AGENDA

- 11:30 : Doors Open
- 11:40 : Presentation
- 12:00–1:30 : Open House

Matanuska-Susitna Borough FEMA Flood Insurance Study Open House

Iditarod Elementary, Wasilla

March 16, 2017

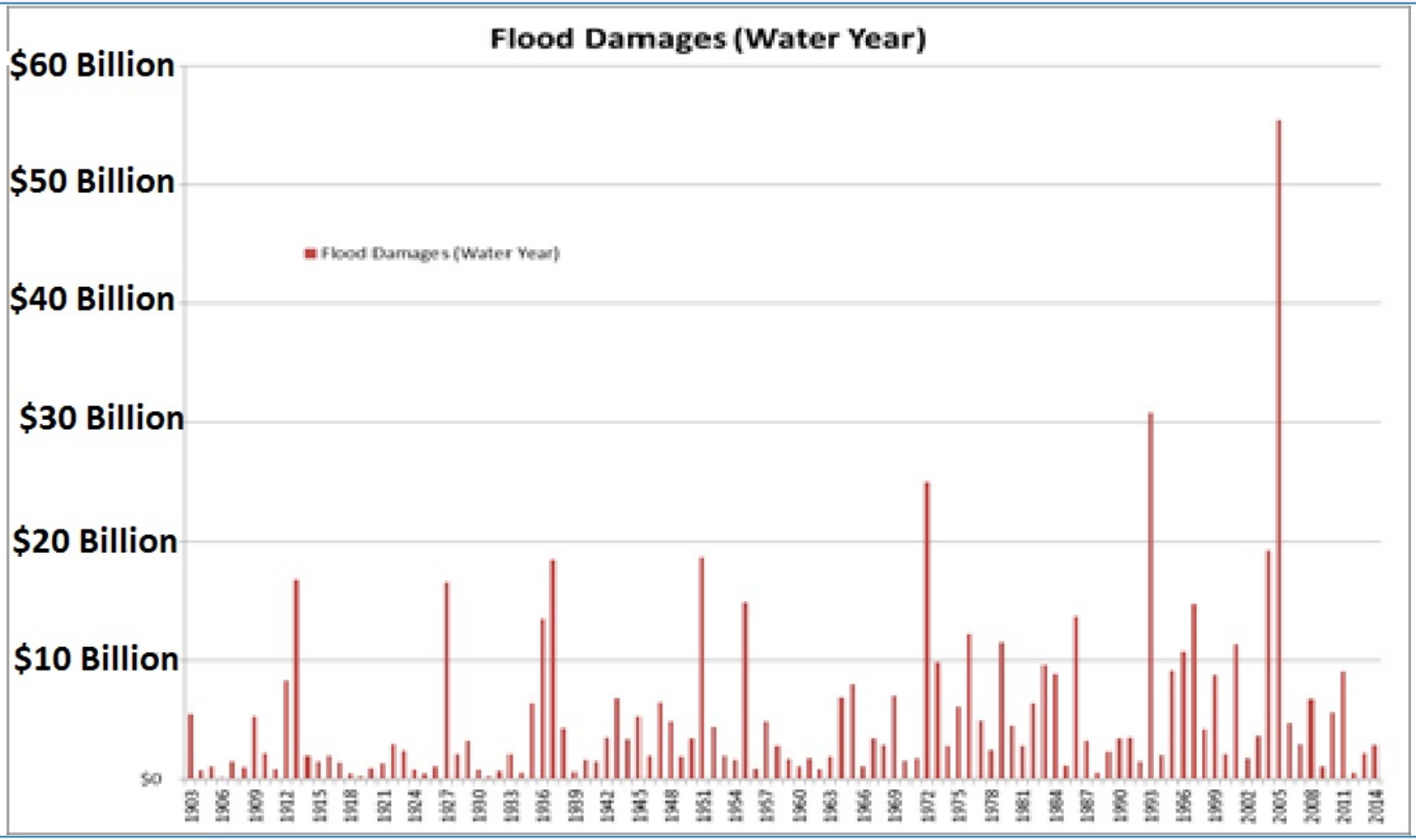
FEMA

Agenda

- Background of the National Flood Insurance Program
- Flood Study Map Update
- Process and Schedule
- Open House Layout

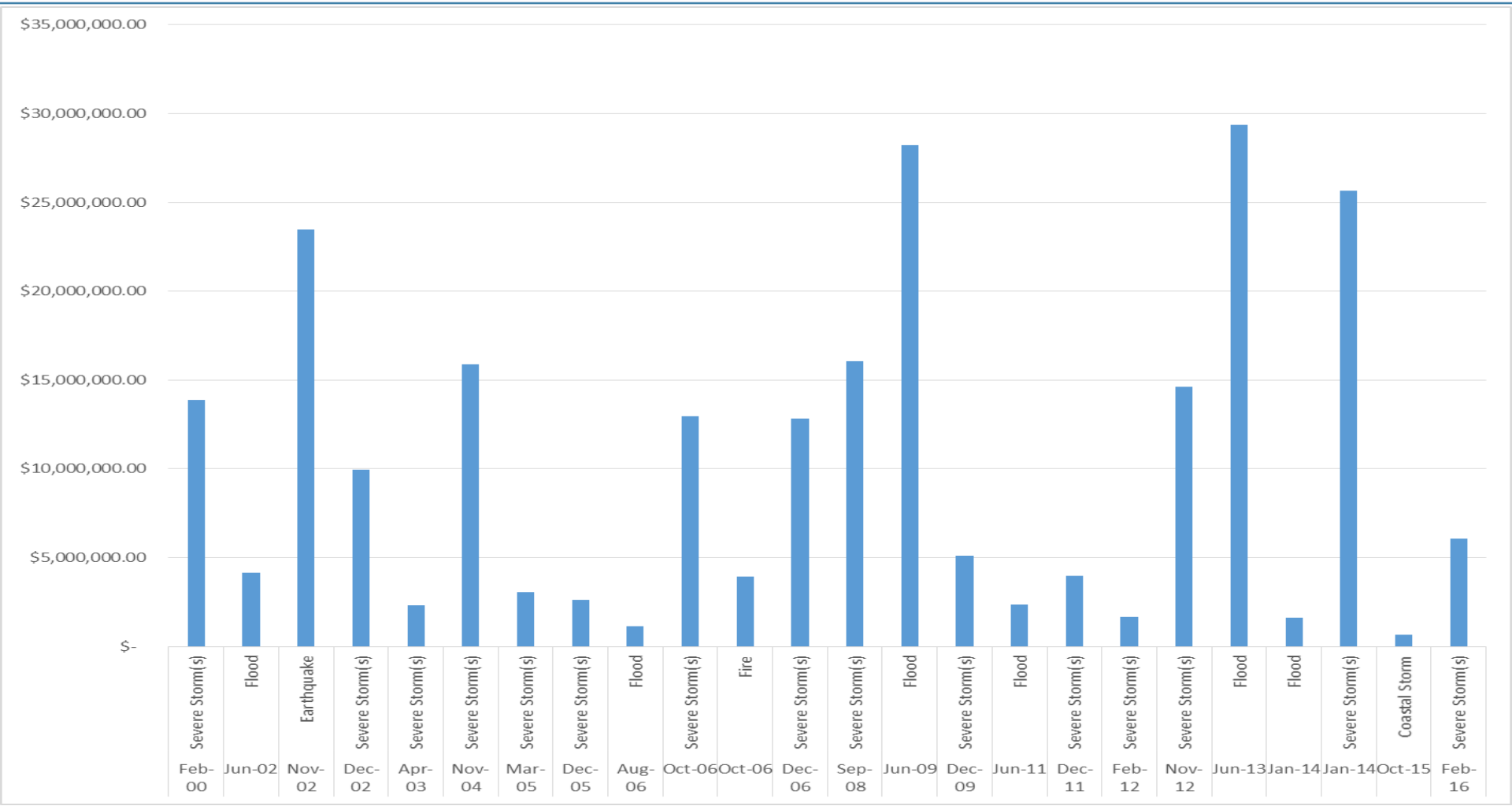
Purpose of the National Flood Insurance Program

Reduce economic loss caused by flood events



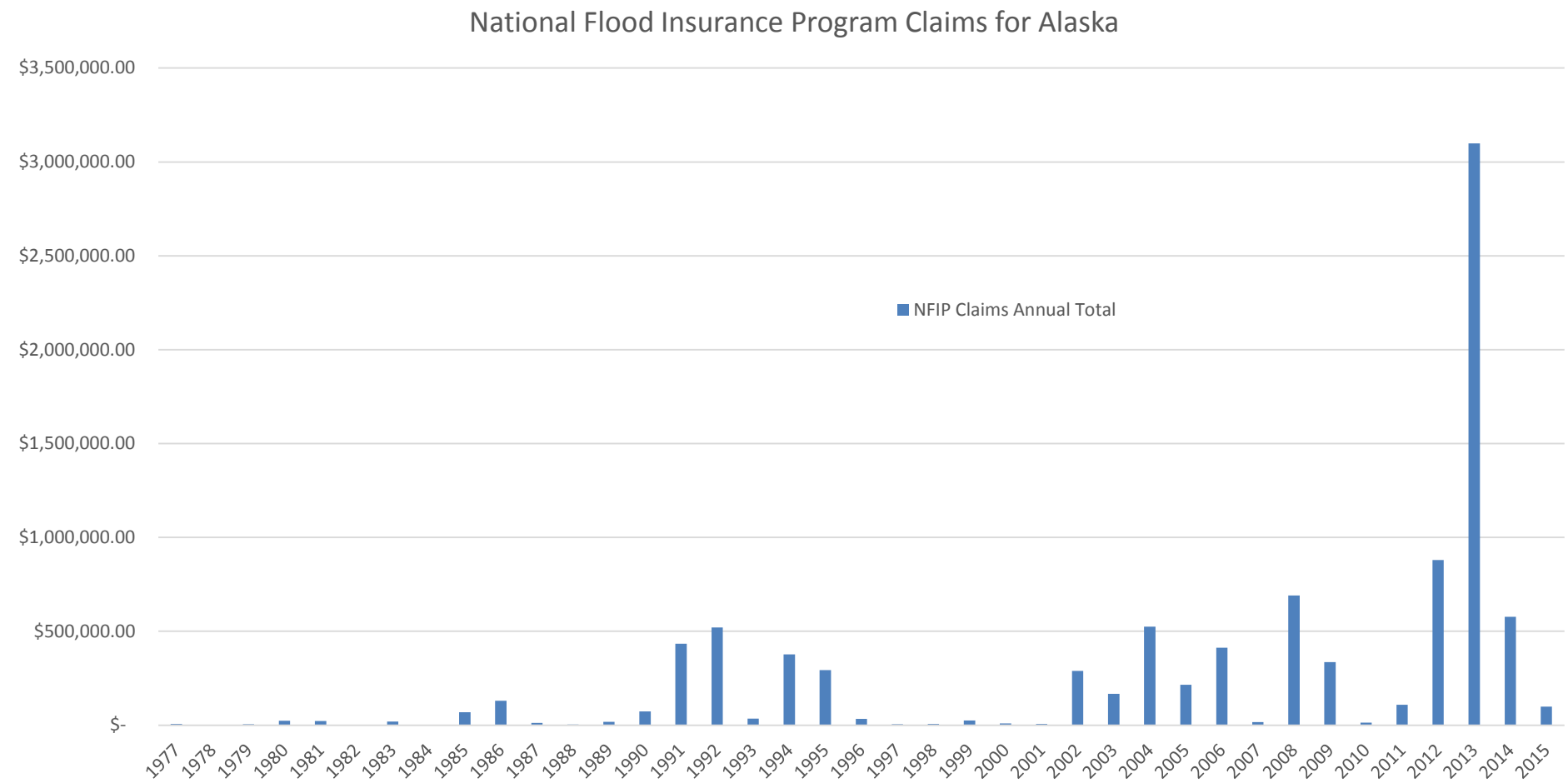
- Between 1980 and 2013, the United States suffered more than $260 billion in flood-related damages.
- Flooding accounts for approximately 85% of all disaster declarations.

State of Alaska Federally Declared Disaster Public Assistance Costs



- Between 2000 and 2016, there has been $240 Million in Public Assistance Needs from AK
- Flooding and Severe Storms account for approximately 89% of the needs.

State of Alaska Flood Insurance Claims



National Flood Insurance Program Costs:

First Claim in AK – 9/8/1977	Total Claims in AK – 620	Total Dispersed - $9.55 Million
Average Per Year	16	$245,000

Matanuska-Susitna Borough Flood Insurance Claims

- Matanuska-Susitna Borough has had 78 Flood Insurance Claims that has paid out $1.7 Million
- In 2012, the Borough had 31 claims that paid out $600K
- In 2006, the Borough had 16 claims that paid out $150K
- The Borough' first claim was in December 1980
- 44% of paid out claims are from 2006 and 2012

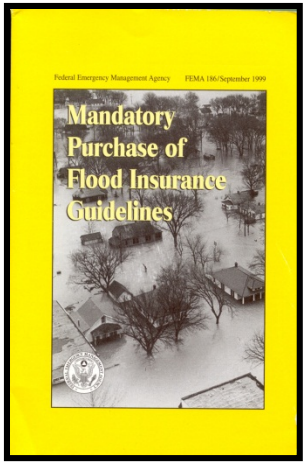
Purpose of the National Flood Insurance Program

Reduce economic loss caused by flood events

- Maps the flood risk and assign insurance rates (FIRMs)
- Makes flood insurance available
- Sets minimum floodplain construction standards
- Reduces dependency on structural flood control
- Promotes floodplain management practices

Mandatory Purchase Requirement

- Two federal statutes mandate purchase of flood insurance
  - The Flood Disaster Protection Act of 1973
  - The National Flood Insurance Reform Act of 1994
- Applies to properties in the 1% Chance Floodplain
  - Insurance is a prerequisite to receive a loan from Federally regulated and insured lenders.
  - The requirement is triggered when a loan is:
    - Made
    - Increased
    - Renewed
    - Extended
  - The insurance must be in effect for the life of the loan.
- Monetary penalties on lenders for non-compliance, requires escrow accounts for other insurance purposes, and requires that lenders review flood maps and map changes.



How the 1% Flood Elevation (BFE) Affects Insurance Rates

- The greater the chance of loss (risk), the higher the premium
- The higher the lowest elevated floor is above the BFE, the lower the premium

FEMA

How the National Flood Insurance Program (NFIP) Works

Three disciplines of the NFIP:

- **Mapping – Flood Studies**
- **Regulations**
- **Insurance**

SCOPE OF WORK - ORIGINAL

Detailed Studies

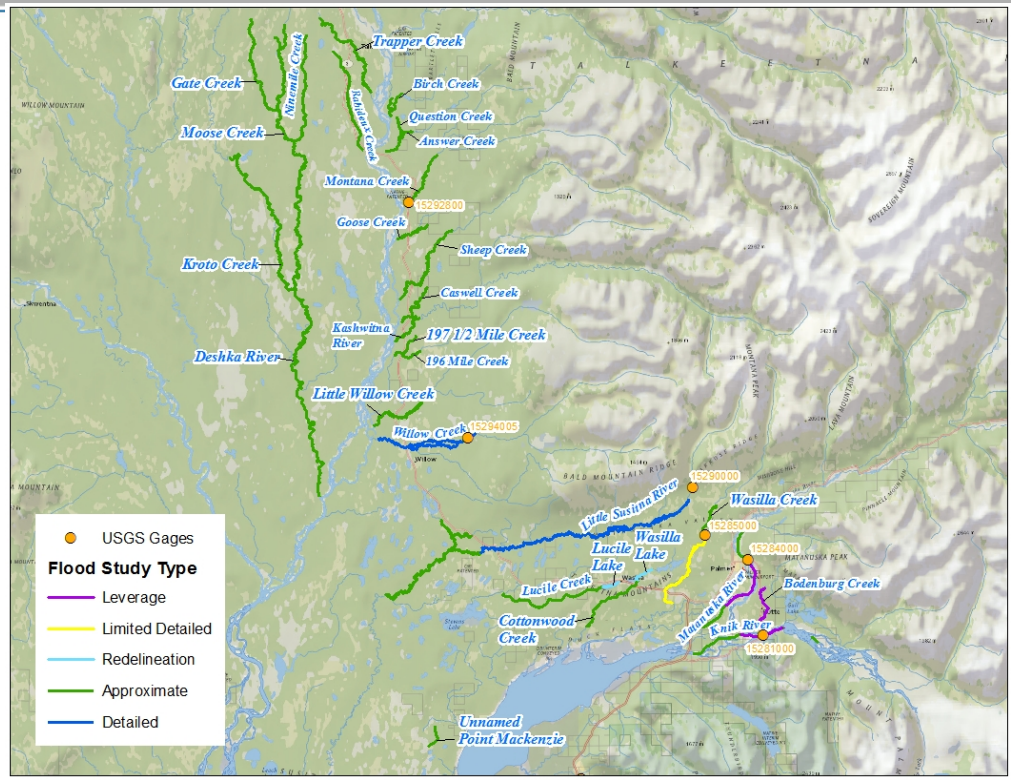
- Little Susitna River (39.2 miles)
- Willow Creek (13.3 miles)
- Willow Creek Tributary (7.1 miles)

Approximate Studies

- Various Reaches (~300 miles)

Leverage Studies (Source: USACE)

- Matanuska River (3.9 miles)
- Knik River (2.7 miles)
- Bodenburg Creek (5.7 miles)

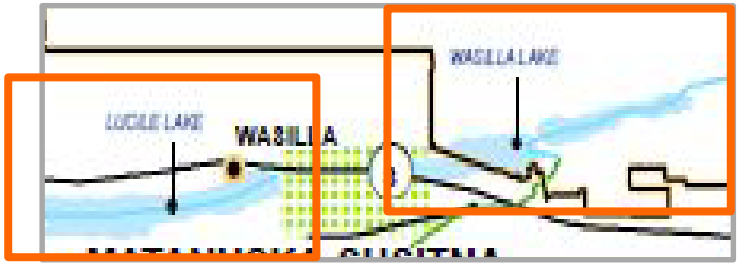


- Update of 122 map panels

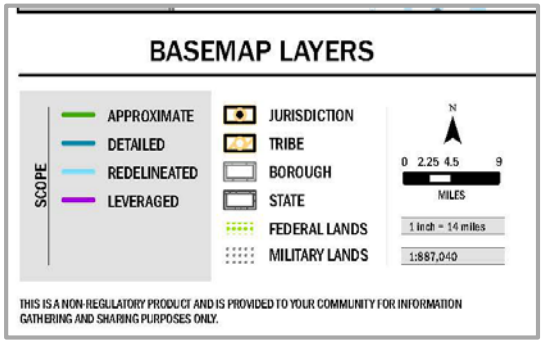
SCOPE OF WORK – ADDED POST FRR MEETING (1/30/16)

- **Redelineated Floodplains**
  - Wasilla Lake (325.7 feet MSL)
  - Lucile Lake (314.4 feet MSL)

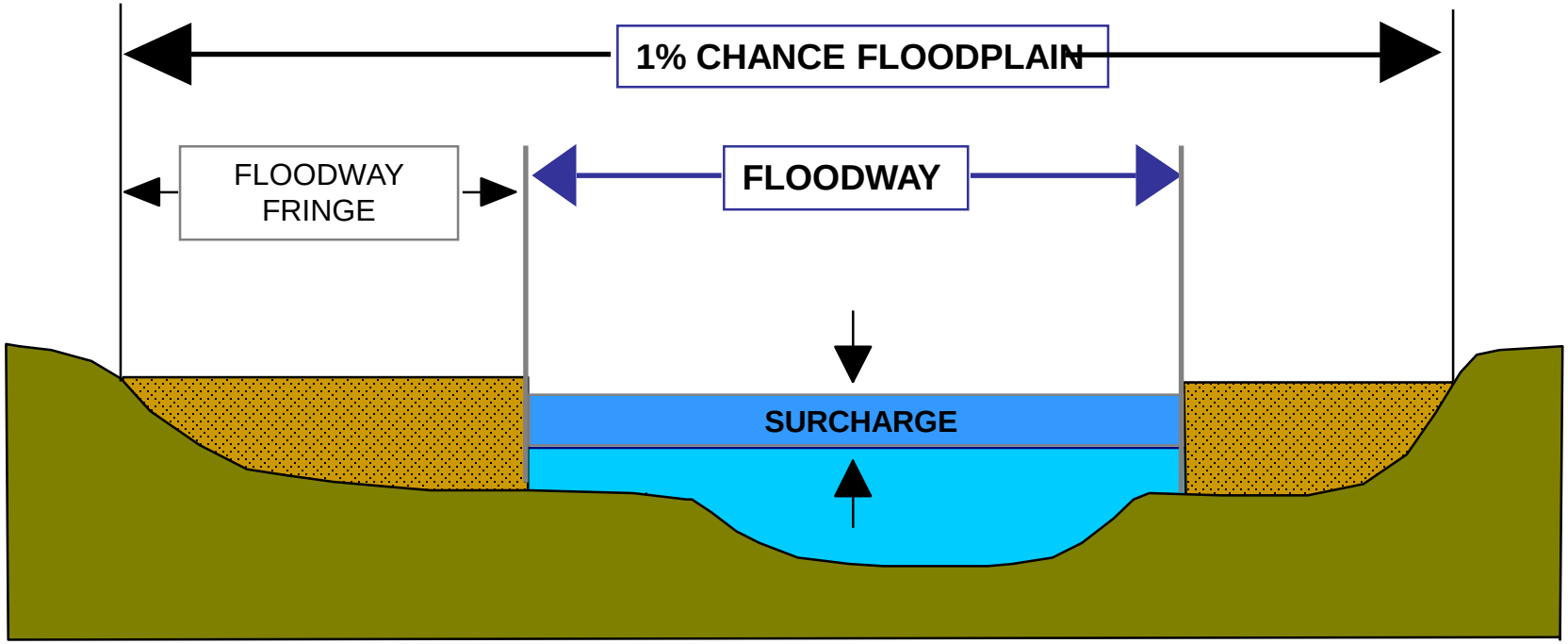
Wasilla Lake



Lucile Lake



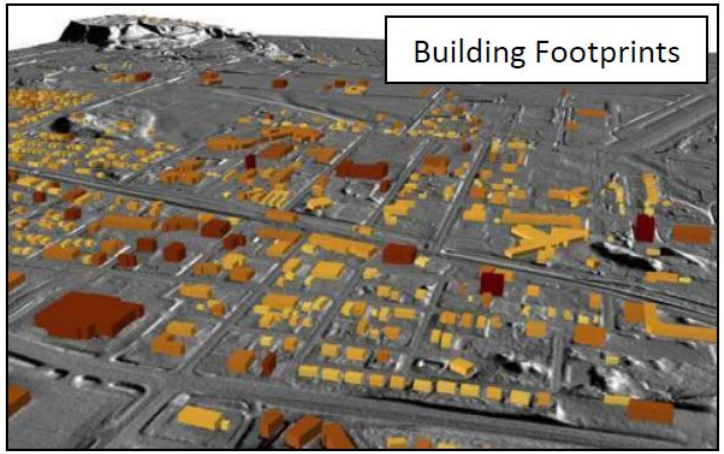
Floodway Schematic

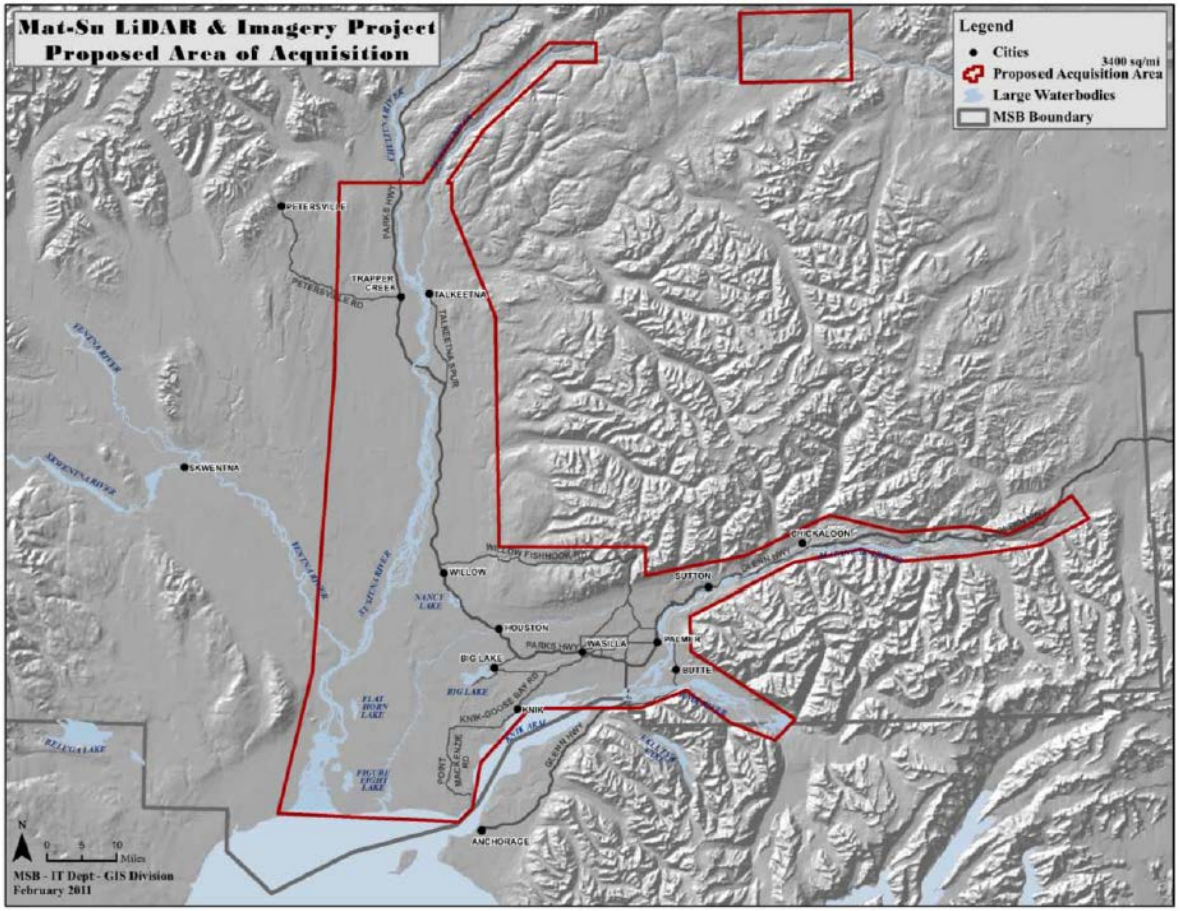


FLOODWAY + FLOODWAY FRINGE = 1% CHANCE FLOODPLAIN - SURCHARGE NOT TO EXCEED 1.0 FEET

Topographic Data

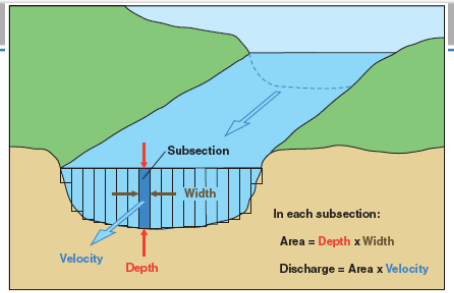
- Source: Mat-Su LiDAR & Imagery Project
- Collected: 2011-2012
- Resolution: Two (2) feet



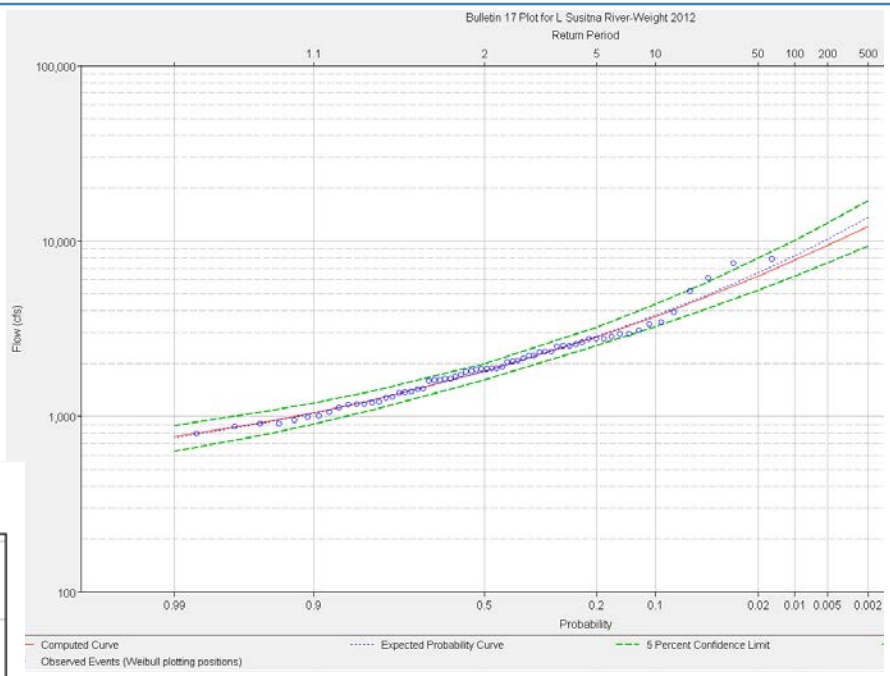


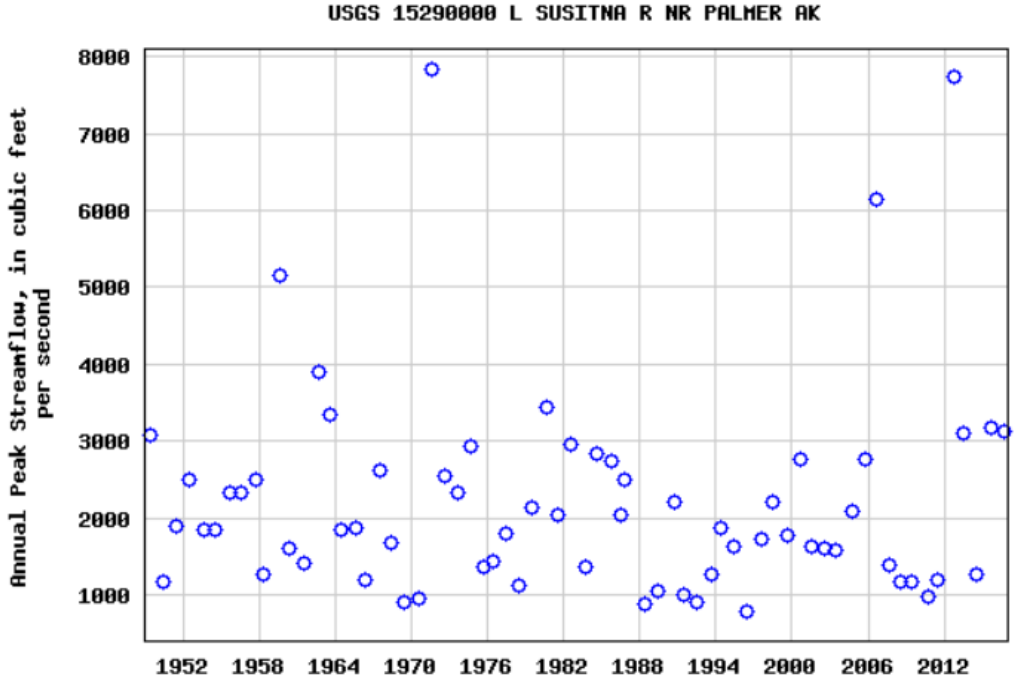
http://matsu.gina.alaska.edu/

Hydrologic Methods



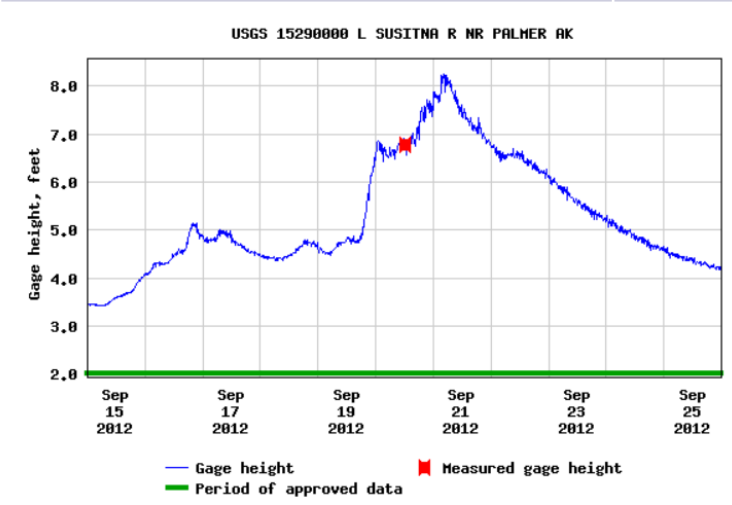
Current-meter discharge measurements are made by determining the discharge in each subsection of a channel cross section and summing the subsection discharges to obtain a total discharge.

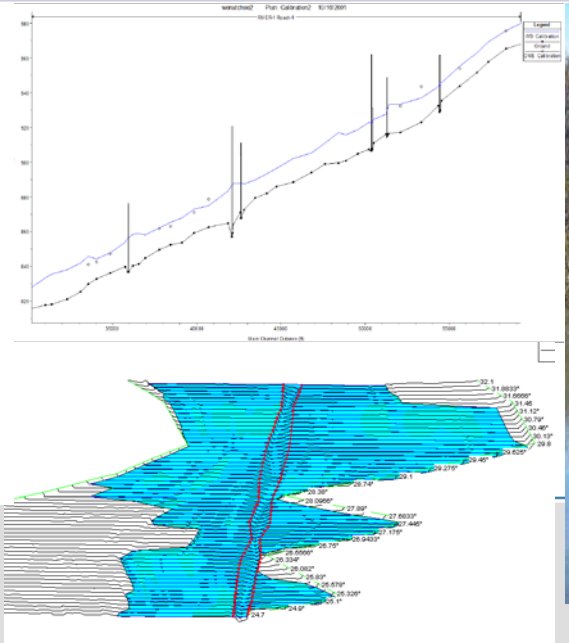




Hydraulic Methods

Method	Description
Detailed (Zone AE)	• Steady State HEC-RAS model • Roughness is examined closely (calibrated to gages) • Based on LiDAR Topography • Channel cross sections surveyed • Structures are surveyed • Floodway Analysis

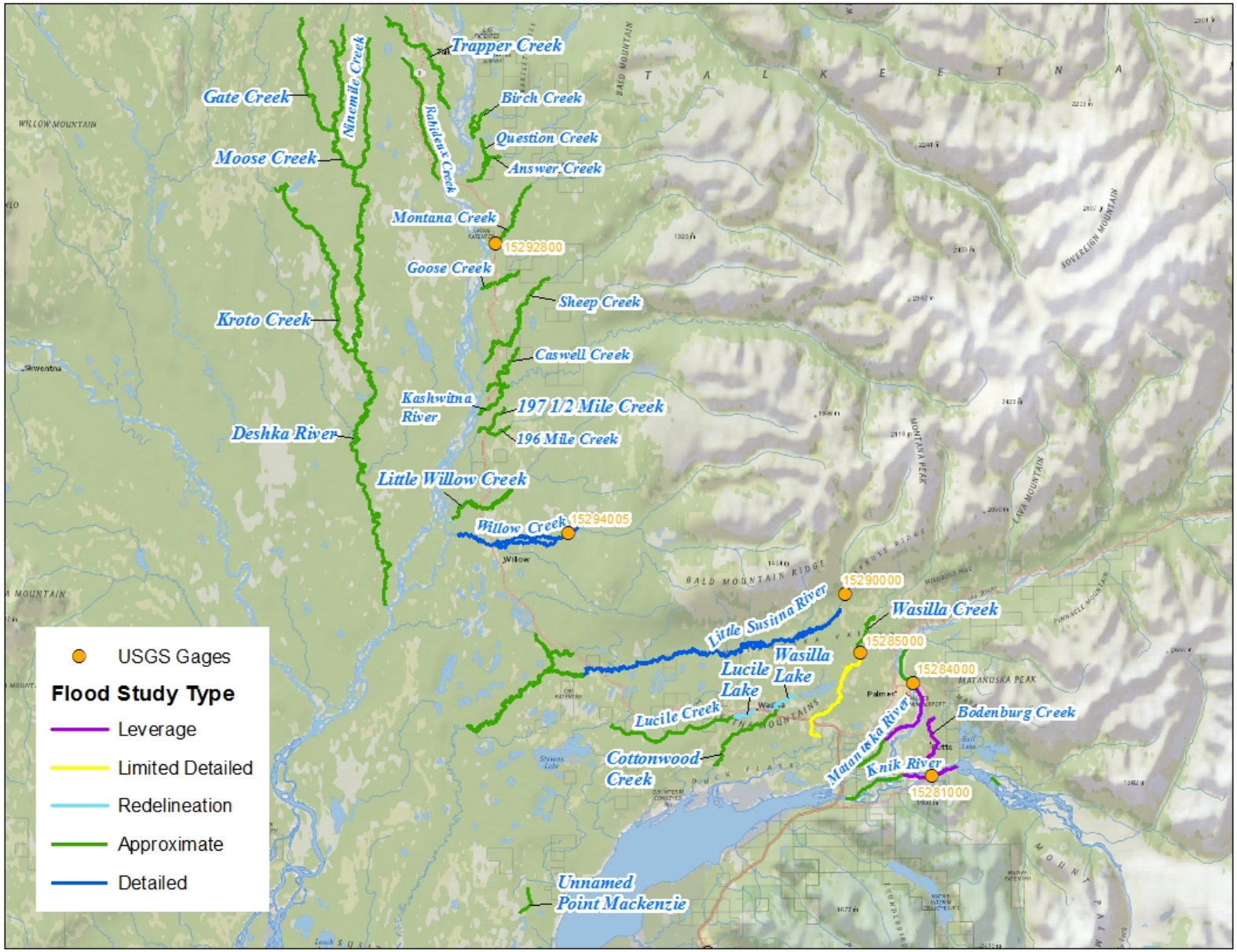




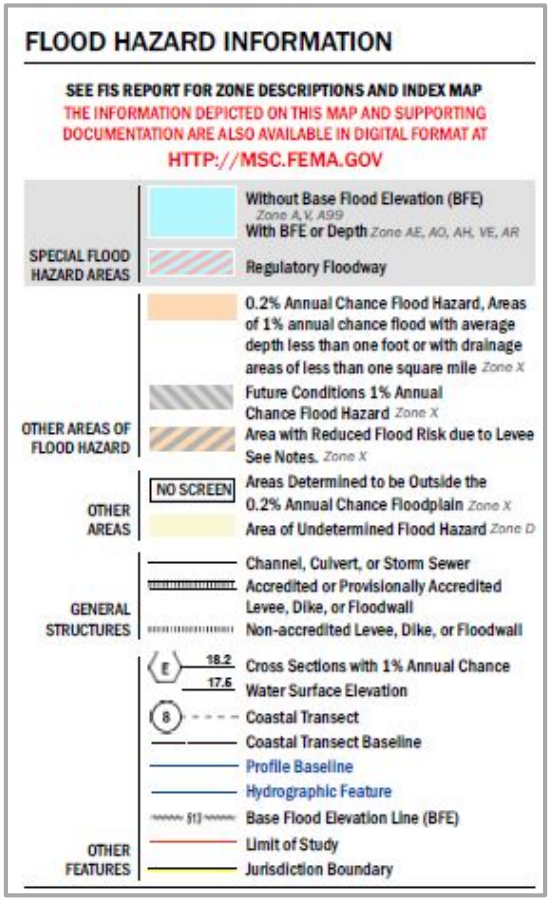
Hydraulic Methods

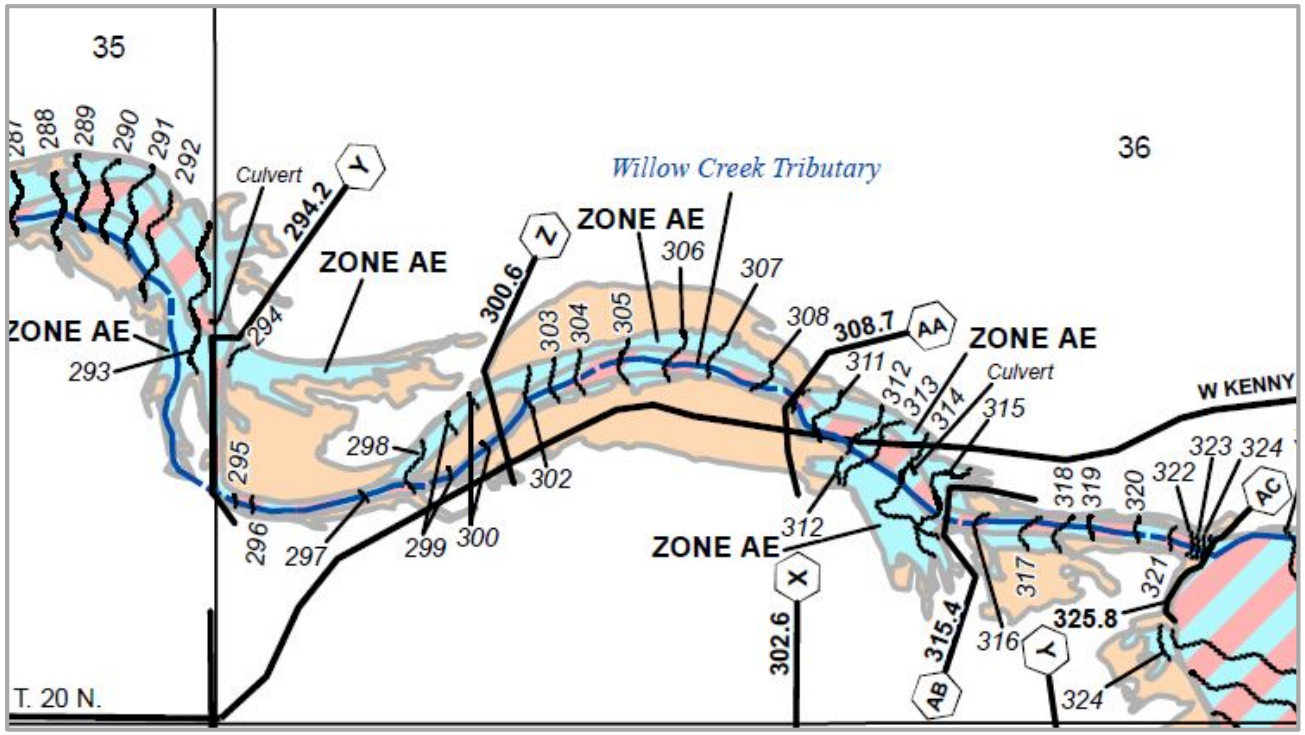
Method	Description
Approximate (Zone A)	• HEC-RAS model (simplified) • Roughness is generalized • Based on LiDAR Topography • No survey • Structures are not modeled

Hydraulic Scope



Preliminary Map Labeling





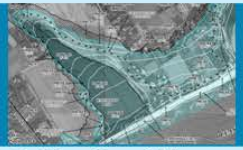
RiskMAP, the NFIP and Hazard Mitigation Planning

RiskMAP

Increasing Resilience Together

Goals

Deliver High-Quality Risk Data



Products

- Intuitive Flood Maps
- Credible data- reliable, accurate, watershed-based
- Illustrations of Flood Depths
- Valuable Flood Risk Assessments

Increase Awareness of Flood Risk

Products

- Tools to understand how flood risk has changed
- Continuous engagement with communities
- Enable communities to communicate flood risk to constituents

Promote Community Mitigation Actions

Products

Support that allows communities to identify and risks and promote:

- Community resiliency
- Sustainability
- Reduced need for federal disaster assistance

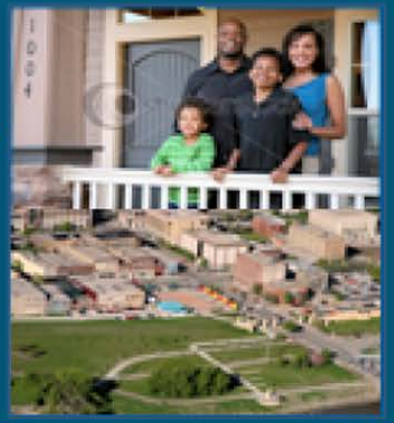
Processes

MITIGATION PLANNING

Enhance delivery of Risk MAP Products

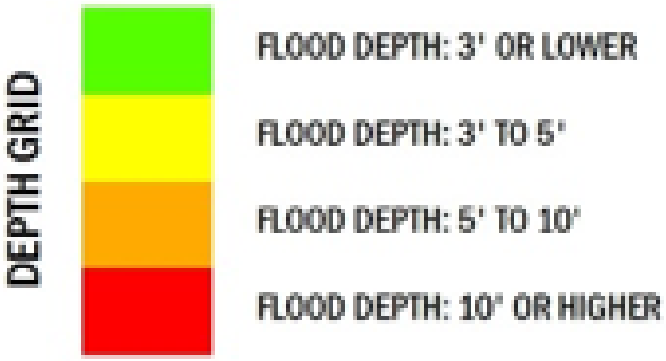
Collaborate across all levels of government

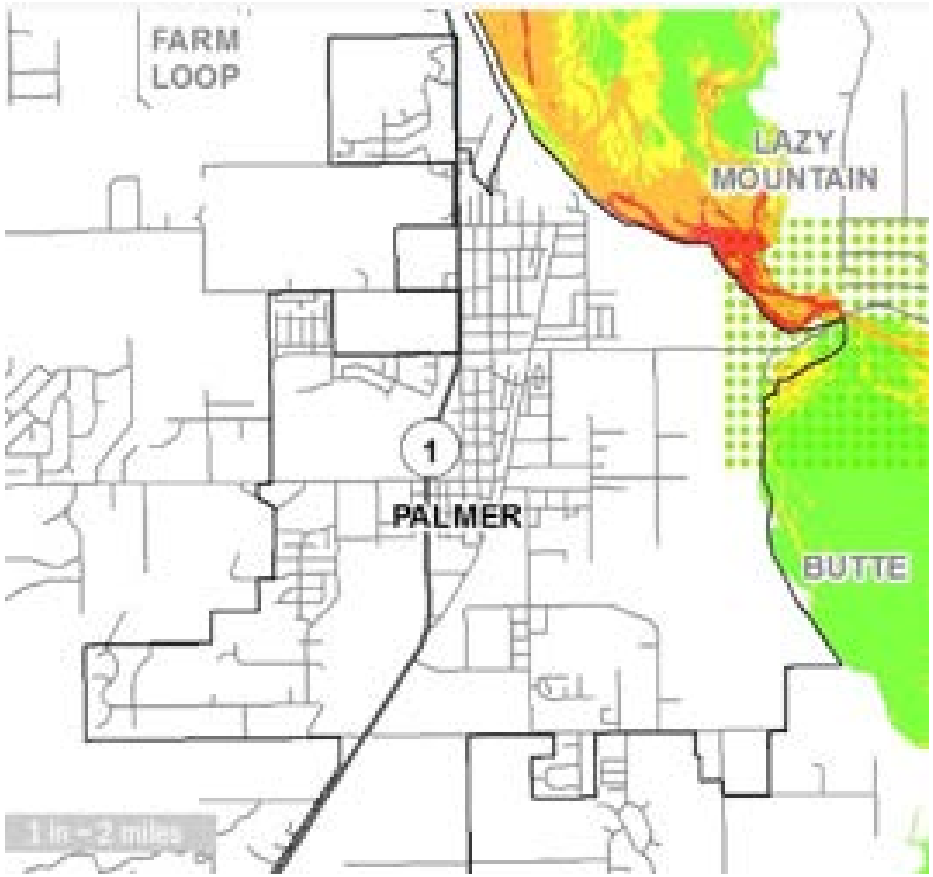
Reduce Risk to Lives and Property



Flood Depth Grids

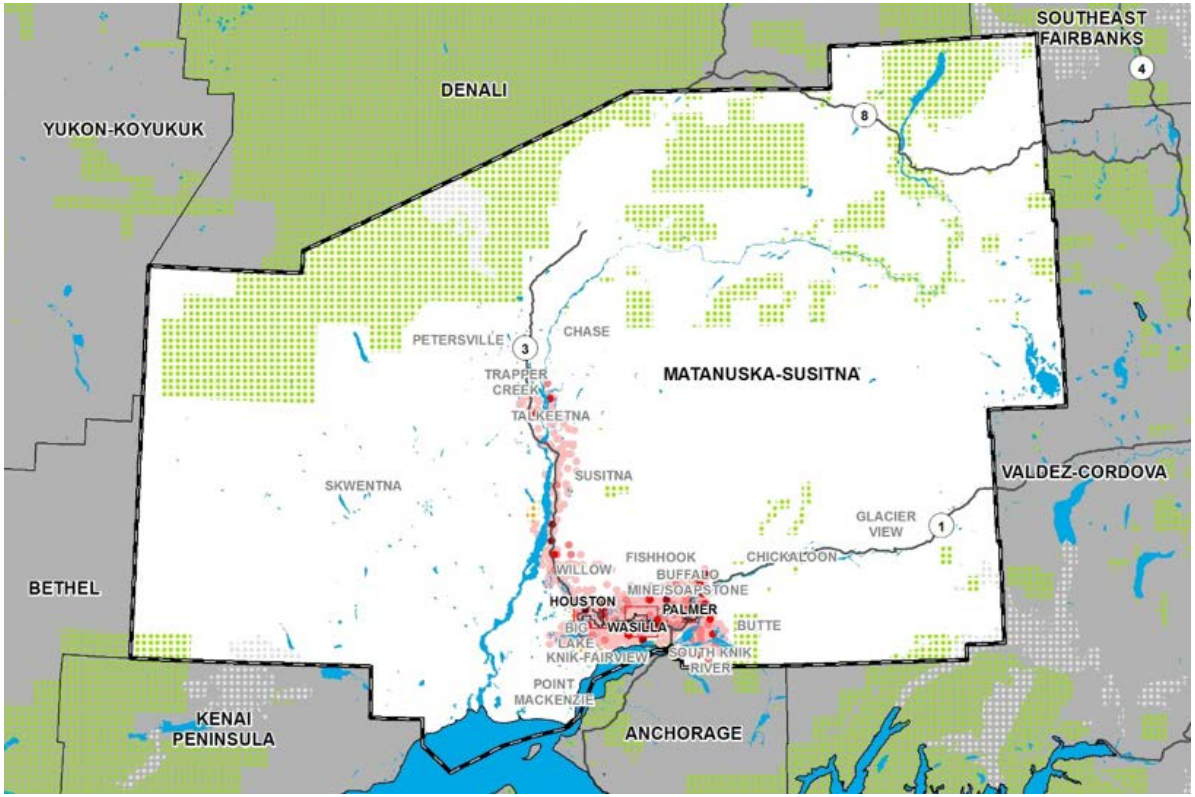
- **Flood Depth Grids**
  - Riverine: 10%, 4%, 2%, 1%, & 0.2% Annual Chance Floods





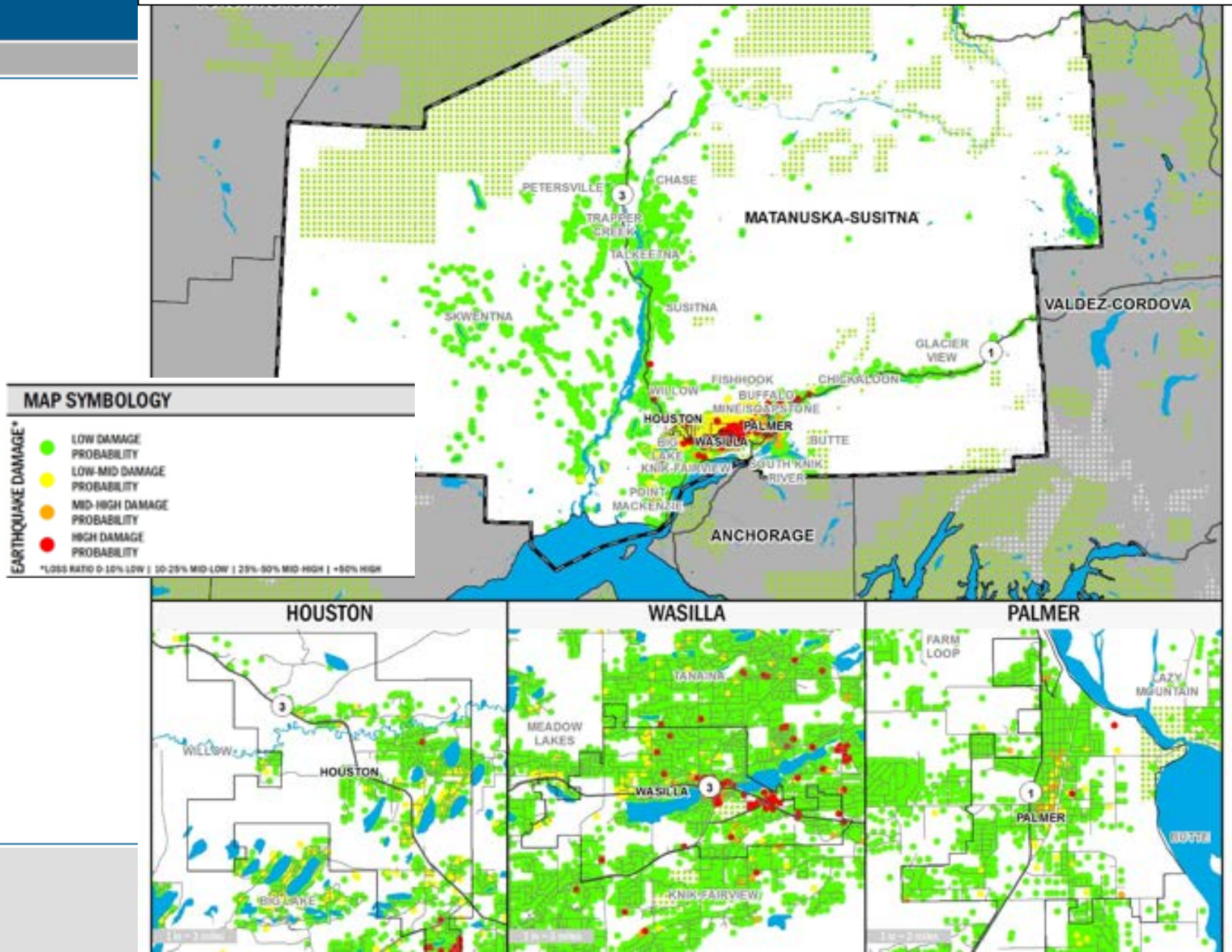
Results from 1% Annual Chance Flood

Multi-Hazard Assessments

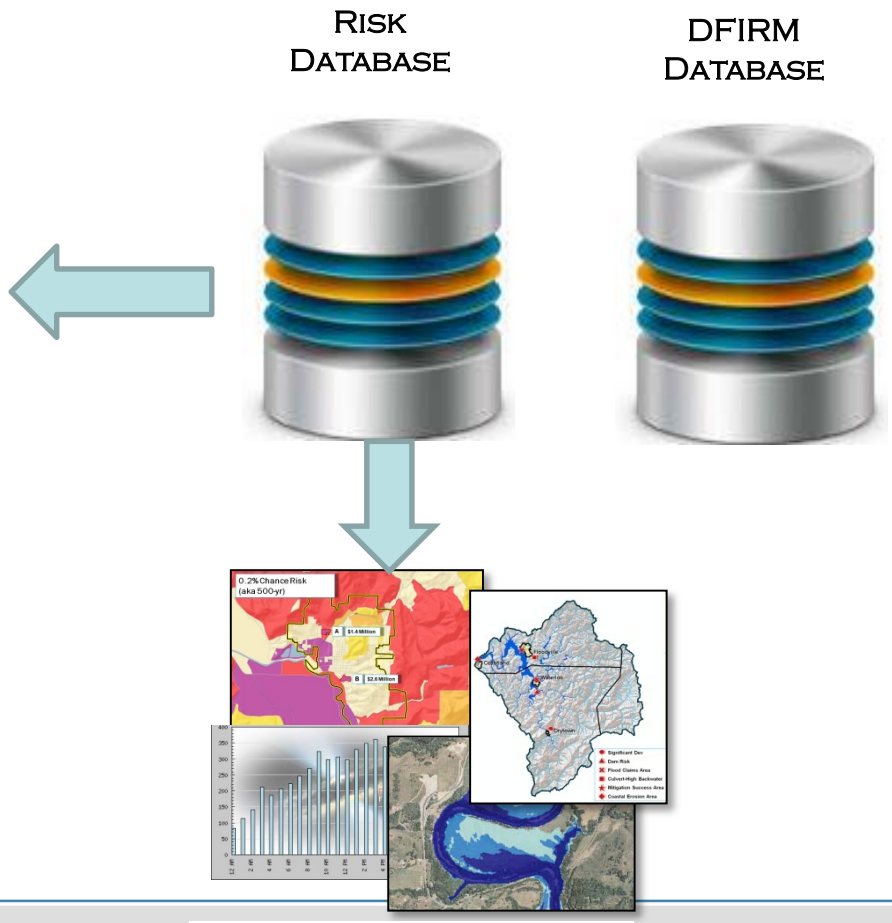


- Flood
- Earthquake
- Landslide (Profile)
- Wildfire (Profile)

M7.5 Event Earthquake Damage

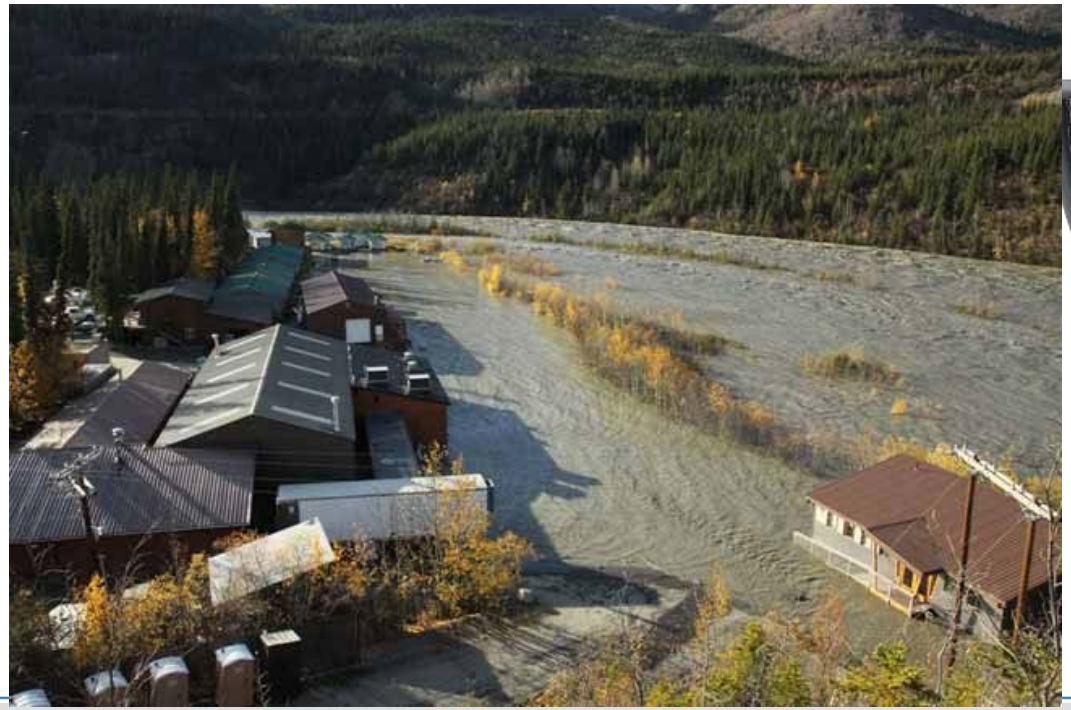


Deliverables



Multi-Hazard Risk Analyses

Matanuska-Susitna Borough Adoption Process



Post Preliminary Processing
Timeline of events

- **Preliminary maps issued** …….. **August 19, 2016**

- **CCO Meeting**…….. **January 4, 2017**
- **Public Meetings** …….. **March 15, 2017**
  March 16, 2017

- **Appeal Period**…… **Spring 2017***
- **End of Appeal Period …….** **Summer 2017***

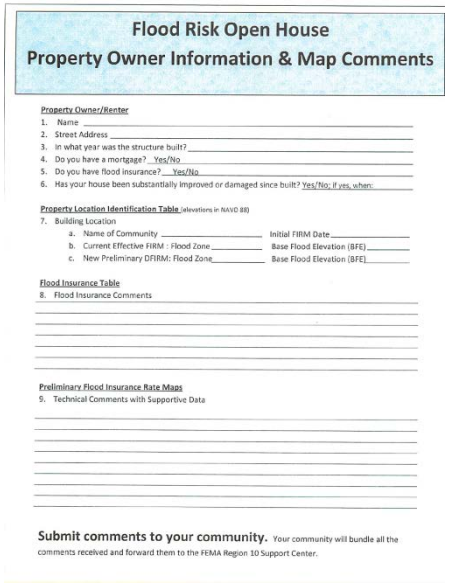
- **FEMA issues "Letter of Final Determination (LFD)" …** **Fall/Winter 2017***
  to communities and publishes BFEs in the Federal Register
  Communities have 6 months to adopt the study before the data becomes "effective".
  Failure to adopt results in suspension from NFIP

- **Effective date …….** **Spring/Summer 2018***

** Proposed dates are subject to change*

Appeals & Comments

- **Submit to your community officials**
- **Community bundles all the comments and forwards them to FEMA Region 10 Service Center**



Flood Risk Open House
Property Owner Information & Map Comments

Property Owner/Renter

1. Name _____
2. Street Address _____
3. In what year was the structure built? _____
4. Do you have a mortgage? Yes/No _____
5. Do you have flood insurance? Yes/No _____
6. Has your house been substantially improved or damaged since built? Yes/No; If yes, when: _____

Property Location Identification Table (elevations in NAVD 88)

7. Building Location
   a. Name of Community _____ Initial FIRM Date _____
   b. Current Effective FIRM : Flood Zone _____ Base Flood Elevation (BFE) _____
   c. New Preliminary DFIRM: Flood Zone _____ Base Flood Elevation (BFE) _____

Flood Insurance Table

8. Flood Insurance Comments

Preliminary Flood Insurance Rate Maps

9. Technical Comments with Supportive Data

Submit comments to your community. Your community will bundle all the comments received and forward them to the FEMA Region 10 Support Center.

- **Forms are available here at the open house**

Letters of Map Change (LOMC) (ways to appeal at any time)

- **Letter Of Map Amendment (LOMA) -** for property owners who believe a property was incorrectly included in a floodplain, primarily through showing that the lowest elevation of the structure is above the 1% flood elevation.
- **Letter of Map Revision (LOMR) –** for communities to submit better technical information to change a floodplain or to reflect physical changes made to the floodplain.

(LOMA) Hotline - 1-877-FEMA-MAP

Information Tables

Flood Insurance	Flood Study / Engineering	Property Identification & Digital Mapping
State Table	Community Tables	Floodplain Regulations

Property Identification and Digital Mapping Table

- Determining if one is in a Flood Zone
- If yes, what type of flood zone is one in (AE, A, AO, AH, V, VE, Shaded X, unshaded X)
- Ability to add layers to help better locate a property (orthophotos, parcel data)
- Print a map of your property and the flood zone
- Where one should go next for more information (Insurance, Floodplain Regulations)

Flood Insurance Table

- When is flood insurance required?
- What is the flood insurance rate structure for the zone one is in (AE, A, AO, AH, V, VE, Shaded X, unshaded X)?
- What are my best options to get the lowest rate?

Floodplain Regulations Table

- What are the building requirements/restrictions for the zone one is in (AE, A, AO, AH, V, VE, Shaded X, unshaded X)
- What are the building requirements/restrictions for a floodway?

Community Tables

- Community Floodplain Regulations
- Emergency Management Capabilities
- Locally Available Hazard Mitigation Plans

State Table

- State Flood Mapping Priorities
- Risk Reducing Strategies
- State Floodplain Regulations

Flood Study/Engineering Table

- How does one determine the 1% flood?
- What areas were updated?
- What information was used (topography, bathymetry, models, assumptions)?
- What is the process to appeal the information and/or provide better information?