2015 Municipality of Anchorage Risk MAP Partnership Agreement

This Risk MAP Partnership Agreement is used to document the non-regulatory tools that communities involved in a Risk MAP Project will receive, specify mitigation technical assistance to be provided, identify roles and responsibilities for all parties involved, list the data to be provided with associated deadlines, define expectations of the study results, and provide a projected timeline and an explanation of what is expected from project partners at each major milestone.

The Agreement provides documentation of FEMA's commitment to the Municipality of Anchorage (MoA) and the commitments of MoA to the Risk MAP Project. By signing the Agreement, the stakeholders and project partners acknowledge that they understand and commit to the project scope.

Working together on a Risk Mapping, Assessment, and Planning (Risk MAP) project, FEMA Region X, the Municipality of Anchorage, the State of Alaska including the Division of Community and Regional Affairs (DCRA), the Department of Homeland Security and Emergency Management (DHS&EM), the Alaska Department of Natural Resources, Division of Geological & Geophysical Surveys (DGGS), the Alaska Department of Natural Resources Office of Dam Safety (DNR), the Alaska Earthquake Center (AEC), the Strategic Alliance for Risk Reduction (STARR) will identify, assess, communicate, plan for, and mitigate risk.

The information provided by this project can be used by these communities to enhance their hazard mitigation plans, make informed decisions to improve resilience to natural hazards, and raise awareness about local risks to hazards so that they are better informed and prepared to take actions to reduce their risk.

Roles and Responsibilities

FEMA, STARR, and the State will provide MoA with regular project status updates on the projects described below and provide assistance with outreach to increase local awareness of multi-hazard risk. These efforts will better enable MoA to take action to reduce risk through better understanding of hazards, development or enhancement of mitigation plans, and increased communication with citizens concerning their natural hazard risk and the steps they can take to mitigate that risk. The State will provide continuity, coordination, and support throughout the Risk MAP project. MoA will provide input and updates throughout the project to ensure that the projects are meeting their needs and the goals of this Agreement.

Communication and Coordination

Achieving Risk MAP's goal of reducing the Nation's vulnerability to risk requires clear, consistent, and candid communications. These communications need to reach local officials in communities where individual constituents need information to take steps to protect themselves from hazards. To accomplish this, the project partners will maintain open lines of communication and establish a consistent flow of information.

FEMA, STARR, and the State will:

- Provide quarterly reports outlining the current project status, key accomplishments to date, and next steps via e-mail to MoA.
- Coordinate with appropriate MoA staff members on the projects listed below.

The Municipality of Anchorage is strongly encouraged to:

- Provide available data and resources (reports, points of contact, etc.) to FEMA for use in the risk assessment process.
- Communicate desired timing and schedule for receiving ongoing project updates.
- Integrate the Risk MAP project meetings and products into existing planning processes.
- Be responsible for planning, supporting facilitation, and scheduling any future meetings.
- Share any concerns and recommendations regarding the project.

Risk Mapping, Assessment, and Planning (Risk MAP) Activities

The Risk MAP Project will consist of the following:

- Avalanche vulnerability assessment and implementation examples
- Seismic Hazus analysis
- Dam failure vulnerability assessment
- Landslide vulnerability assessment
- Wildfire vulnerability assessment
- Wind vulnerability assessment

Seismic Hazus Run and Analysis

As a part of preparation for the Alaska Shield Exercise in 2014, FEMA Region X collected building stock and infrastructure data from MoA which has been formatted for use in Hazus (UDF database). FEMA will work with MoA to develop the Hazus UDF database with any available updated local information and will update the Advanced Engineering Building Module (AEBM) specific to the MoA. MoA will also provide FEMA the T-154 assessment where bridges of concern were identified. Additionally, DHS&EM will provide updated fire station and school retrofit data for the MoA.

FEMA, MoA, DGGS, AEC, and STARR will work together to develop a risk assessment for the below three earthquake scenarios (ShakeMaps will be updated by AEC and posted to the Alaska archive of scenario ShakeMaps):

1. M7.5 Castle Mountain Scenario
2. M7.2 Intraplate Scenario
3. M7.1 Border Ranges Fault

Vulnerable infrastructure and essential facilities will be identified based on results from the above Hazus modeling. Areas of Mitigation Interest (AOMI) will be developed in coordination with MoA.

Avalanche Vulnerability Assessment and Implementation Examples

MoA has an existing analysis of avalanche risk (Arthur Mears Report, and Mass Wasting Geotechnical Report); however a more detailed analysis is desired using updated topographic, infrastructure and essential facility information. MoA will provide FEMA existing reports and available GIS data. DGGS may be able to provide additional information and analysis. Collected data will be used to conduct a vulnerability assessment for avalanche hazards using the UDF building and facility information developed during the Hazus earthquake process. FEMA will complete a vulnerability assessment using MoA provided data and recommend mitigation strategies based on results. Vulnerable infrastructure and essential facilities will be identified based on results from the GIS-based assessment. Areas of Mitigation Interest (AOMI) will be developed in coordination with MoA.

Additionally, FEMA will provide information about assessments and methodologies used by other communities.

Dam Failure Vulnerability Assessment

FEMA, MoA, and the State will coordinate with the AK State Dam Safety Office (DNR) to obtain available inundation information for the ten dams impacting the Anchorage Area (Eklutna, Lake o' the Hills Dam, Lower Fire Lake, Campbell Lake, Westchester Lagoon, Lower Eklutna, Ship Creek, Gregory Lake, Otter Lake, Explorer Glacier Pond). MoA and the State will provide FEMA available inundation information and GIS data. Collected data will be used to conduct a vulnerability assessment for dam failures using the UDF building and facility information developed during the Hazus earthquake process. FEMA will complete a vulnerability assessment using MoA provided data and recommend mitigation strategies based on results. Vulnerable infrastructure and essential facilities will be identified based on results from the GIS-based assessment. Areas of Mitigation Interest (AOMI) will be developed in coordination with MoA.

Landslide Vulnerability Assessment

MoA has an existing analysis of landslide risk (Mass Wasting Geotechnical Report and 1979 Harding Report); however a more detailed analysis is desired. MoA will provide FEMA existing reports and GIS data. DGGS may be able to provide additional information and analysis. Collected data will be used to conduct a vulnerability assessment for landslide hazards using the UDF building and facility information developed during the Hazus earthquake process. FEMA will complete a vulnerability assessment using MoA provided data and recommend mitigation strategies based on results. Vulnerable infrastructure and essential facilities will be identified based on results from the GIS-based assessment. Areas of Mitigation Interest (AOMI) will be developed in coordination with MoA.

Wildfire Vulnerability Assessment

MoA has an existing analysis of wildfire risk (Wildland Urban Interface Areas (WUI) and the Community Wildfire Protection Plan (CWPP)); however a more detailed analysis is desired using updated infrastructure and essential facility information. MoA will provide FEMA existing reports and available GIS data. Collected data will be used to conduct a vulnerability assessment for wildfire hazards using the UDF building and facility information developed during the Hazus earthquake process. FEMA will complete a vulnerability assessment using MoA provided data and recommend mitigation strategies based on results. Vulnerable infrastructure and essential facilities will be identified based on results from the GIS-based assessment. Areas of Mitigation Interest (AOMI) will be developed in coordination with MoA.

Wind Vulnerability Assessment

MoA has a report on wind hazards in the Anchorage area. MoA will provide this report and any available GIS data to FEMA. DGGS may be able to provide additional information and analysis. FEMA will contact the National Weather Service to obtain updated information if available. Collected data will be used to conduct a vulnerability assessment for wind hazards using "Three Second Gusts" (not miles per hour) and the UDF building and facility information developed during the Hazus earthquake process. FEMA will complete a vulnerability assessment using collected data and will recommend mitigation strategies based on results. Vulnerable infrastructure and essential facilities will be identified based on results from the GIS-based assessment. Areas of Mitigation Interest (AOMI) will be developed in coordination with MoA.

Risk Report

FEMA, in coordination with MoA, will provide a non-regulatory **Risk Report** which will include narratives on the above hazards and risk exposure, and will explain the risk assessment methodology and results for MoA. The Risk Report will provide loss estimations using Hazus for earthquake hazards. Avalanche, dam failure, landslide, wildfire, and wind will include a summary and vulnerability analysis. Areas of Mitigation Interest (AOMI) will be identified for each hazard described above. Results and AOMI will be presented to MoA at an in-person **Resilience Workshop**, expected to be held the summer of 2016. During the Resilience Workshop, FEMA, the State, and Subject Matter Experts will work with MoA to identify actionable mitigation strategies for the top priority AOMI. MoA is encouraged to link the Resilience Workshop and completed risk assessment products into its ongoing Hazard Mitigation Plan update process.

In addition to the Risk Report, all supporting GIS data will be combined into a risk database. FEMA will provide technical assistance throughout the project and upon delivery of the final database.

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This Partnership Agreement is not a legally binding document. It represents a good-faith effort by all parties to share data, communicate findings, and plan mitigation activities to reduce the exposure of the residents within the municipality of Anchorage to hazard risk. The parties listed in the signature block below will collaborate on hazard identification activities and risk analysis products, and will consult each other to integrate contributions into hazard identification efforts. It is intended to provide a common strategy to address hazards and increase resilience within communities.

FEMA Region X Risk Analysis Branch Chief
Tamra Biasco
Date: 12/14/15

FEMA Region X FM&I Branch Chief
John Graves
Date:

FEMA Region X Alaska Area Office- Manager
Robert Forgit
Date:

FEMA Region X Alaska Area Office
Thomas Wilder
Date:

FEMA Region X Alaska Area Office
Ramona VanCleve
Date:

FEMA Region X Engineer
Ted Perkins
Date: 12/14/15

Regional Support Center Lead
Josha Crowley
Date: 12/14/2015

FEMA Region X Risk Analyst
Amanda Siok
Date: 12/14/2015

FEMA Region X Mitigation Planner
Kristen Meyers
Date:

FEMA Region X NFIP Specialist
Karen Wood-McGuiness
Date:

FEMA Region X CERC Mitigation Champion
Jamie Mooney
Date:

Alaska Division of Community and Regional Affairs Director
~~Scott Ruby~~ for: Katherine Eldemar
Alaska State Risk MAP Coordinator, Sally Cox
Alaska State NFIP Coordinator, Taunnie Boothby
Date:

Alaska Division of Homeland Security and Emergency Management Director Michael F. O'Hare for:
Alaska State Hazard Mitigation Officer, Ann Gravier
Alaska State Hazard Mitigation Planner, Scott Nelsen
Date:

State Seismologist, University of Alaska Fairbanks
Michael West
Date:

Alaska DNR- Division of Geological & Geophysical Surveys
Director and State Geologist Steven Masterman for:
Engineering Geology Section Chief De Anne Stevens
Date:

Alaska DNR- Office of Dam Safety- State Dam Safety Officer
Charlie Cobb
Date:

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Municipality of Anchorage:

Municipality of Anchorage- Planning Department, Director
Hal Hart
Date: 1/14/16

Municipality of Anchorage- Planning Department, Long Range Planning, Senior Planner
Jon Cecil
Date: 1/14/16

Municipality of Anchorage- Development Services, Plan Review Engineer
Ron Wilde
Date: 1.15.2016

Municipality of Anchorage-Planning Department- Long Range Planning, Manager
Carol Wong
Date: 1/14/2016

Municipality of Anchorage- Watershed Manager
Kristi Bischofberger
Date: 1/15/16

Municipality of Anchorage- Emergency Management, Director
Kevin Spillers
Date:

Municipality of Anchorage- Fire Chief
Denis LeBlanc
Date: 1/19/16

Municipality of Anchorage- GIS Specialist
Terry Lamberson
Date:

Municipality of Anchorage- Director- Office of Economic and Community Development
Chris Schutte
Date: 01-19-2016

Municipality of Anchorage- Municipal Manager
Michael Abbott
Date: