIP Participants
- Communications/ Outreach Activities
- General Technical Assistance
- Interagency Coordination
- Promote Higher Regulatory Standards
- Continuing Education for coordinator
- Disaster Assistance

1996 Flood Event Shows Benefits of Land Use Planning

“In Washington state, there were 20 Presidential disaster declarations for flooding in the last 25 years.

“During the same time in Oregon, there were only 3, despite the fact that the same basic weather patterns affected Oregon.

“This says something about Oregon’s land use program; among other things, it shows that good land use planning has taken hold, in that development in the last two decades has largely been kept out of those areas that are most susceptible to flooding.”

– Chuck Steele, Former FEMA R10 Director, June 1996



LOTS OF WORK REMAINS!!!



- ▶ Increasing population
- ▶ New development to standards
- ▶ Mitigating old development not to standards
- ▶ Future growth patterns/watershed impacts
- ▶ Fish-friendly floodplain management
- ▶ Constant demand for technical assistance

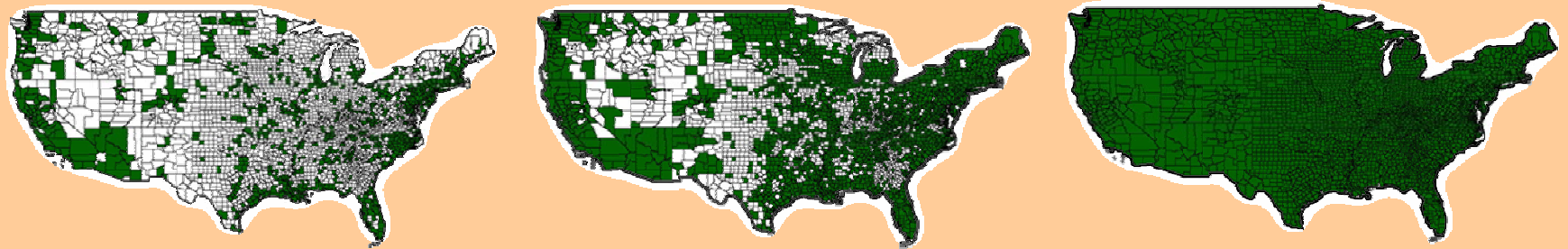
DLCD's Role in Flood Map Modernization



Flood Map Modernization

- FEMA initiative to modernize existing, paper flood maps to digital platform
 - Allow for integration into GIS systems
 - Update with best available data as feasible
 - Provide current “snapshots” of flood hazards
 - Allow local govt. to use digital maps/data for regulatory purposes
 - Improve public access to flood maps & information

FEMA'S GOAL: A Nation With Digital Maps



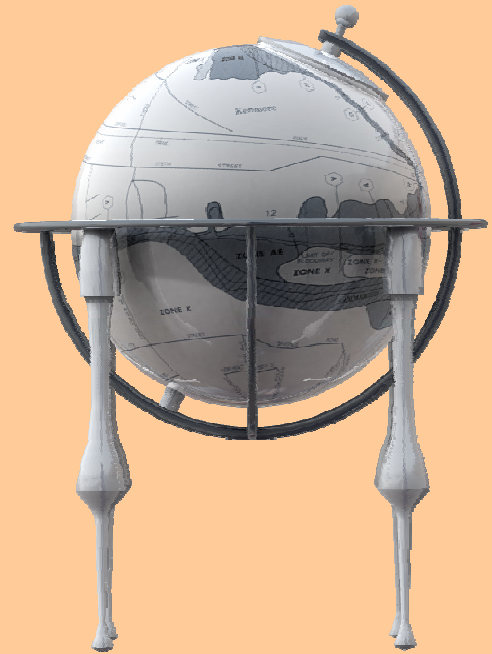
2005



2009

Why is Map Modernization Important?

- FEMA Flood Maps are one of the essential tools for floodplain management and mitigation.
- Local governments, state and federal agencies, property owners, insurance agents, lenders, and others rely on these maps to identify flood risk.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
FLOODVILLE,
CALIFORNIA
WHITEWATER CO

0 OF 1200

INDEX FOR PANEL (ED)

COMMUNITY-

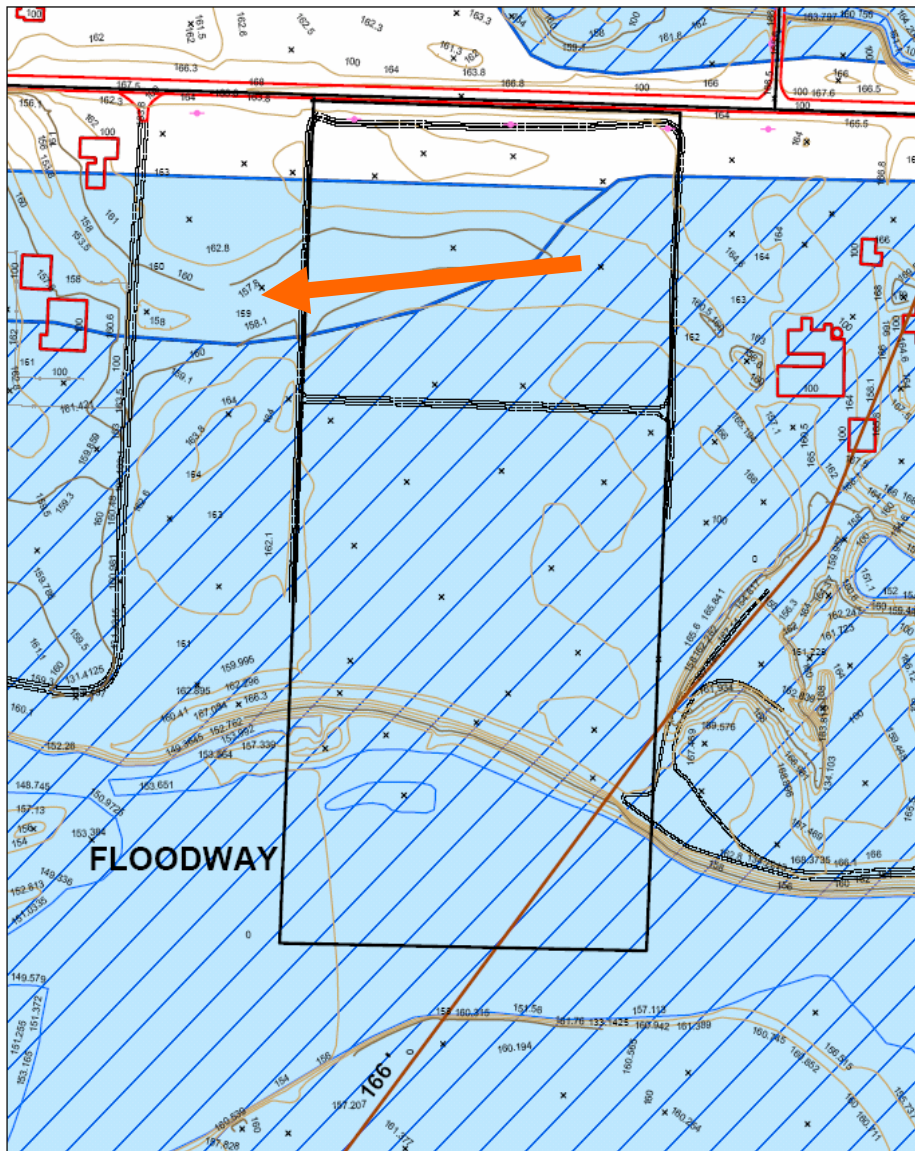
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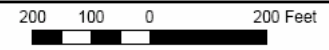

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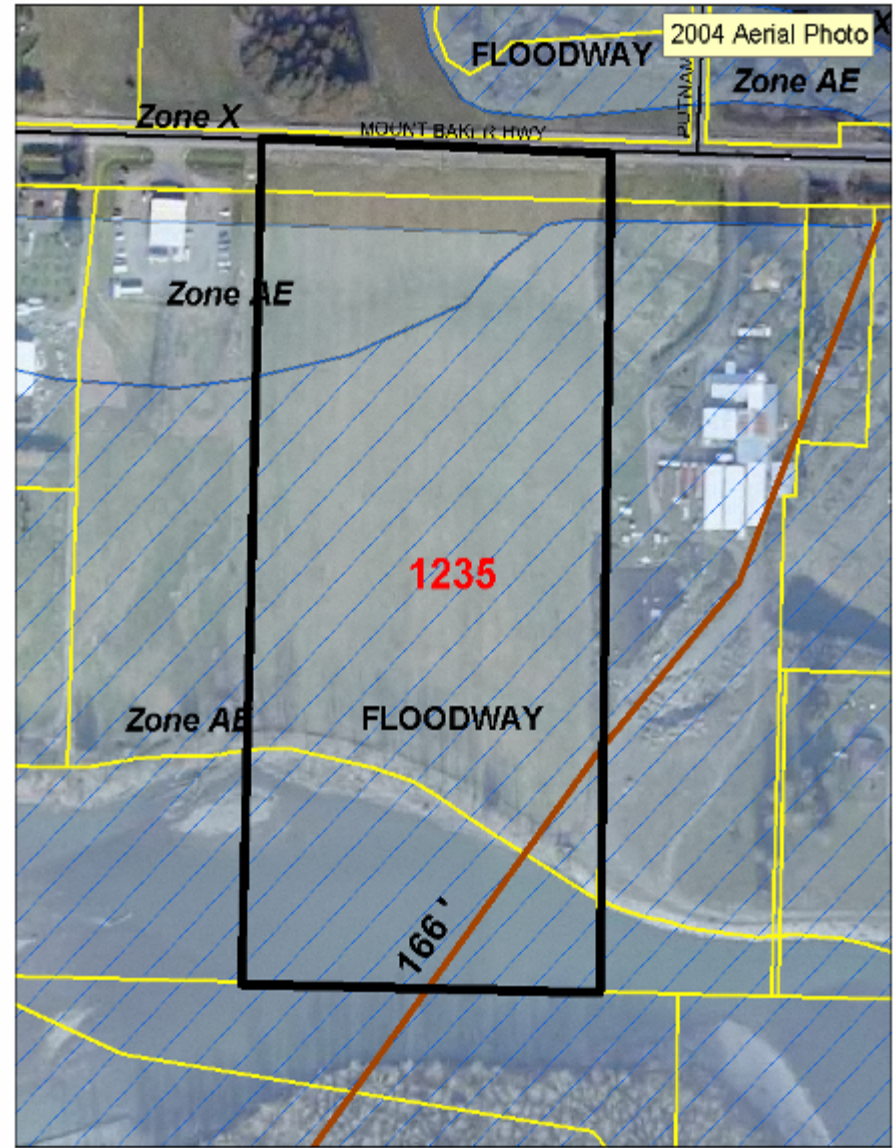
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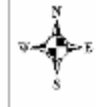
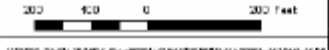

Federal Emergency Management Agency

When better data is available...

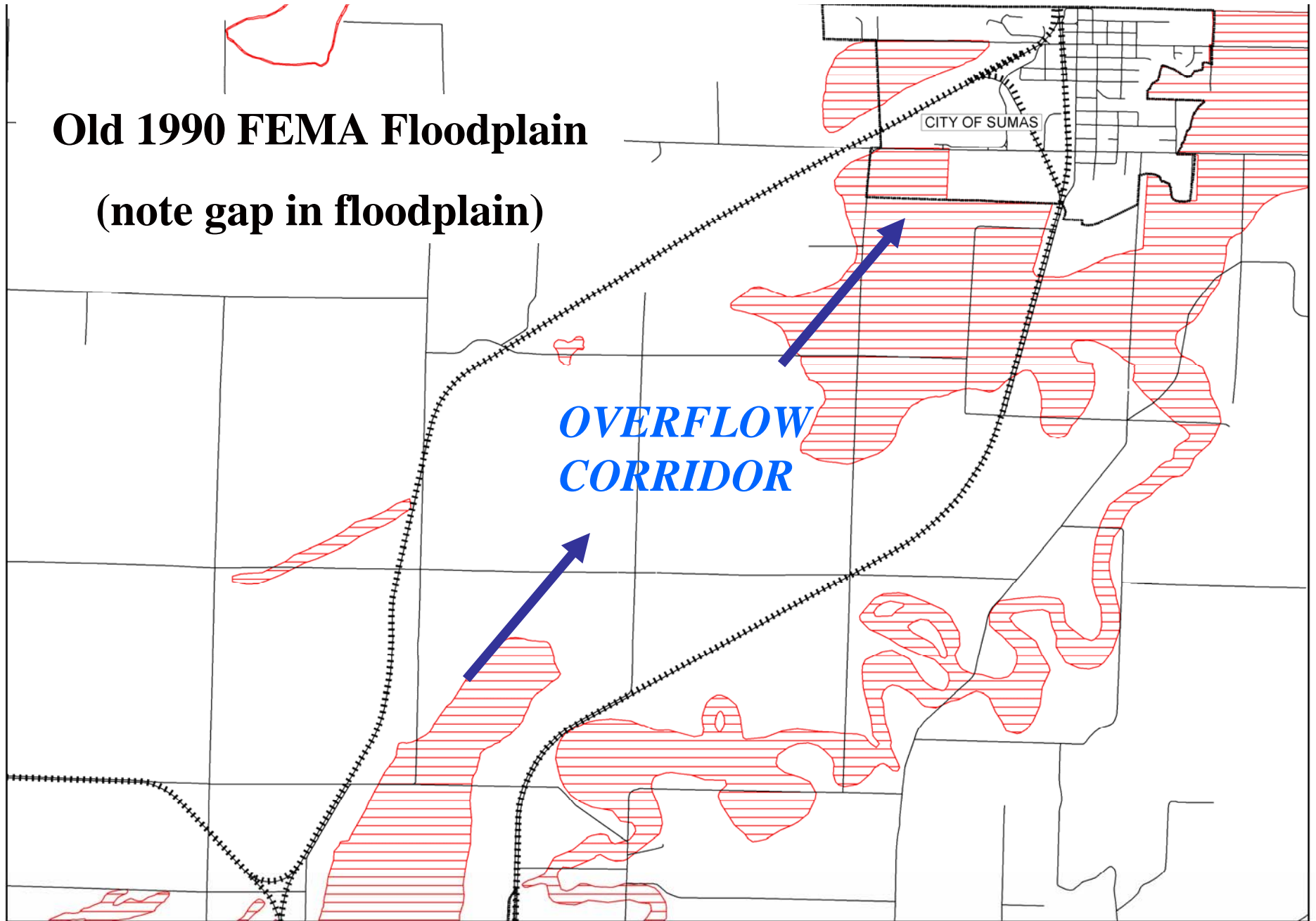


		Mt Baker Hwy		Parcel: 390427-227339
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 Whatcom County Public Works River and Flood Division				



		Mt Baker Hwy		Parcel: 390427-227339
	<small>Whatcom County disclaims any warranty of merchantability or warranty of fitness of this data for any particular purpose, either expressed or implied. No representation or warranty is made concerning the accuracy, currency, completeness or quality of the data. Any user of this data assumes all responsibility for use thereof, and further agrees to hold Whatcom County harmless from and against any damage, loss, or liability arising from any use of this data.</small>	FIRM 53073C 1235 D	Date: 11/19/04	Drawn By: A. Clary
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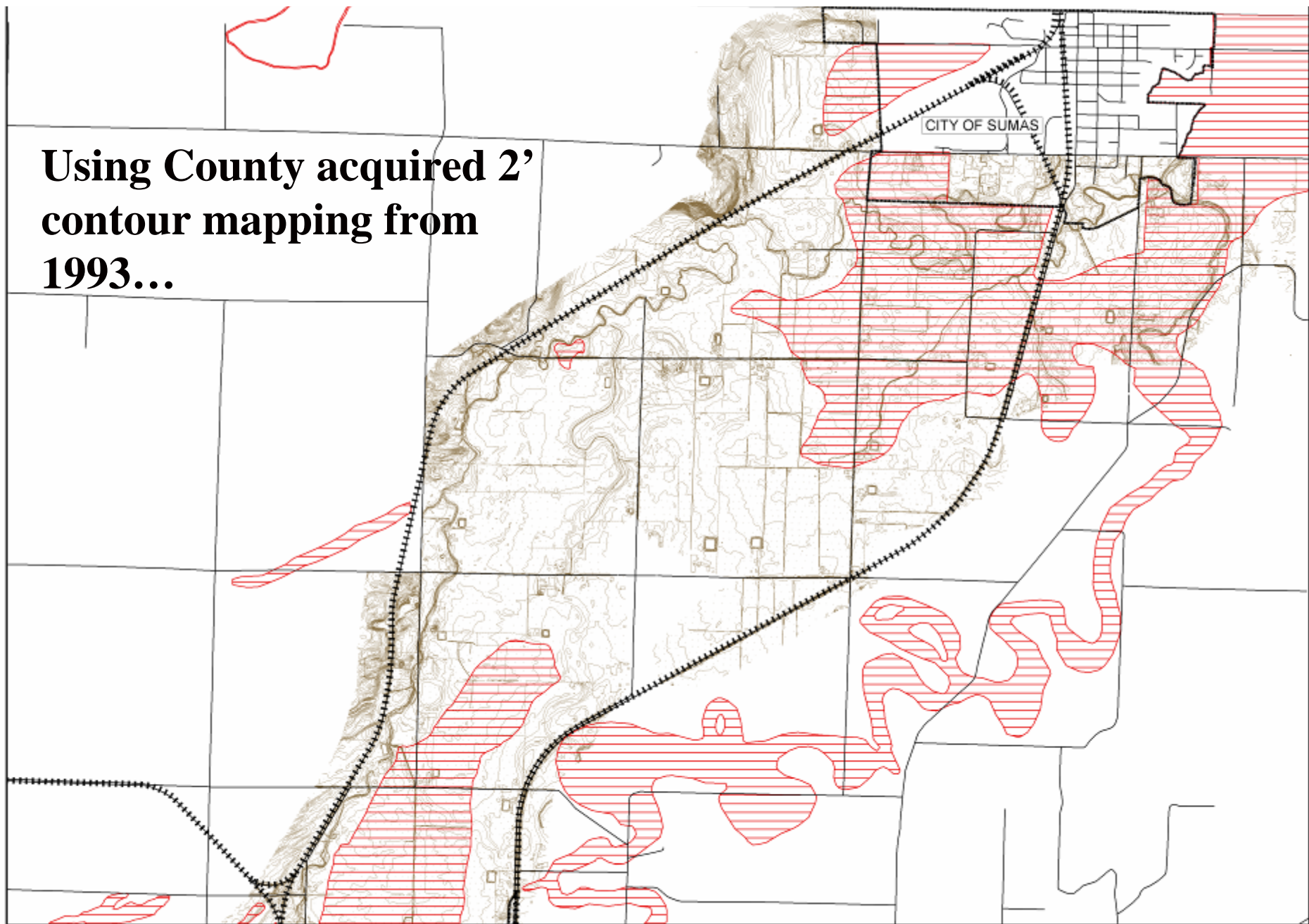
Old 1990 FEMA Floodplain
(note gap in floodplain)



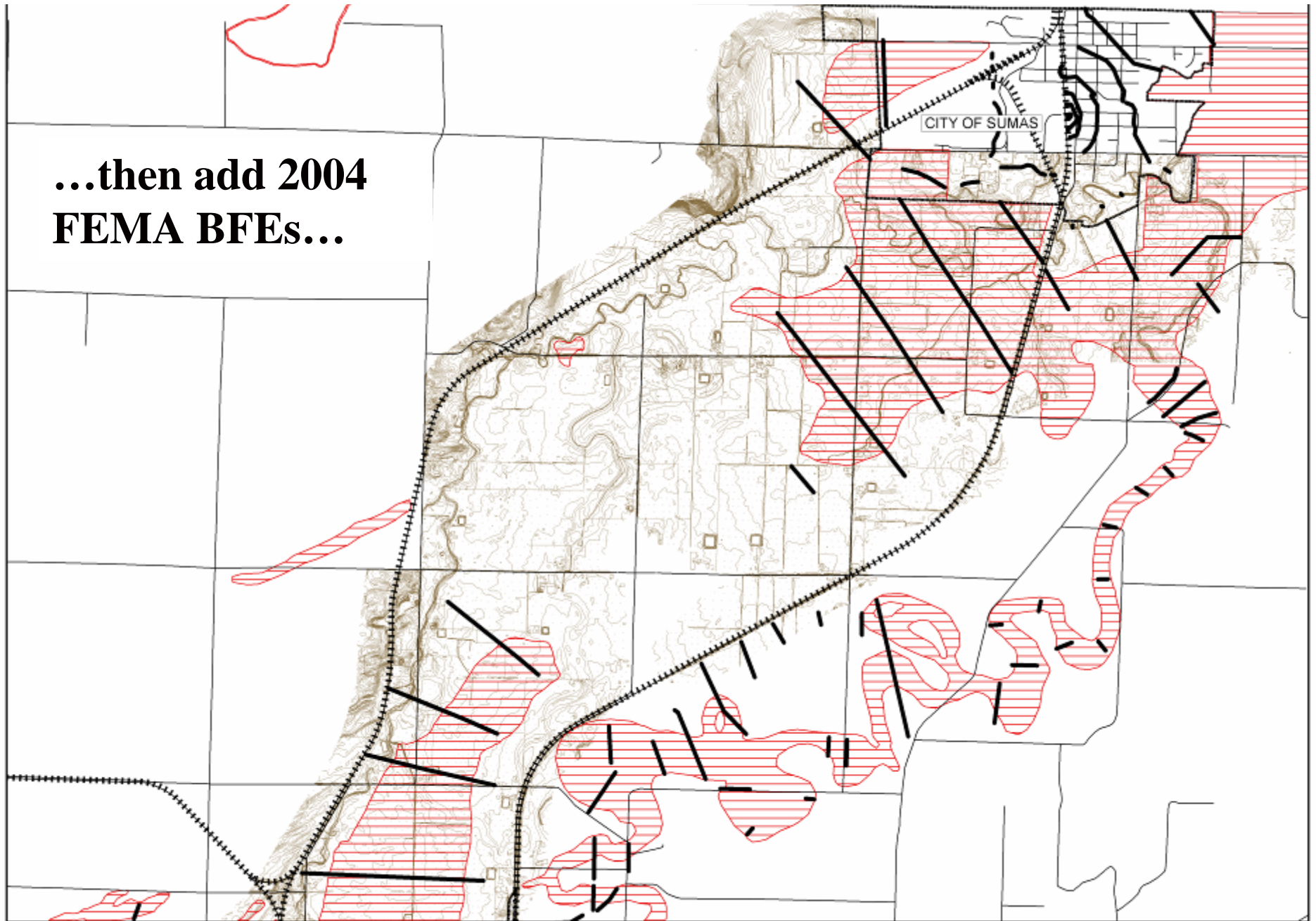
 OLD 1990 FEMA 100-yr FLOODPLAIN (SCANNED)






**Using County acquired 2'
contour mapping from
1993...**



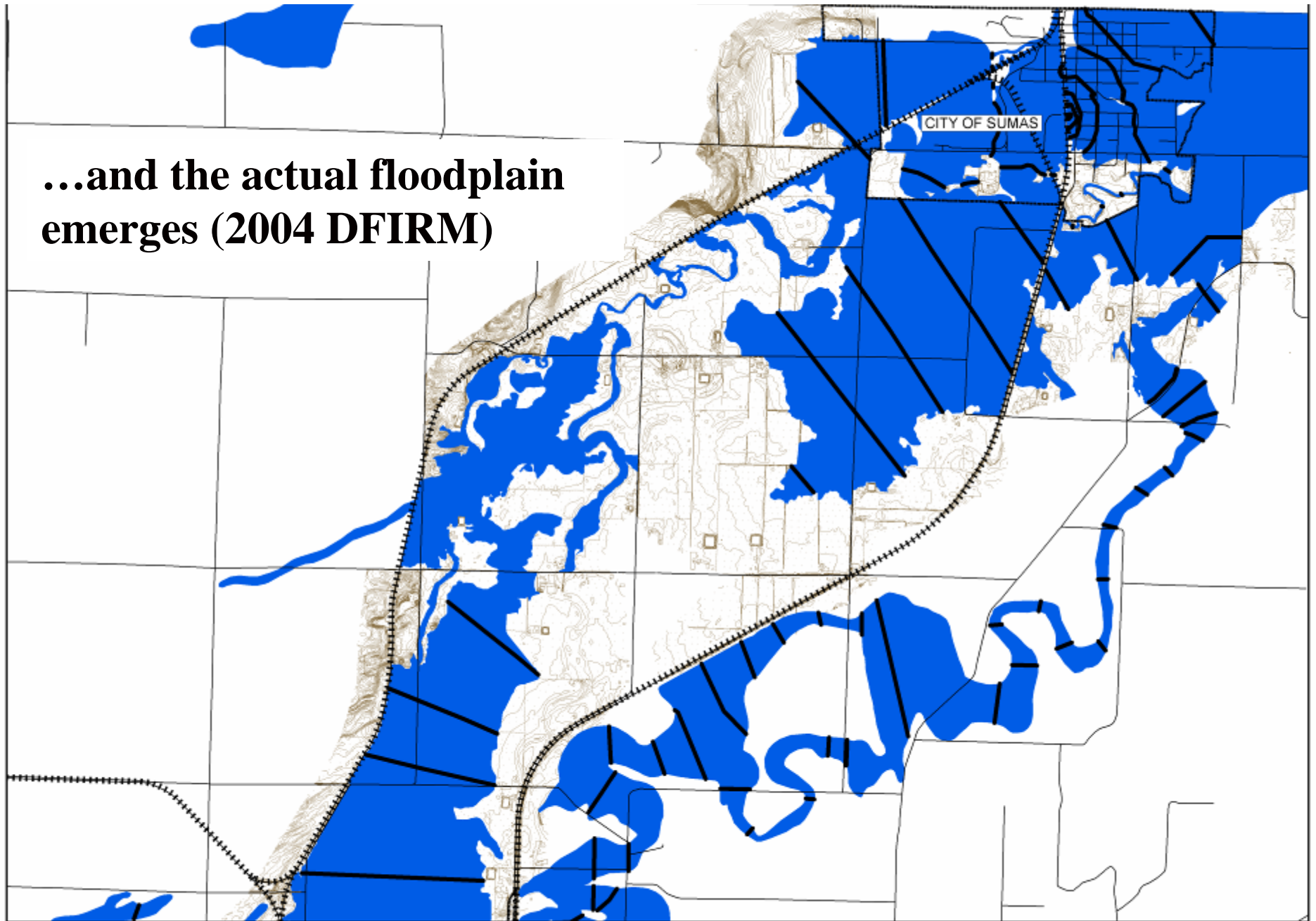
**...then add 2004
FEMA BFE's...**






-  2004 DIGITAL FEMA BFE's
-  2 FOOT CONTOUR MAPPING
-  OLD 1990 FEMA 100-yr FLOODPLAIN (SCANNED)



...and the actual floodplain emerges (2004 DFIRM)



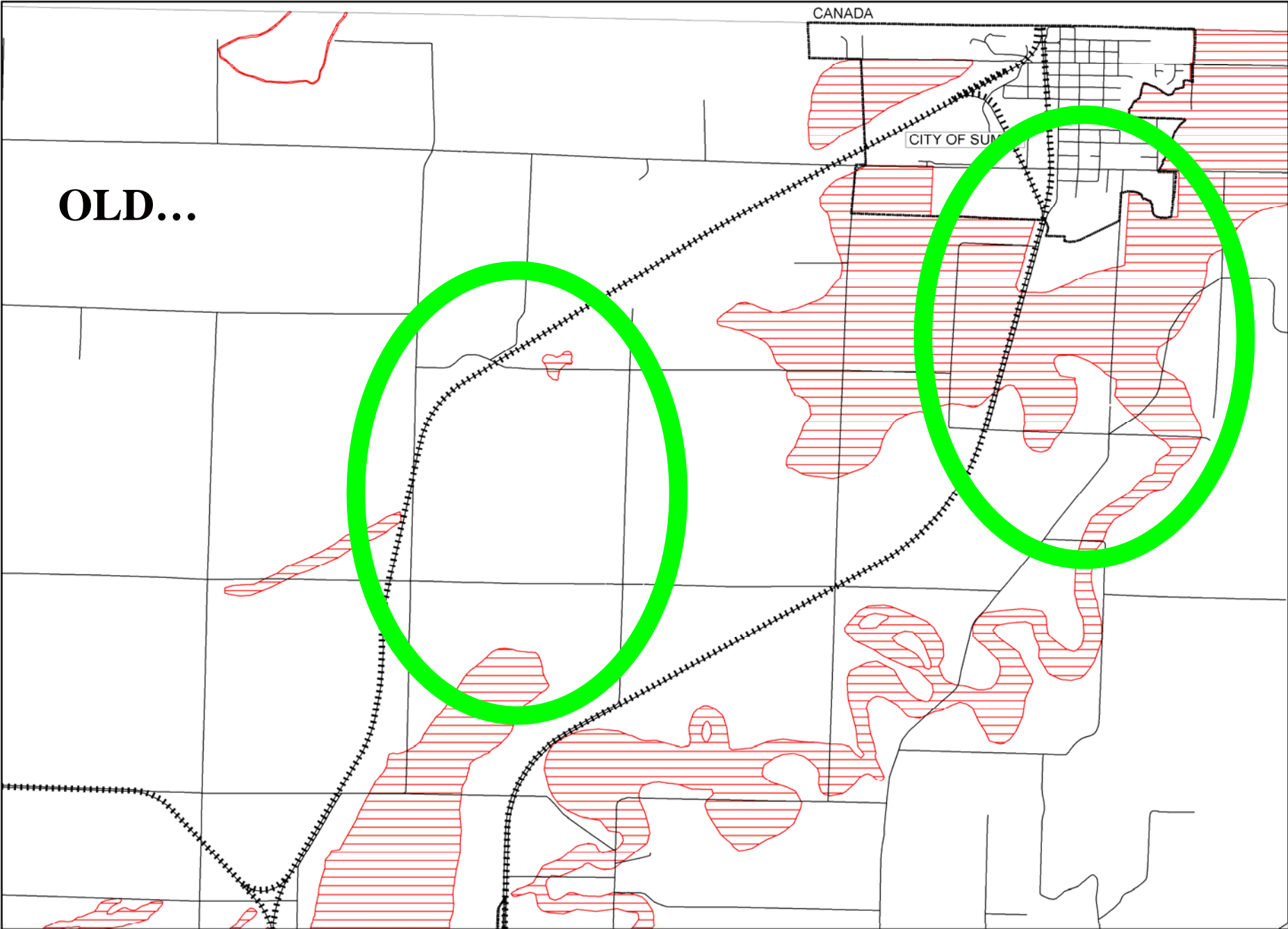
-  2004 DIGITAL FEMA BFE's
-  2 FOOT CONTOUR MAPPING
-  NEW 2004 DIGITAL FEMA 100-yr FLOODPLAIN



CANADA

CITY OF SUMMIT

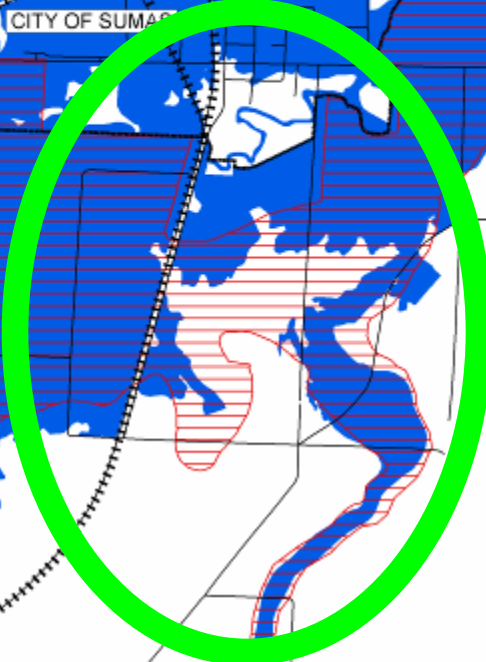
OLD...



 OLD 1990 FEMA 100-yr FLOODPLAIN (SCANNED)



NEW!



CITY OF SUMMIT



-  NEW 2004 DIGITAL FEMA 100-yr FLOODPLAIN
-  OLD 1990 FEMA 100-yr FLOODPLAIN (SCANNED)



DLCD's Map Modernization History

- Eligible for map modernization grant dollars starting in 2002
- Initial assessment of mapping needs (7/2002)
- Business plan to define potential state role in map modernization (3/2004)
- Developed budget package, approved for 05-07
- Map modernization coordinator position filled (11/2005)

Map Modernization Budget Package 05-07

- Federally-funded package, FEMA map modernization grants, no state general fund
- Requested position authority, expenditure limitation
- 2.5 FTE authorized, 1 FTE map modernization coordinator on board!
- Expect a similar package for 07-09

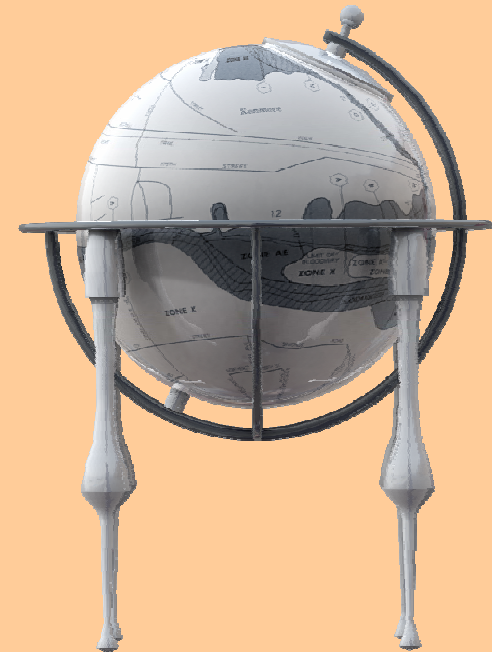


Regional Comparisons

Region 10 States	NFIP Communities	Total State Staff	Map Mod. Staff
Alaska	31	2	1
Idaho	161	1.5	0.5
Oregon	257	2	1
Washington	287	4	1

KEY POINTS – DLCD ROLE

- DLCD will NOT be producing the maps.
- DLCD will be providing support to the FEMA initiative in Oregon, in conjunction with state and local partners.
- DLCD hopes to play a key role in long-term maintenance of the digital maps.



Support Services

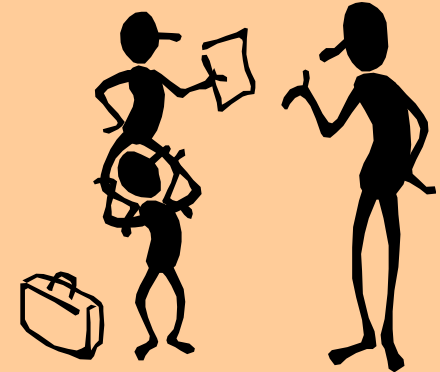
- Inventory of available, digital base data needed to produce digital flood maps
- Discussion with FEMA Region 10 about whether available data/map layers meet FEMA standards
- Linkage of efforts to statewide GIS utility development initiative, including architecture to support digital flood maps
- Technical assistance/outreach for local government

Continued....

- Continuing assessment of local mapping needs
- Assistance with map/ordinance adoption
- Support for FEMA map coordination meetings
- Pilot Project to test integration of FEMA's national portal for digital maps with state GIS system (supported by comp. grant award)

FEMA-DLCD-DAS Partnership

- Entering into a three-way, formal cooperative agreement



- Role of DAS-Geospatial Enterprise Office is key to Oregon's long-term strategy
- Integrate with & take advantage of related state efforts regarding geospatial data

Interagency Coordination – Key to Program Success



KEY COORDINATION FORUMS

- Interagency Hazard Mitigation Team
- Oregon Seismic Safety Policy Advisory Commission
- Oregon Partnership for Disaster Resilience and Resistance
- Pre-disaster Mitigation Planning – Oregon Emergency Management
- Disaster Response/Recovery – Oregon Emergency Management
- Coastal Program – Goals 17 & 18
- Building Codes – Implementation/Updates



Membership of the IHMT

- DAS-Risk Mgmt.
- Agriculture
- Building Codes Div.
- Insurance Div.
- Econ. & Comm. Dev.
- Environmental Quality
- Fish & Wildlife
- Forestry
- Geology & Mineral Ind.
- DLCD
- State Lands
- Parks & Recreation
- Emergency Mgmt.
- State Fire Marshall
- Public Utility Comm.
- Transportation
- Univ. Oregon -ONHW
- Oregon Climate Service
- Water Resources



OSSPAC – ORS 401

13 MEMBERS APPOINTED:

- 1 local government
- 1 public education
- 2 legislative
- 3 general public
- 6 industry or other stakeholders

STATE AGENCIES DESIGNATED:

- Building Codes Div.
- Geology & Mineral Industries
- DLCDD
- Emergency Mgmt.
- Transportation



Disaster Resistant by Design



www.OregonShowcase.org

Oregon Showcase State Program





Local Activities

Community Plan Development

Worked with 20 jurisdictions to develop risk-reduction plans
Clackamas County now has the first FEMA approved plan in the nation

Community Workshops & Trainings

Conducted over 35 workshops serving over 400 participants

Partnership & Grant Development

Helped 27 jurisdictions write grants for natural hazard mitigation

Statewide Activities

Collaborative planning process linking state and local efforts

Planning for Natural Hazards: Oregon Technical Resource Guide

State of Oregon's Natural Hazard Mitigation Plan

Local Natural Hazard Mitigation Planning Guide

Natural hazards resource website: www.OregonShowcase.org

Quarterly newsletter sent to elected officials

Technical resource CD's for communities

National Activities

National Disaster Mitigation Roundtable sponsored by Congressman Earl Blumenauer

Senior Advisor to FEMA on the development of their "How To" series on mitigation planning

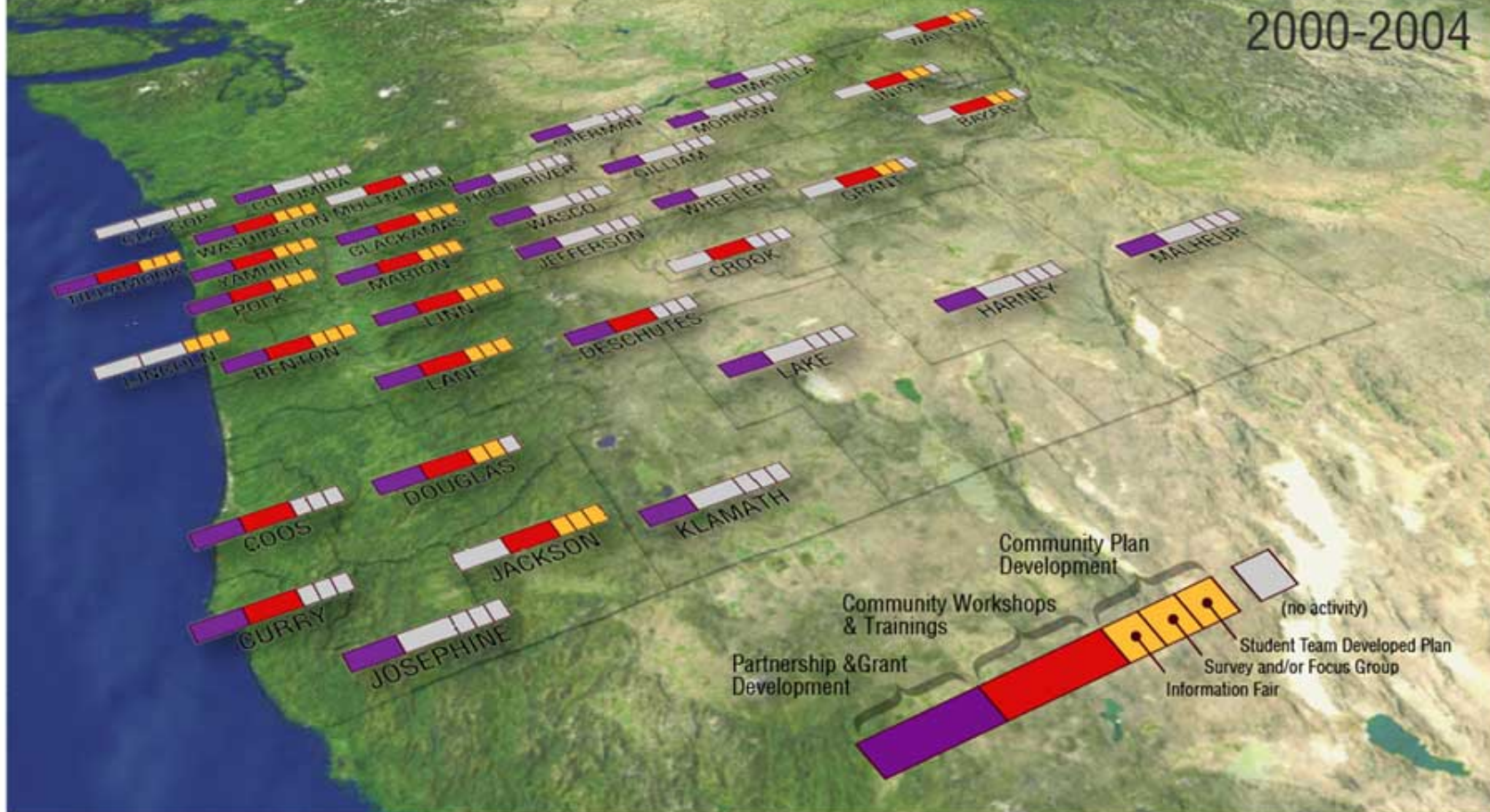
Technical assistance to 10 states regarding ONHW capacity building and planning model

Regional Partnerships with City of Seattle and Cascadia Region Earthquake Workgroup



Oregon Natural Hazards Workgroup

2000-2004



Hazard Mitigation Projects

- Work closely with Oregon Emergency Management and FEMA Region 10
- FEMA Grant Programs:
 - Pre-Disaster (Annual)
 - Flood Mitigation (Annual)
 - Post-Disaster

