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
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.
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.
National Flood Insurance Program Costs:

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

- 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

Reduce economic loss caused by flood events
Mandatory Purchase Requirement

• Two federal statutes mandate purchase of flood insurance
  – The Flood Disaster Protection Act of 1973
• 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

Reducing risk is like putting money in the bank!
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
• Redelineated Floodplains

  - Wasilla Lake (325.7 feet MSL)
  - Lucile Lake (314.4 feet MSL)
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

[Map of proposed area of acquisition with building footprints]

http://matsu.gina.alaska.edu/
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.
<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
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<tbody>
<tr>
<td>Detailed (Zone AE)</td>
<td>• Steady State HEC-RAS model</td>
</tr>
<tr>
<td></td>
<td>• Roughness is examined closely (calibrated to gages)</td>
</tr>
<tr>
<td></td>
<td>• Based on LiDAR Topography</td>
</tr>
<tr>
<td></td>
<td>• Channel cross sections surveyed</td>
</tr>
<tr>
<td></td>
<td>• Structures are surveyed</td>
</tr>
<tr>
<td></td>
<td>• Floodway Analysis</td>
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## Hydraulic Methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
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<tbody>
<tr>
<td>Approximate (Zone A)</td>
<td>• HEC-RAS model (simplified)</td>
</tr>
<tr>
<td></td>
<td>• Roughness is generalized</td>
</tr>
<tr>
<td></td>
<td>• Based on LiDAR Topography</td>
</tr>
<tr>
<td></td>
<td>• No survey</td>
</tr>
<tr>
<td></td>
<td>• Structures are not modeled</td>
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RiskMAP, the NFIP and Hazard Mitigation Planning

RiskMAP: Increasing Resilience Together

Goals:
- Deliver High-Quality Risk Data
  - Intuitive Flood Maps
  - Credible data: reliable, accurate, watershed-based
  - Illustrations of Flood Depths
  - Valuable Flood Risk Assessments

Increase Awareness of Flood Risk
- Tools to understand how flood risk has changed
- Continuous engagement with communities
- Enable communities to communicate flood risk to constituents

Promote Community Mitigation Actions
- Support that allows communities to identify and risks and promote:
  - Community resiliency
  - Sustainability
  - Reduced need for federal disaster assistance

Mitigation Planning
- Enhance delivery of Risk MAP Products
- Collaborate across all levels of government

Reduce Risk to Lives and Property
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

Risk Report
FEMA Region X – Matanuska-Susitna (Mat-Su) Borough, Alaska

Matanuska-Susitna Borough and the incorporated cities of Houston, Palmer, and Wasilla

Risk Database
DFIRM Database

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
• Submit to your community officials

• Community bundles all the comments and forwards them to FEMA Region 10 Service 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
- 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)
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?
| 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 Floodplain Regulations
Emergency Management Capabilities
Locally Available Hazard Mitigation Plans
• State Flood Mapping Priorities
• Risk Reducing Strategies
• State Floodplain Regulations
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<tr>
<th>Question</th>
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<tbody>
<tr>
<td>How does one determine the 1% flood?</td>
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<tr>
<td>What areas were updated?</td>
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<tr>
<td>What information was used (topography, bathymetry, models, assumptions)</td>
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<tr>
<td>What is the process to appeal the information and/or provide better information?</td>
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