

**FEMA Region X – Risk MAP Discovery Interview  
City and Borough of Sitka, AK**

June 5, 2013 11:00 AM Pacific Time

Attendees:

**City and Borough of Sitka**

Mim McConnell – Mayor of City/Borough

Stephen Weatherman – Municipal Engineer

William Stortz – Building Official, Fire Marshal, Floodplain Administrator

Marlene Campbell – Relations Director

Wayne Dye – O’Neil Engineering

**State of Alaska**

Sally Russell Cox – Alaska State Risk MAP Coordinator (meeting facilitator)

**FEMA Region X**

Kristen Meyers – FEMA - Mitigation Planner

Jen Monroe – FEMA - Risk Analyst

Ted Perkins – FEMA - Acting Risk Analysis Branch Chief, Regional Engineer

Karen Wood-McGuinness – FEMA

**STARR (FEMA Contractor)**

Joshua Crowley – STARR – RSC Lead (meeting host)

Emily Whitehead – STARR – Project Manager

Ms. Russell Cox provides a presentation introducing Risk MAP and the Discovery process. The presentation is attached to these minutes as Appendix A.

Ms. Meyers provided a demonstration of the Region X Pin Map web application. This web application is available for users to add location data (aka “pins”) to the Risk MAP Discovery datasets (such as Flood Hazard, Tsunami, Earthquake, and Wildfire). Information can be gathered through this site regarding critical facilities, specific hazard locations, important places, mitigation actions, high water marks, and other relevant data. The web application link is:

<http://maps.starr-team.com/Default.aspx?cn=Sitka-Coastal>

*The following information was collected during the Interview. Unless otherwise noted, all comments are from the City and Borough of Sitka representatives.*

- I. Local Contacts
  - a. The local contact spreadsheet was displayed on screen via the WebEx software, and asked if there were any updates needed:
    - i. William Stortz supplied the list of Contacts for the City and Borough of Sitka.
    - ii. Michael Harmon, Public Works Director was added to list of contacts.
    - iii. Stephen Weatherman is GIS point-of-contact (POC) for City/Borough
    - iv. Wells Williams, Planning Director, would be POC for property information
- II. Topographic Data
  - a. All existing topographic data is outdated and not very high resolution

- b. It is assumed that new LiDAR will be needed along coastline for the planned FEMA study. Scoping for this is currently underway.
  - c. FEMA will be discussing with City/Borough the potential for partnering to increase overall LiDAR footprint for areas outside of what is needed for the coastal study.
- III. Critical Facilities
- a. Critical facilities were discussed and located - no specific GIS data (layer) is available from the City/Borough regarding Critical Facilities
- IV. Mitigation Planning
- a. Discussion of the most highly valued aspects of Sitka:
    - i. Citizens and visitors value: All of the parks, recreation facilities, trails, schools, playgrounds, ball fields.
    - ii. Sitka has the largest small harbor system in the State
    - iii. City/Borough has two hospitals, a fire department, State and City buildings, wastewater treatment (sewer) plant, currently upgrading hydroelectric dam that provides the electricity, road system – a lot of important infrastructure can be found in the vicinity.
  - b. Current Hazard Mitigation Plan is effective through 4/20/2015.
    - i. Risk MAP process will help provide additional data for the next update to the Mitigation Plan
    - ii. Ms. McConnell and Ms. Campbell were involved in the process for creating and/or updating the Mitigation Plan
  - c. Assistance or support to implement or improve the existing plan?
    - i. Mr. Weatherman mentioned that the City/Borough would appreciate any assistance/support they can get as they move through the Risk MAP process
  - d. Top Hazard Mitigation Priorities
    - i. The City/Borough is currently upgrading the breakwater in the harbor.
  - e. Evacuation, response, or recovery plans adopted/in practice
    - i. An earthquake occurred not too long ago – evacuated and inspected buildings – continually upgraded
  - f. Emergency Management plan for resilience
    - i. No Emergency Management Office – First Responders manage the emergency plan that was created with the local emergency planning committee
    - ii. Fire and Police Departments deal with disaster planning as primary First Responders
    - iii. Fire and Police Chiefs would be more knowledgeable on the Mitigation Plan and Emergency Management Plan, but they were unavailable for the interview.
    - iv. Plan for cleanup is part of emergency management plan
    - v. The City/Borough will work in conjunction with US Coast Guard and other Emergency Responders
- V. Flood and Erosion Hazard
- a. Areas where Effective Flood Insurance Rate Map does not accurately reflect 1% Annual Chance Flood
    - i. It was felt that the entire effective coastal floodplain does not reflect what

happens on the ground during flood events and needs to be restudied.  
City/Borough feels only issue would be if someone built below the High Tide line.

- ii. City/Borough feels that there isn't significant coastal flooding as depicted on the Effective Maps.
- iii. Indian River is not an issue, very controlled floodplain
- b. No known past claims that are outside mapped SFHA
- c. No known Repetitive Loss properties
- d. Some infrastructure work in downtown Sitka
  - i. DOT – two (2) construction projects – **Location and dates for projects to be determined.**
  - ii. No known LOMC planned for DOT projects.
  - iii. Coastal library property did have LOMC – work/design continues.
- e. Rapid Growth/Development impacting run-off or areas near mapped floodplain
  - i. Hillside Development has caused some downstream issues – tied in with state highway infrastructure project – No LOMC associated with this project as it is not in an effective not in flood zone.
- f. Areas of Severe Run-up
  - i. A little water during big storms on highway near sandy beach – no housing development in this area.
  - ii. Airport runway gets debris deposited during high water events – acting as break water.
- g. Erosion
  - i. No severe erosion zones
  - ii. Erosion related to rainfall/runoff (in Hazard Mitigation Plan)
    - 1. Indian River – no significant issues, well contained and stable stream bed
    - 2. isolated coastal erosion, sand spit between rock outcrops
    - 3. flow coming off mountain as it flows through town, occasionally have a storm drain failure – ditch will erode out, not in SFHA – erosion around a bridge did expose a water line, not in SFHA
    - 4. surface run off does cause some road embankment erosion
- h. Break Water
  - i. Overtopped rarely during high water and very large storms – Sitka Channel break water designed to reduce wave action in the harbor – USACE doing modifications to break water
- i. No coastal roads impacted by tides or waves
- j. Flood Insurance Rate Map use that makes update necessary
  - i. Residential and Commercial development and construction – as old dwelling units removed new houses are being built and owners are surprised they are in a flood zone.
- k. Tools needed to meet needs
  - i. LiDAR would be beneficial to help with placing homes outside risk areas

- I. Existing Studies to provide data for Risk MAP
  - i. Tsunami Inundation Study – University of Alaska, Fairbanks, computer generated risk management study – to be completed soon.
- m. Local Funding available to make the Risk MAP study more robust
  - i. Sitka is not in a position to pay for additional data/services at this time
  - ii. Mr. Crowley mentioned possible need to increase footprint of LiDAR inland – would like to involve Sitka as much as possible during scoping to address needs
  - iii. Sitka would like to see FEMA’s footprint after it is ready to see if expansion is needed – **Limits will be discussed at Discovery Meeting.**
- n. Any additional information or areas of concern
  - i. Islands – would islands benefit from detailed analysis - run-up from SE is not a problem, run-up from SW is a bigger problem – the islands have high end housing development – Mr. Stortz asked to look into this offline. **Specific islands of concern will be discussed/identified at the Discovery Meeting.**
  - ii. Island shadowing causes differences in BFE.
  - iii. Wave run-up is not perceived to be an issue by the City/Borough.
  - iv. Swan Lake – controlled by culvert – Zone A – no BFE – problematic for home owners refinancing (LOMCs) – would benefit from LiDAR. This area needs new study or redelineation. **Field trip planned in conjunction with Discovery Meeting.**
  - v. Not concerned about the airport – no development pressure or concerns about hazard mapping.
  - vi. Baranof/Warm Springs – small community of vacation homes and a few permanent residents that doesn’t have much issue with flood hazards – no need identified for LiDAR or Flood Insurance Study
  - vii. Landslide at Redoubt Lake (SW of Sitka) took out Forest Service cabin
- VI. Earthquake
  - a. Most recent activity (January 2013) off of Queen Charlotte Fault – 120 miles SW of Sitka, off of Prince of Wales Island, 7.2 – 7.5 magnitude, Tsunami warning and full evacuation occurred – No infrastructure damage
  - b. Not as common as they are in other areas of Alaska, but not unprecedented and the slide slip faults release a lot of energy quickly.
- VII. Snow Avalanche
  - a. Not an issue in the coastal areas but more inland due to steeper topography
  - b. Periodic cut-off of Blue Lake Road to ice jam/damming.
  - c. STARR/FEMA interested in any maps or data that show areas at risk of any hazard (avalanche, mudslide, and wildfire) to include in the digital database to overlay multiple hazards – **City/Borough will plan to annotate maps to show areas of risks to critical infrastructure during Discovery Meeting.**
- VIII. Landslides/Ground Hazards
  - a. Significant landslides near Halibut Point Road, destroyed City Shop years ago

- b. Other slides have knocked homes off foundations
  - c. Definition of slides – trees and muck on a hillside that slip and drop down
  - d. No restricted development in slide areas.
- IX. Tsunami
- a. University of Alaska, Fairbanks did a recent Tsunami Study that showed limited run-up. Data will be acquired when available.
  - b. No run-up from Japan earthquake Tsunami in 2012 but significant circulation of current in channel and harbors for hours – major amount of water moving around.
  - c. 1964 earthquake may have caused Tsunami damage but now certain, possibly more of a surge not run-up from Tsunami – buildings at that time were built on pilings over the water
- X. Severe Storms
- a. Wind storms, massive low pressure systems, have generated enough wave action to throw rocks across runway at the airport. Generally in November and coincide with extreme high tide or typhoon remnants from Asia. Small amounts of water has been reported in front of visitors center in Totem Park and overtopping Halibut Point Road near Sandy Beach at its lowest elevation
  - b. Sever Winter Storms occur every year:
    - i. Tree blow downs
    - ii. Power line taken out by downed trees
    - iii. Home damage
    - iv. Long period swells after large storms in the Gulf have caused 30+ foot waves in the harbors – rare but has happened in the last couple years – usually coincide with extreme high tide or large storms in Gulf.
- XI. Communication of Severe Weather or other risks
- a. National Weather Service
  - b. Internet
  - c. Harbor Master issues warnings to boat owners
- XII. Other Hazards
- a. Drought
    - i. Hydroelectric power generation issues
    - ii. Drinking water issues
    - iii. Increased Fire risk
  - b. Catastrophic Dam Failure
- XIII. Levees/Flood Control Structures
- a. No Levees or Flood Control Structures in City/Borough
  - b. No certified coastal levees/seawalls
  - c. All breakwaters and armoring done with very large rubble rock
- XIV. Environmentally Sensitive Areas
- a. Many wetlands identified in numerous reports – **City/Borough will make reports available.**
  - b. Inter-Tidal area set aside for mitigation
- XV. Presidential Declared Disasters

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- a. None in recent memory
  - b. 1964 earthquake may have been a declared disaster.
- XVI. Communications and Outreach
- a. Tsunami Awareness Outreach
  - b. Residents would welcome new flood study
  - c. More details that came along with any new study would be helpful
    - i. People are worried about financing or refinancing homes
    - ii. New study could help clarify a lot of concerns
  - d. Types of Communication
    - i. Newspaper
    - ii. Official notices on back of utility billings
    - iii. Public Radio Station
    - iv. Public Service Announcements
    - v. Assembly Meetings
    - vi. Planning Commission meetings
  - e. Outreach Templates
    - i. Interested in STARR/FEMA outreach templates. **Details to be discussed at Discovery Meeting.**
- XVII. Compliance and Training
- a. Floodplain Management Program training benefit
    - i. New maps will be most beneficial
  - b. STARR/RSC Newsletter
    - i. Lists available training schedule.
    - ii. William Stortz is subscribed to the newsletter
- XVIII. Close
- a. No other information identified that would be helpful before or at the Discovery Meeting.
  - b. Mr. Stortz requested a copy of the presentation – Sally emailed out to the distribution list following the meeting.

# Appendix A - Discovery Information Exchange Presentation



FEMA

# Risk MAP Discovery

City and Borough of Sitka

Information Exchange Session  
June 2013

**RiskMAP**

Increasing Resilience Together





# Information Exchange Agenda

- **Overview of Risk MAP and Discovery**
- **Introduction to Enhanced Risk MAP Products**
- **Interactive Questionnaire**
- **Close**

# Overview: Risk MAP



- Five year effort to modernize maps
- Result: digital flood data and digital maps for 92% of population
- Improved flood data quality
- Limited to flood hazards
- Limited up-front coordination
- Scoping not mandatory

## RiskMAP

Increasing Resilience Together

- Collaborative approach
- Goals: quality data, public awareness, action that reduces risk
- Watershed-oriented
- Multi-Hazard
- Focus on up-front coordination
- Discovery is mandatory

# The Vision for Risk MAP

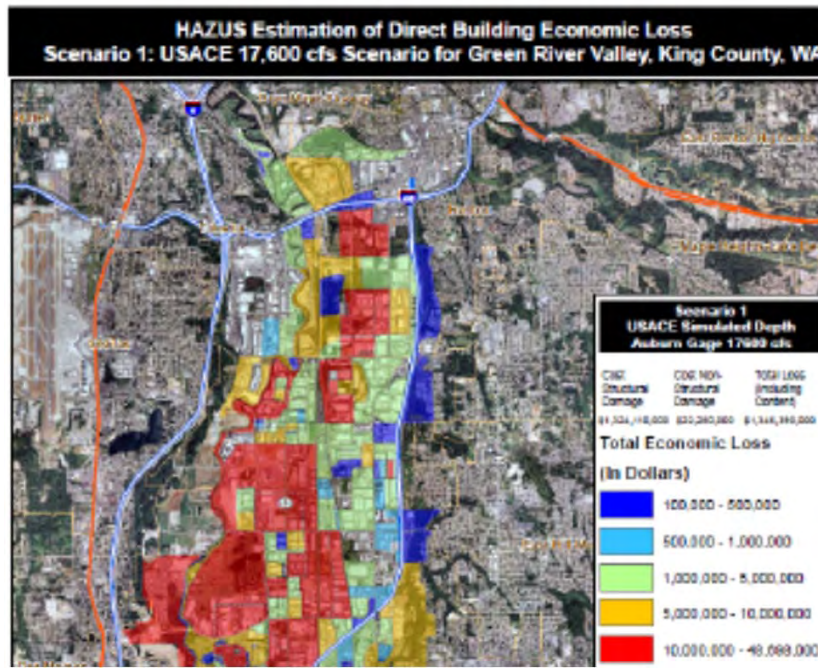
Through collaboration with State, Local, and Tribal entities, Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property



# Risk MAP Products

## Multi-Frequency Depth & Water-Surface Elevation (WSE) Grids

10%, 2%, 1%, 0.5%, 0.2% annual chance profiles



### Inundation

- 3 feet or less
- 3 to 6 feet
- 6 feet +

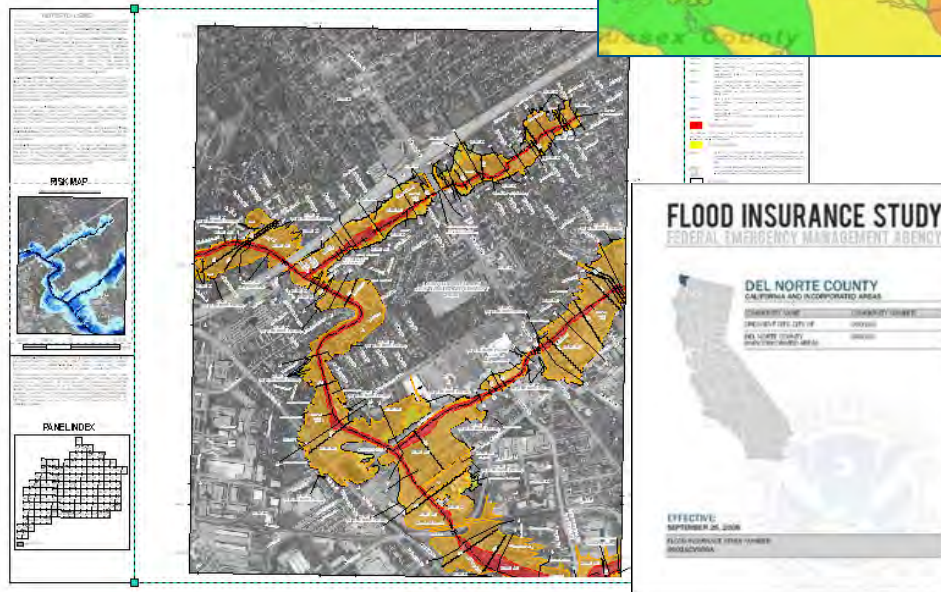
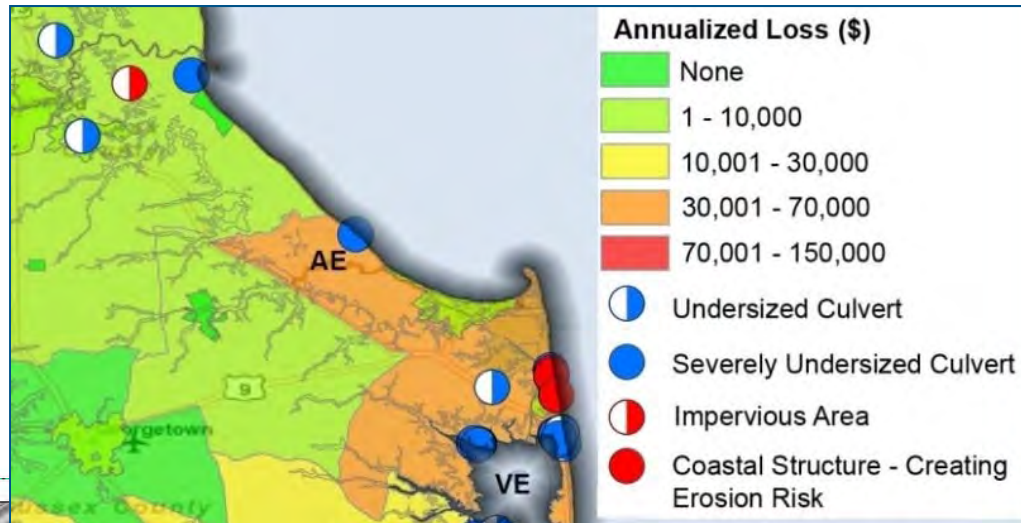
## HAZUS Risk Assessment & National Flood Risk Layer

Enables communities to understand risk by reference to existing structure loss

# Risk MAP Products

## Contributing Hazard Factors

Highlights areas of concern identified throughout project

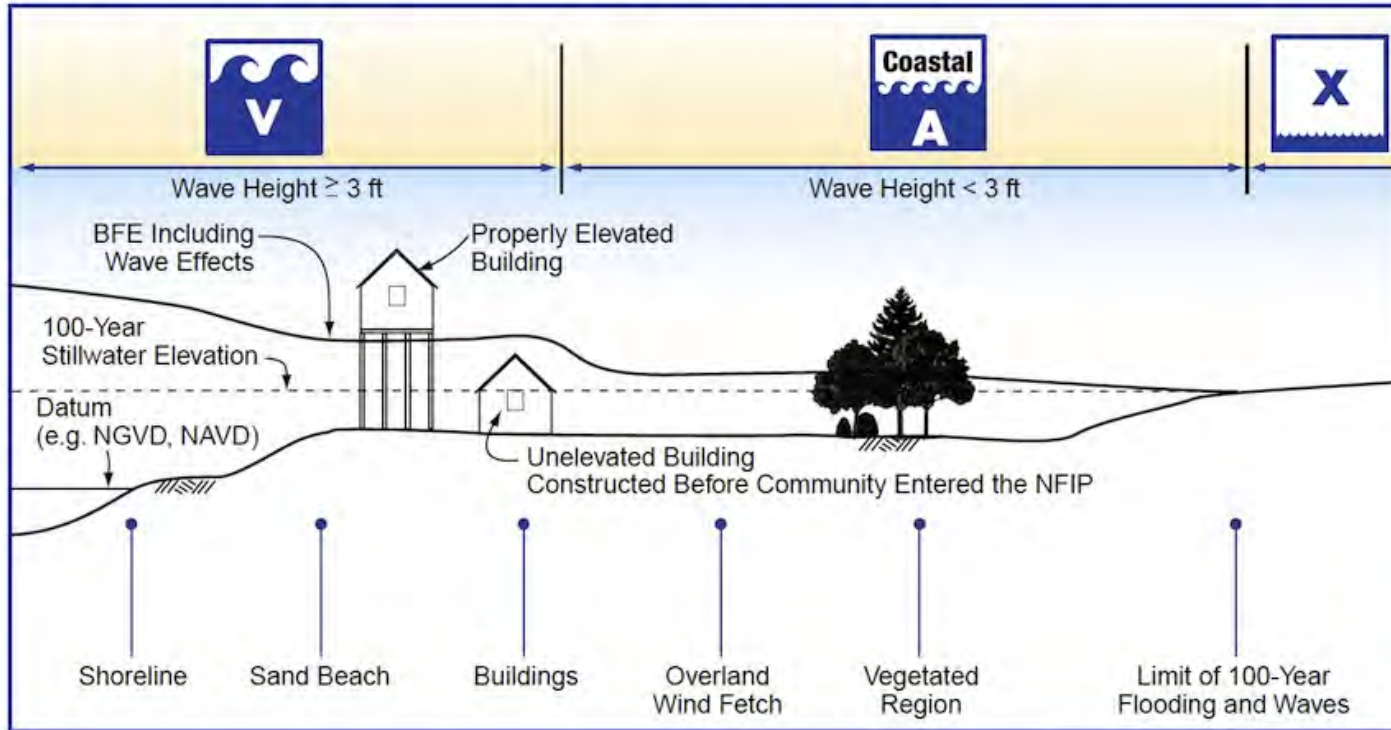


## FIS Reports and DFIRM Maps

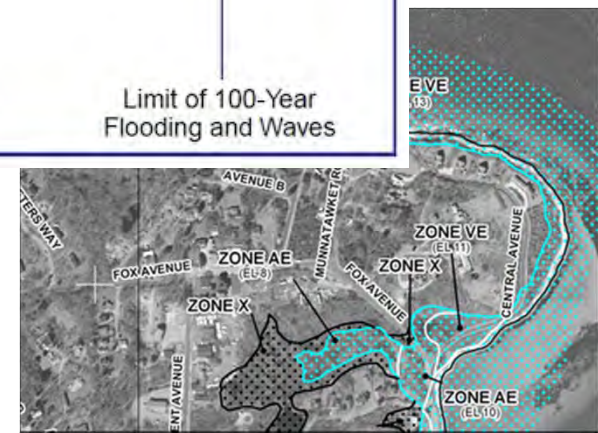
DFIRM and FIS will continue to fulfill regulatory requirements and support the NFIP

# Coastal Mapping

Typical shoreline-perpendicular transect used in the analysis of stillwater and wave crest elevations.



1% Annual Chance Storm (100-Year)  
 Stillwater elevation (tide plus surge)  
 Plus Wave Elevation  
 Plus Wave Run-Up



# Discovery

***Discovery is the process of data collection and analysis with the goal of initiating a hazard risk or mitigation project and risk discussions within the watershed***

## **When:**

- After an area/watershed has been prioritized
- Before a Risk MAP project is scoped or funded

## **Required for new and updated...**

- Flood studies
- Flood risk assessments
- Mitigation planning technical assistance projects

## **Why:**

- Increases visibility of flood risk information, education, involvement
- Helps inform whether a Risk MAP project will occur in the watershed



# City and Borough of Sitka Discovery

- **Federal and State Data Collection**
- **Local Issues: Identify Risk MAP Needs**
  - Need support with mitigation planning?
  - Need mitigation projects?
  - Need new flood study data?
  - Need training on floodplain management?
  - Need support developing a hazard risk outreach program?
  - What else can FEMA do to help your community become resilient?
- **Discovery Meetings: July 2013**
- **Risk MAP Project(s) Identified**
- **Possible FEMA Funding Allocated for Risk MAP Project**



# Discovery Questionnaire Overview

- **Local Contacts**
- **Data**
  - LiDAR
  - Local or Regional GIS Data
- **Mitigation Planning**
  - Desired Mitigation Projects
- **Local Hazards**
  - Earthquakes
  - Wildfires
  - Landslides
  - Severe Storms
  - Flooding
- **Levees**
- **Environmentally Sensitive Areas**
- **Communications and Outreach**
- **Compliance and Training**

Mitigation Planning		
How would you describe your level of involvement with the development of the mitigation plan? (Considerable, Moderate, Minimal)	Do you need assistance with mitigation planning in your community? (Yes, No, Possibly)	Mitigation Planning Comments, Explanations, Questions

# Contact Information

	A	B	C	D	E	F	G
2	Community Contact Information						
3	Community	County (if Different)	State	Information Exchange Call Date (mm/dd/yy)	Name and Title	Name and Title 2	Name and Title 3

- Is our contact information complete and accurate?
- Are there others we should contact before the Discovery meeting?

# Topographic Data - LiDAR

	AL	AM	
s	Data - LiDAR		
nts, ns, cluding eral SAs)	Are you aware of existing or planned additional topographic data? (Yes, No, Possibly)	LiDAR Comments, Explanations, Questions (Including general coverage area, date, and accuracy of additional data collection)	Trans L

- Assumed that new LiDAR needed.
- Any additional data?

# Local and Regional GIS Data

	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX
	Local or Regional GIS Data										
ons e,	Transportation Layers	Political Boundaries	Land Use Data	Parcel Data	Building Footprints	Inundation Areas from Historic Flooding	Essential Facility Data	Wetlands or Environmentally Sensitive Data	Ortho-photography	Other	GIS Contact Information or GIS Data Comments, Explanations, Questions

- Local and regional data can be used in regulatory or non-regulatory products
- Helpful in identifying levels of risk within community for educational purposes

# Mitigation Planning

- **What do you value in your community?**
- **How much were you involved with developing your current plan?**
- **Do you desire support with planning in the future?**
- **What kind of technical assistance or support would you benefit from?**

# Desired Mitigation Projects

- **Does your current plan include all desired mitigation projects?**
- **Repetitive loss structures in your community?**
- **Do you have evacuation, response, or recovery plans adopted and in practice?**
- **Does your emergency management office have a plan for resilience?**
- **Are there other flood-related mitigation projects that you will be adding to your next mitigation plan update? Where? Why?**
- **Past grant projects? Successes?**

# Local Hazards

- Earthquakes
- Wildfires
- Landslides
- Severe Storms
- Flooding

## Things to consider

- Hazard areas mapped?
- Response plans in place?
- Is mitigation possible?
- Are your citizens aware of the hazard?
- How to communicate hazards and motivate risk reduction



# Levees

	Y	Z	AA	AB	AC	
	Levees					
Age, Location, etc.	Are there levees in your community that provide protection from the base (100-year) flood? (Yes, No, Possibly)	Flooding source and general location of levee?	Do you know if these levees meet FEMA 65.10 requirements? (Yes, No, Possibly)	If yes, do you have the documentation to support recertification? (Yes, No, Possibly)	Levee Comments, Explanations, or Questions (including levee owner or POC for certification docs)	How your community is doing with the levees (Comments)

- Know of any in your community? Where?
- Provide base (100-yr) flood protection
- Certification of compliance with 65.10



# Environmentally Sensitive Areas

	AJ	AK	
	Environmentally Sensitive Areas		
ing ing ion and n)	Are there ESAs in your community that should be considered in flood-related projects? (Yes, No, Possibly)	ESA Comments, Explanations, Questions (including type and general location of ESAs)	Are y e a topog ( P

- Any ESAs in your community?
- Locations and details welcome

# Communications and Outreach

	AY	AZ	BA	BB	BC	BD	BE	BF	
	Communications and Outreach								
	In general, what is the current awareness level about flood risk among your citizens? (High, Low, Mixed)	If levees present, what is the current awareness level of flood risk among residents living behind levees? (High, Low, Mixed)	Thoughts on anticipated residents' reactions to updated flood study results? (Positive, Negative, Indifferent, Mixed)	Special flood-related outreach programs, such as in response to federally-declared disasters? (Yes, No)	Has the community found any particular type of outreach that works better to communicate risk to the different demographic groups? (Yes, No, Not Needed)	Regarding notification regarding future projects, are there regular meetings that officials hold where project status might be appropriate for the agenda? (Yes, No, Possibly)	With supporting templates and information, would your community be willing to take a proactive approach in educating citizens about their risk and steps they can take to protect themselves? (Yes, No, Possibly)	Communication and Outreach Comments, Explanations, Questions	

- Residents look to local officials for flood risk information
- Risk MAP to provide tools, templates, resources to support local officials in communication
- Goal to increase local knowledge of flood risk (not just insurance requirement)

# Compliance and Training

	BG	BH	BI	BJ	
	Compliance and Training				A
and ents,	Does your community have a identified Floodplain Administrator? (Yes, No, Unsure, Floodplains Managed by Other Entity)	Do you have a floodplain permitting process? (Yes, No, Unsure)	Is training or other support in floodplain management needed? (Yes, No, Possibly)	Compliance Comments, Explanations, Questions	Risk M

- Need support with your floodplain management program?
- Could use a little training?

# Questions?

## FEMA

- Jennifer Monroe, Risk Analyst, [jennifer.monroe@fema.dhs.gov](mailto:jennifer.monroe@fema.dhs.gov)
- Kristen Meyers, Mitigation Planner, [kristen.meyers@fema.dhs.gov](mailto:kristen.meyers@fema.dhs.gov)
- Dwight (Ted) Perkins, Regional Engineer, [dwight.perkins@fema.dhs.gov](mailto:dwight.perkins@fema.dhs.gov)

## Alaska

- Sally Russell Cox , State Risk MAP Coordinator, [sally.cox@alaska.gov](mailto:sally.cox@alaska.gov)

## STARR

- Josha Crowley, [josha.crowley@starr-team.com](mailto:josha.crowley@starr-team.com)
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- Becca Croft, [becca.croft@starr-team.com](mailto:becca.croft@starr-team.com)