

13. Appendices

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**APPENDIX 13.1 FEMA STATE HAZARD MITIGATION PLAN (SHMP)
APPROVAL LETTER AND REVIEW TOOL**

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FEMA

OCT 19 2018

Michael J. Sutton, Director
Department of Military and Veterans Affairs
Division of Homeland Security and Emergency Management
P. O. Box 5750
Fort Richardson, Alaska 99505-5750

Dear Mr. Sutton:

The U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA) Region X Mitigation Division, Risk Analysis Branch has approved the updated Alaska State Standard Mitigation Plan effective October 26, 2018, through October 25, 2023, in accordance with the planning requirements of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended, the National Flood Insurance Act of 1968, as amended, and Title 44 Code of Federal Regulations (CFR) Part 201.

A FEMA-approved state mitigation plan is a condition of receiving certain non-emergency Stafford Act assistance and FEMA mitigation grants from the following programs:

- Public Assistance Categories C-G (PA C-G),
- Fire Management Assistance Grants (FMAG),
- Hazard Mitigation Grant Program (HMGP),
- Pre-Disaster Mitigation (PDM),
- Flood Mitigation Assistance (FMA).

State mitigation plans must be updated and resubmitted to FEMA Region X, Mitigation Division, Risk Analysis Branch for approval. If the plan is not updated by the date indicated on this FEMA approval letter, the plan is considered lapsed and FEMA will not obligate funds until the mitigation plan is approved by FEMA.

If at any time over the plan approval period, FEMA determines that the state is not complying with all applicable federal statutes and regulations in effect with respect to the periods for which it receives funding or is unable to fulfill mitigation commitments, FEMA may take action to correct the noncompliance (44 CFR §§201.3(b)(5) and 201.4(c)(7)).

FEMA determined the state mitigation plan includes a Repetitive Loss Strategy that meets the requirements set forth in 44 CFR §201.4(c)(3)(v) and qualifies the state to request an increased federal share for repetitive loss properties under the FMA program.

The State is responsible for communicating with local and tribal officials, as applicable, interested in applying through the State for FEMA assistance. FEMA encourages states to communicate with the appropriate officials regarding mitigation plan status and eligibility requirements.

In addition, FEMA will provide a reminder to the State, at a minimum, 12 months prior to the plan expiration date of the consequences of not having a FEMA-approved mitigation plan with respect to eligibility for the FEMA assistance programs that require a FEMA-approved mitigation plan as a condition of eligibility. To maintain eligibility for PA C-G, FMAG, HMGP, PDM and FMA, the State must submit a draft of the next plan update prior to the end of the approval period and allow sufficient time for the review and approval process including any revisions, if needed, and for formal adoption by the State following determination by FEMA that the plan has achieved a status of "Approvable Pending Adoption."

We look forward to continuing a productive relationship between FEMA, Region X, and the State of Alaska. Please contact our Risk Analysis Branch Chief, Tamra Biasco, at 425-487-4645, or our Mitigation Division Director, Mark Carey, at 425-487-4687 with any questions or for further assistance.

Sincerely,



Sharon Loper
Deputy Regional Administrator

Enclosure

TB:rg

STATE MITIGATION PLAN REVIEW TOOL

This section is organized as follows:

1. Plan Review Tool Summary
2. Standard State Mitigation Plan Regulation Checklist
3. Enhanced State Mitigation Plan Regulation Checklist
4. Strengths and Opportunities for Improvement

FEMA uses the State Mitigation Plan Review Tool (“**Plan Review Tool**”) to document how the state mitigation plan meets the regulation. If plan requirements are not met, FEMA informs the state of the changes it needs to make in each of the Required Revisions sections.

The “**Strengths and Opportunities for Improvement**” summary offers FEMA an opportunity to provide more comprehensive feedback to the state.

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The FEMA Plan Approver must reference the *State Mitigation Plan Review Guide* when completing the *Plan Review Tool*. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been ‘Met’ or ‘Not Met.’

The “**Required Revisions**” summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is ‘Not Met.’ Sub-elements should be referenced in each summary by using the appropriate number, where applicable. Requirements for each Element and sub-element are described in detail in the *State Mitigation Plan Review Guide*.

FEMA will provide a narrative summary of the review findings that includes a discussion of “**Strengths and Opportunities for Improvement**” as a means to offer more comprehensive feedback to the state to acknowledge where the plan exceeds minimum requirements as well as provide suggestions for improvements. FEMA will describe the strengths that are demonstrated and highlight examples of best practices.

FEMA may provide suggestions for improvement as part of the *Plan Review Tool* or in a separate document. FEMA’s suggestions for improvement are not required to be made for plan approval.

Required revisions from the Regulation Checklist are not documented in the “**Strengths and Opportunities for Improvement**” section.

State Mitigation Plan Review Tool 2015

1. Plan Review Tool Summary

State: Alaska	Title and Date of Plan: October 2018	Date of Submission: September 14, 2018 October 15, 2018
State Point of Contact (Name / Title): Mike Johnson	Address: DHS&EM Mitigation Section P.O. Box 5750 JBER, Alaska 99505	
Agency: Division of Homeland Security & Emergency Management (DHS&EM)		
Phone Number: 907.428.7055 or 907.428.07000	E-Mail: Mike.johnson@alaska.gov	

Date Received in FEMA Region: September 12, 2018	
FEMA Reviewer (Planning – Name / Title): Brett Holt, Stakeholder Relations	Date: 9/13/18; 10/15/18
FEMA Reviewer (HMA – Name / Title):	Date:
FEMA Reviewer (Name / Title):	Date:
FEMA Reviewer (Name / Title):	Date:
FEMA Approver (Name / Title):	Date:
Plan Status (Not Approved, Approvable Pending Adoption, Approved): Approved	Date: October 26, 2018

SUMMARY	YES	NO
STANDARD STATE MITIGATION PLAN		
Does the plan meet the standard state mitigation plan requirements?	X	
REPETITIVE LOSS STRATEGY		
Does the plan include a Repetitive Loss Strategy? [see S6 / RL1; S8 / RL2; S9 / RL3; S10 / RL4; S13 / RL5; and S15 / RL6]	X	
ENHANCED STATE MITIGATION PLAN		
Does the plan meet the enhanced state mitigation plan requirements?	N/A	

State Mitigation Plan Review Tool 2015

2. Standard State Mitigation Plan Regulation Checklist

REGULATION CHECKLIST – STANDARD PLAN		Location in Plan	M / NM*
*M=Met; NM=Not Met			
STANDARD (S) STATE MITIGATION PLAN			
Planning Process			
S1. Does the plan describe the planning process used to develop the plan? [44 CFR §§201.4(b) and (c)(1)]	Section 3.1, Page 3-1 to 3-21	M	
S2. Does the plan describe how the state coordinated with other agencies and stakeholders? [44 CFR §§201.4(b) and (c)(1)]	Section 3.2, Page 3-2 to 3-3 Section 3.4, Page 3-6 to 3-7, Table 3-2 Section 3.5, Page 3-8 to 3-12, Table 3-3 Appendix 13.7 and 13.8	M	
Required Revisions:			
Hazard Identification and Risk Assessment			
S3. Does the risk assessment include an overview of the type and location of all natural hazards that can affect the state? [44 CFR §201.4(c)(2)(i)]	Section 5, Page 5-1 to 5-5, Tables 5-1 and 5-2 Cryosphere Nature (Type): Section 6.1, Page 6-1 to 6-23 Location: Figure (Fig) 6-10, 6-11, 6-15, 6-16, 6-19, EQ: Type: Section 6.2, Page 6-25 to 6-41; Location: Pages Page 6-26 - Map 6-21, Page 6-27- Fig 6-23, Page 6-32 & 33-Fig 6-26 & 6-27; Page 6-40-Fig 6-35 Section 6.2.3 Page 6-35 to 6-37 Flood: Type: Section 6.3, Page 6-42 to 6-63; Location: (includes History) Page 6-50-Fig 6-44, Page 6-52-Fig 6-46, Page 6-55 Fig 6-49, Page 6-61-Fig 6-57, Ground Failure: Type: Section 6.4 Page 6-65 to 6-77; Location: Page 6-75 to 6-76, Fig 6-66, 6-67 Tsunami : Type: Section 6.5, Page 6-79 to 6-94; Location: 6-89 to 6-91, Fig 6-75 Volcanic Ash: Type: Section 6..6, Page 6-93 to 6-110; Location: Page 6-93 -Fig 6-77, Page 6-103-Fig 6-86, Page 6-106-Fig 6-89, Page 6-107-Fig 6-90	M	

State Mitigation Plan Review Tool 2015

	Weather: Type: Section 6.7, Page 6-111 to 138; Figure 6-93 Location: Section 6.7.2 History provides location data Page 6-118 to 6-136, 6-137 Wildland Fire Section 6.8 Page 6-139 to 6-159 Type: Section 6.8.2, 6-144 to 6-145; Location: Page 6-149 to 6-150-Fig 6-106 and Fig 6-107 Section 6.8.8 Page 6-158 to 6-159	
S4. Does the risk assessment provide an overview of the probabilities of future hazard events? [44 CFR §201.4(c)(2)(i)]	Cryosphere: Section 6.1, Page 6-1 to 6-23; No – unpredictable EQ: Section 6.2, Page 6-25 to 6-41; Probabilities: Page 6-29 to 6-30 – Figures 6-25, Page 6-41 Flood: Section 6.3, Page 6-42 to 6-63; Probabilities Page 6-63 Ground Failure: Section 6.4 Page 6-65 to 6-77; Probabilities Page 6-77 Tsunami: Section 6.5, Page 6-79 to 6-94; Probabilities 6-91 Volcanic Ash: Section 6..6, Page 6-93 to 6-110; Probabilities 6-109 to 110 Weather: Section 6.7, Page 6-11 to 138; Probabilities 6-138 Wildland Fire: Section 6.8, Page 6-139 to 6-159; Probabilities 6-159 Vulnerability / Probability: Section 8, Page 8-1 to 8-49, Section 8.6 to Page 8-50, Tables 8-12, 8-13, 8-14, 8-15, 8-16, Probabilities: Page 8-46 to 8-48, Tables 8-17 & 8-18	M
S5. Does the risk assessment address the vulnerability of state assets located in hazard areas and estimate the potential dollar losses to these assets? [44 CFR §§201.4(c)(2)(ii) and 201.4(c)(2)(iii)]	Section 8, Page 8-1 to 8-49, Section 8.6, Page 8-28 to Page 8-34, *Tables 8-12, 8-13, 8-14, 8-15, 8-16 Section 8.7, Page 8-35 to 8-48, Table 8-16 to 8-17 Probabilities: Page 8-46 to 8-48, Tables 8-17 & 8-18 *Available GIS does not provide facility values	M
S6. Does the risk assessment include an overview and analysis of the vulnerability of jurisdictions to the identified hazards and the potential losses to vulnerable structures? [44 CFR §§201.4(c)(2)(ii) and 201.4(c)(2)(iii)]	Section 8, Page 8-1 to 8-48 Section 8.6.2, Tables 8-12 to 8-15 Section 8.7, Page 8-35 to 8-48, & Table 8-16 to 8-17	M

State Mitigation Plan Review Tool 2015

S7. Was the risk assessment revised to reflect changes in development? [44CFR §201.4(d)]	Section 9.8.1.1, Page 9-82 to 9-83	M
Required Revisions:		
Mitigation Strategy and Priorities		
S8. Does the mitigation strategy include goals to reduce / avoid long-term vulnerabilities from the identified hazards? [44 CFR §201.4(c)(3)(i)]	Section 9.3, Page 9-17 to 9-18, Table 9-6	M
S9. Does the plan prioritize mitigation actions to reduce vulnerabilities identified in the risk assessment? [44 CFR §§201.4(c)(3)(iii) and (iv)]	Section 9.4, Page 9-18 to 9-38, tables 9-7 and 9-8. Section 9.5, Page 9-39 to 9-41 Section 9.6, Page 9-41 to 9-65, Table 9-10	M
S10. Does the plan identify current and potential sources of funding to implement mitigation actions and activities? [44 CFR §201.4(c)(3)(iv)]	Section 9.6, Page 9-41 to 9-65, Table 9-9, Table 9-10 and Appendix 13.24	M
S11. Was the plan updated to reflect changes in development, progress in statewide mitigation efforts, and changes in priorities? [44 CFR §201.4(d)]	Section 9.7.1, Page 9-66 Section 9.7.2, Page 9-67 Section 9.8, Page 9-76 to 9-83, Tables 9-12 & 9-13	M
Required Revisions:		
State Mitigation Capabilities		
S12. Does the plan discuss the evaluation of the state's hazard management policies, programs, capabilities, and funding sources to mitigate the hazards identified in the risk assessment? [44 CFR §201.4(c)(3)(ii)]	Section 3.5.2.1, Page 3-8 to 3-12 Table 3-3; Section 9.2, Page 9-2 to 9-16 Section 9.2.2, Page 9-4 to 9-5 Section 9.2.6, Page 9-14 to 9-15 Section 9.7, Page 9-66 to 9-76	M
Required Revisions:		

REGULATION CHECKLIST – STANDARD PLAN

*M=Met; NM=Not Met

Location in
Plan

M/
NM*

Local Coordination and Mitigation Capabilities

S13. Does the plan generally describe and analyze the effectiveness of local and tribal, as applicable, mitigation policies, programs, and capabilities? [44 CFR §201.4(c)(3)(ii)]	Section 3.5.3.4, Page 3-16	M
S14. Does the plan describe the process to support the development of approvable local and tribal, as applicable, mitigation plans? [44 CFR §§201.3(c)(5) and 201.4(c)(4)(i)]	Section 9.2.3.2, Page 9-6 to 9-7	M
S15. Does the plan describe the criteria for prioritizing funding? [44 CFR §201.4(c)(4)(iii)]	Section 3.7, p. 3-20; Section 9.2, Page 9-2 to 9-14	M
S16. Does the plan describe the process and timeframe to review, coordinate and link local and tribal, as applicable, mitigation plans with the state mitigation plan? [44 CFR §§201.3(c)(6), 201.4(c)(2)(ii), 201.4(c)(3)(iii), and	Section 9.2.5, Page 9-11 to 9-14	M

State Mitigation Plan Review Tool 2015

201.4(c)(4)(ii)]		
Required Revisions:		
Plan Review, Evaluation, and Implementation		
S17. Is there a description of the method and schedule for keeping the plan current? [44 CFR §§201.4(c)(5)(i) and 201.4(d)]	Section 3.5, Page 3-17 to 3-20	M
S18. Does the plan describe the systems for monitoring implementation and reviewing progress? [44 CFR §§201.4(c)(5)(ii)]	Section 9.7, Page 9-67 to 9-76	M
Required Revisions:		
Adoption and Assurances		
S19. Did the state provide documentation that the plan has been formally adopted? [44 CFR §201.4(c)(6)]	Awaiting FEMA approval before Adoption Section 4, Page 4-1 Appendix 13.2	M
S20. Did the state provide assurances? [44 CFR §201.4(c)(7)]	Awaiting FEMA approval before Adoption Section 4, Page 4-1 Appendix 13.2	M
Required Revisions: S19/20: After plan is adopted		
Repetitive Loss (RL) Strategy		
RL1. Did Element S6 (risk assessment) address RL and SRL properties? [44 CFR §§201.4(c)(2)(ii), 201.4(c)(2)(iii), and 201.4(c)(3)(v)]	Section 8.3, Page 8-18 to 8-22 Section 8.5, Page 8-27	M
RL2. Did Element S8 (mitigation goals) address RL and SRL properties? [44 CFR §§201.4(c)(3)(i) and 201.4(c)(3)(v)]	Section 9, Page 9-13 to 9-14 (DCCED/DCRA) Section 9.3, Page 9-17 Table 9-6	M
RL3. Did Element S9 (mitigation actions) address RL and SRL properties? [44 CFR §§201.4(c)(3)(iii) and 201.4(c)(3)(v)]	p. 9-26 FL Action 1.4.1	M
RL4. Did Element S10 (funding sources) address RL and SRL properties? [44 CFR §§201.4(c)(3)(iv) and 201.4(c)(3)(v)]	p. 1-9 Section 8.4.1 Page 8-28	M
RL5. Did Element S13 (local and tribal, as applicable, capabilities) address RL and SRL properties? [44 CFR §§201.4(c)(3)(ii) and 201.4(c)(3)(v)]	Table 9-8	M
RL6. Did Element S15 (prioritizing funding) address RL and SRL properties? [44 CFR §§201.4(c)(4)(iii) and 201.4(c)(3)(v)]	Section 9.2, Page 9-2 to 9-15 Section 9.6, Page 9-41 to 9-42 and Table 9-10	M
Required Revisions:		

APPENDIX 13.2 GOVERNOR'S SHMP ADOPTION

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THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Military and Veterans' Affairs

Division of Homeland Security
and Emergency Management

P.O. Box 5750
JBER, AK 99505-0750
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October 16, 2018

Michael O'Hare,
Regional Administrator
Federal Emergency Management Agency, Region X
130 228th Street SW
Bothell, WA 98021-9796

RE: State of Alaska Hazard Mitigation Plan Update

Mr. O'Hare,

Culminating a successful collaborative effort, the 2018 State of Alaska Hazard Mitigation Plan Update is hereby adopted. The continued implementation of this plan is a significant step toward protecting lives and property in our state.

The State of Alaska acknowledges the active participation of our local and tribal communities, governmental agencies, and subject specialists throughout the writing of this update. Their contributions have been incorporated into this document.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Sutton".

Michael J. Sutton
Director, Division of Homeland Security and Emergency Management

cc: Mark Cary, FEMA Region X

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APPENDIX 13.3 SHMP CHANGE SCHEDULE

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SHMP Change Schedule

SHMP Change Schedule

Assignment	Reviewer	Agency	Assigned (Date)	Notes
Project set-up				
Introduction				
Background Information				
Planning Process				
SHMP Adoption				
Hazard Analysis Process				
Hazard Profiles				
Cryosphere				
Earthquake				
Flood & Erosion				
Ground Failure				
Tsunami				
Volcano				
Weather				
Wildland & Conflagration Fire				
Risk Analysis / Vulnerability Assessment				

SHMP Change Schedule

SHMP Change Schedule

Assignment	Reviewer	Agency	Assigned (Date)	Notes
Mitigation Strategy				
Enhanced SHMP				
Attachments				
Appendices				
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Appendix 13.20	SHMP Pertinent State and Federal Agencies			
Appendix 13.21	Hazard Mitigation Success Stories (move to Mitigation Strategies)			
Appendix 13.22	Alaska Administrative Orders			

SHMP Change Schedule

SHMP Change Schedule

Assignment	Reviewer	Agency	Assigned (Date)	Notes
Appendix 13.23	2017 AK Distressed Communities Report - Denali Commission			
Appendix 13.24	Potential Agency Mitigation Funding Sources			
Appendix 13.25	SHMP References			
Appendix 13.26	Legacy 2013 SHMP Medium and Low Priority Projects (Not included in MAP)			
Appendix 13.27	2018 Alaska Hazard Risk Location Figures			

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APPENDIX 13.4 SHMP ACRONYM LIST

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SHMP Acronyms or Abbreviations and their Respective Meanings

Acronyms/Abbreviations	
°F	Degrees Fahrenheit
AAA	American Avalanche Association
AAIC	Alaska Avalanche Information Center
AAS	Alaska Avalanche School
ACCIMP	Alaska Climate Change Impact Mitigation Program
ACIA	Arctic Climate Impact Assessment
ACWF	Alaska Clean Water Fund
ADF&G	Department of Fish and Game
ADWF	Alaska Drinking Water Fund
AEA	Alaska Energy Authority
AECOM	AECOM, Technical Services
AEEE	Alternative Energy and Energy Efficiency
AEC	Alaska Earthquake Center
AET	Alaska Economic Trends
AFS	Alaska Fire Service
AFG	Assistance to Firefighters Grant
AGDC	Alaska Geospatial Data Committee
AHFC	Alaska Housing Finance Corporation
AICC	Alaska Interagency Coordination Center
AIDEA	Alaska Industrial Development and Export Authority
AMF	Airport Maintenance Facility
ANA	Administration for Native Americans
ANSS	Alaska National Seismic System
AONAP	Alaska Office of Native American Programs
ARC	American Red Cross
ARRC	Alaska Railroad Corporation
ARTA	Alaska Railroad Transfer Act
ARW	Airport Runway
AS	Alaska Statute
ASHSC	Alaska Seismic Hazard Safety Commission
ASPHL	Alaska State Public Health Laboratories
ATAACA	Anti-Terrorism All-Hazard Advisory Council of Alaska
AVCP	Association of Village Council of Presidents
AVEC	Alaska Village Electric Cooperative
AVO	Alaska Volcano Observatory
B/C	Benefit/Cost
BCA	Benefit Cost Analysis
BEA	Baseline Erosion Assessment
BFE	Base Flood Elevation
BIA	US Bureau of Indian Affairs

SHMP Acronym List

Acronyms/Abbreviations	
BLM	Bureau of Land Management
CBO	Communications Building-Other
CCP	Citizen Corps Program
CDBG	Community Development Block Grant
CDC	Center for Disease Control
CEHHWG	Climate, Ecosystems & Human Health Work Group
CFR	Code of Federal Regulations
CFP	Community Forestry Program
CGP	Comprehensive Grant Program
CIG	Conservation Innovation Grant
CIP	Capital Improvement Plan
C2ER	Council for Community and Economic Research
COLI	Cost of Living Index
CP	Comprehensive Plan
CPD	Community Planning and Development (also known as Comprehensive Development Plan)
CRS	Community Rating System
CTA	Conservation Technical Assistance
CVRF	Coastal Villages Region Fund
CWSRF	Clean Water State Revolving Fund
DART	Deep-ocean Assessment and Reporting of Tsunamis
DAS	Department of Administration
DSC	Dam Safety and Construction
DCCED	Department of Commerce, Community, and Economic Development
DCI	Disaster Cost Index
DCRA	Division of Community and Regional Affairs
DEC	Department of Environmental Conservation
DEED	Department of Education and Early Development
Denali	Denali Commission
DGGS	Alaska Division of Geological and Geophysical Survey
DHS	U.S. Department of Homeland Security
DHS&EM	Division of Homeland Security and Emergency Management
DHSS	Department of Health and Social Services
DMA 2000	Disaster Mitigation Act Of 2000
DMVA	Department of Military and Veterans Affairs
DNR	Department of Natural Resources
DOE	U.S. Department of Energy
DOF	Division of Forestry
DOI	Division of Insurance
DOL	Department of Labor
DOT/PF	Department of Transportation and Public Facilities
DPC	Disaster Policy Cabinet

Acronyms/Abbreviations	
DPS	Department of Public Safety
DR	Disaster Relief (FEMA)
DRU	Disaster Resilient University
DSS	Division of Senior Services
EAP	Emergency Action Plan
EAS	Emergency Alert System
EH	Environmental Health
EHS	Extremely Hazardous Substances
EMPG	Emergency Management Performance Grant
ENSO	El Niño/La Niña Southern Oscillation
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
EPPS	Energy Production Plant-Small
EQ	Earthquake
EQIP	Environmental Quality Incentives Program
ETC	Environmentally Threatened Communities
EWPP	Emergency Watershed Protection (Program)
°C	Degrees Celsius
°F	Degrees Fahrenheit
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FGDC	Federal Geospatial Data Clearinghouse
FHA	Federal Housing Administration
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FL	Flood
FMA	Flood Mitigation Assistance
FPM	Floodplain Manager (or FDC Coordinator)
FP&S	Fire Prevention and Safety
FRA	Federal Railroad Administration
ft	Feet
FY	Fiscal Year
g	Gravity
GAR	Governor's Authorized Representative
GF	Ground Failure
GIS	Geographic Information System
Hazus	Hazards U.S. – Multi-Hazard Software
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
HRD1	Highway/Road - One Lane

SHMP Acronym List

Acronyms/Abbreviations	
HRD2	Highway/Road - Two Lane
HS	Hazardous Substances
HSGP	Homeland Security Grant Program
HUD	Department of Housing and Urban Development
HWBO	Highway Bridge-Other (includes wood)
HVA	Hazard and Vulnerability Assessment
IA	Individual Assistance
IBC	International Building Code
IBHS	Institute for Business And Home Safety
ICC	Increased Cost of Compliance
ICDBG	Indian Community Development Block Grant
IGAP	Indian General Assistance Program
IHBG	Indian Housing Block Grant
IHBG-IT	Indian Housing Block Grant-Imminent Threat
IHLGP	Indian Home Loan Guarantee Program
INAP	Indian and Native American Programs
IRA	Indian Reorganization Act
IRRP	Indian Reservation Road Program
IRS	Internal Revenue Service
ISER	Institute of Social and Economic Research
JFO	Joint Field Office
Kt(s)	Knot(s)
KIB	Kodiak Island Borough
KPB	Kenai Peninsula Borough
LEG	Legislative Energy Grant
LEPC	Local Emergency Planning Committee
LHMP	Local Hazard Mitigation Plan
M	Magnitude
MAP	Mitigation Action Plan
MGL	Municipal Grants And Loans
MMI	Modified Mercalli Intensity
MOA	Municipality of Anchorage
mph	Miles Per Hour
MSB	Matanuska-Susitna Borough
msl	Mean Sea Level
SHMP	Multi-Jurisdictional Hazard Mitigation Plan
NAHASDA	Native American Housing Assistance and Self Determination Act
NFIP	National Flood Insurance Program
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRF	National Response Framework

Acronyms/Abbreviations	
NRCS	Natural Resources Conservation Service
NTHMP	National Tsunami Hazard Mitigation Program
NTWC	National Tsunami Warning Center
NWS	National Weather Service
OTF	Oil Tank Farm
OSWER	Office of Solid Waste and Emergency Response
PDM	Pre-Disaster Mitigation (Program)
PGA	Peak Ground Acceleration
PHN	Public Health Nurse
PMEL	Pacific Marine Environmental Laboratory
PNP	Private Non-Profits
PPSB	Potable Water Pumping Station
PSTS	Water Storage Tank-Steel
PTWC	Pacific Tsunami Warning Center
PWE	Potable Water Well
PWPB	Potable Water Pipelines-Buried
PWS	Port Waterfront Structures (Harbor)
PWTS	Potable Water Treatment (Plant)-Small
RCASP	Remote Community Alert Systems
RD	Rural Development
REAA	Rural Educational Attendance Area
RFC (FEMA)	Repetitive Flood Claim
RFC (NWS)	River Forecast Center
RL	Repetitive Loss
RurALCAP	Rural Alaska Community Action Program
SAFER	Staffing For Adequate Fire and Emergency Response
SARA	Superfund Amendments and Reauthorization Act
SBA	U.S. Small Business Administration
SEOC	State Emergency Operations Center
SHMAC	State Hazard Mitigation Advisory Committee
SHMO	State Hazard Mitigation Officer
SHMP	State Hazard Mitigation Plan
SHSP	State Homeland Security Program
SIFT	Short-term Inundation Forecasting for Tsunami
SOE	State of Alaska Epidemiology
SPAR	Spill Prevention and Response
SPCC	Spill Prevention and Control Countermeasure
SRL	Severe Repetitive Loss
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
STAPLEE	Social, Technical, Administrative, Political, Legal, Economic, and Environmental
SVA	Security and Vulnerability Assessment
TCC	Tanana Chiefs Conference

SHMP Acronym List

Acronyms/Abbreviations	
T/F	Technical/Feasibility
THMP	Tribal Hazard Mitigation Plan
TIME	Tsunami Inundation Mapping Effort
TP	Transportation Plan
TTP	Tribal Transportation Program
UAA	University of Alaska, Anchorage
UAF	University of Alaska, Fairbanks
UAF/GI	UAF/Geophysical Institute
DOD	U.S. Department of Defense
DOI	U.S. Department of Interior
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USDOF	U.S. Department of Forestry
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VFA-RFA	Volunteer Fire Assistance and Rural Fire Assistance Grant
VSW	Village Safe Water
WARN	Warning, Alert, and Response Network
WTF	Water Treatment Facility
WUI	Wildland Urban Interface (Fire)
WWTS	Wastewater Treatment (Plant)-Small

APPENDIX 13.5 SHMP DEFINITIONS

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An Alphabetical listing of SHMP Terms and Definitions

Term	Definition / Usage
Aufeis	When new ice continues to form on top of older ice. Ice-forming situations occur wherever there are continuous sources of water and freezing temperatures.
Alluvial Fan	Area of deposition where steep mountain drainages empty into valley floors. Flooding in these areas often includes characteristics that differ from those in riverine or coastal areas.
Alluvial Fan Flooding	Flooding that occurs on the surface of an alluvial fan (or similar landform) that originates at the apex of the fan and is characterized by high-velocity flows; active processes of erosion, sediment transport, and deposition; and unpredictable flow paths.
Anabatic Wind	Any wind blowing up an incline; the opposite to katabatic wind.
Avalanche	Mass of snow and ice falling suddenly down a mountain slope and often taking with it earth, rocks and rubble of every description.
Borough	The basic large unit of local government in Alaska in the organized boroughs. Large land areas of Alaska are not in organized boroughs and therefore fall under State jurisdiction as the Unorganized Borough
Caldera	A caldera is a large, usually circular depression at the summit of a volcano formed when magma is withdrawn or erupted from a shallow underground magma reservoir.
Chinook	A warm down-slope wind.
Community Rating System	An NFIP program that provides incentives for NFIP communities to complete activities that reduce flood hazard risk. When the community completes specified activities, the insurance premiums of policyholders in these communities are reduced.
Community	Any state, area or political subdivision thereof, or any Indian tribe or tribal entity that has the authority to adopt and enforce statutes for areas within its jurisdiction.
Critical Facility	Facilities that are critical to the health and welfare of the population and are especially important during and after a hazard event. Critical facilities include, but are not limited to, shelters, hospitals, and fire stations.
Daylight	The exposure of strata by a cut whose angle is steeper than that of the underlying beds. Such exposure increases the likelihood of landslides.
Dam	A structure built across a waterway to impound water.
Development	Any manmade change to improved or unimproved real estate including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

SHMP Definitions

Term	Definition / Usage
Economic Disaster	State definition used: “When the annual income to workers in the designated area drops below the average annual income for the base period for workers in the designated area and the drop in income is of such magnitude that the average family income of all residents of the designated area as determined by the DCCED is below the poverty guidelines issued by the Federal Department of Health and Human Services, adjusted by the DCCED to reflect subsistence economic patterns and appropriate cost-of-living differentials; the availability of alternate employment shall be considered in determining whether an economic disaster has occurred under this paragraph.”
Earthquake	A sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the earth’s tectonic plates.
Earthquake Swarm	A collection of earthquakes that occur in the same area in a relatively short amount of time. There is no identifiable main shock.
Elevation	The raising of a structure to place it above flood waters on an extended support structure.
Emergency Operations Plan	A document that describes how people and property will be protected in disaster and disaster threat situations; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies, and other resources available for use in the disaster; and outlines how all actions will be coordinated.
Erosion	The wearing away of the land surface by running water, wind, ice, or other geological agents.
Federal Disaster Declaration	See Presidential Disaster Declaration
Federal Emergency Management Agency (FEMA)	A federal agency created in 1979 to provide a single point of accountability for all federal activities related to hazard mitigation, preparedness, response, and recovery.
Flash Flood	A flood event occurring with little or no warning where water levels rise at an extremely fast rate.
Floeberg	A massive piece of sea ice, composed of pressure ridges or hummocks, which has separated from the ice pack and become lodged in shallow water.
Flood	A general and temporary condition of partial or complete inundation of normally dry land areas from 1) the overflow of inland or tidal waters, 2) the unusual and rapid accumulation or runoff of surface waters from any source, or 3) mudflows or the sudden collapse of shoreline land.
Floodplain	A "floodplain" is the floodable lowland adjacent to a river, lake, or ocean. Floodplains are designated by how frequently a flood occurs that is large enough to cover that location. For example, the 10-year floodplain will be covered by the 10-year flood. The 100-year floodplain by the 100-year flood. (See Flood Frequency)
Flood frequencies	Frequencies are determined by plotting a graph of all known floods for an area and determining how often floods of a particular size occur. The flood frequency is the chance of a flood occurring during a given timeframe. For example, the 100-year flood has a 1percent chance, and the 10-year flood has a 10 percent chance, of occurring in any given year.

Term	Definition / Usage
Fumarole	Fumaroles are vents from which volcanic gas escapes into the atmosphere. Fumaroles may occur along tiny cracks or long fissures, in chaotic clusters or fields, and on the surfaces of lava flows and thick deposits of pyroclastic flows. They may persist for decades or centuries if they are above a persistent heat source or disappear within weeks to months if they occur atop a fresh volcanic deposit that quickly cools.
Geographic Information System	A computer software application that relates physical features of the earth to a database that can be used for mapping and analysis.
Governing Body	The legislative body of a governmental unit including an assembly of a borough or the council of a city.
Groin	A narrow, elongated coastal engineering structure built on the beach perpendicular to the trend of the beach.
Hazard	A source of potential danger or adverse condition.
Hazard Mitigation	Any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards. (44 CFR Subpart M 206.401)
Hazard Mitigation Grant Program	The program authorized under section 404 of the Stafford Act, which may provide funding for mitigation measures identified through the evaluation of natural hazards conducted under §322 of the Disaster Mitigation Act 2000.
Hazard and Vulnerability Analysis	The identification and evaluation of all the hazards that potentially threaten a jurisdiction and analyzing them in the context of the jurisdiction to determine the degree of threat that is posed by each.
Infrastructure	The public services of a community that have a direct impact to the quality of life. Infrastructure refers to communication technology such as phone lines or Internet access, vital services such as public water supply and sewer treatment facilities, and includes an area's transportation system, regional dams or bridges, etc.
Interferometry	A method employing the interference of electromagnetic radiation to make highly precise measurements of the angle between the two rays of light.
Inundation	In reference to tsunامي, the maximum horizontal distance inland reached by the wave.
Ivu	Ivu or Ice Push is a surge of ice from an ocean or large lake onto the shore.
Jökulhlaup	A sudden flood-like release of water from a glacier. (Glacier outburst flooding)
Katabatic wind	Any wind blowing down an incline; the opposite to anabatic wind.
Knot	A unit of measurement equally 1 nautical mile per hour. This is roughly 1.15 statute miles per hour or 1.852 kilometers per hour.
Lahar	Lahar is an Indonesian word for a rapidly flowing mixture of rock debris and water that originates on the slopes of a volcano. Lahars are also referred to as volcanic mudflows or debris flows. They form in a variety of ways, chiefly by the rapid melting of snow and ice by pyroclastic flows, intense rainfall on loose volcanic rock deposits, breakout of a lake dammed by volcanic deposits, and as a consequence of debris avalanches.
Landslide	Downward movement of a slope and materials under the force of gravity.

SHMP Definitions

Term	Definition / Usage
Lava dome	Lava domes are rounded, steep-sided mounds built by very viscous magma. Such magmas are typically too viscous (resistant to flow) to move far from the vent before cooling and crystallizing. Domes may consist of one or more individual lava flows.
Littoral	Of or pertaining to the shore, especially of the sea.
Local Government	Any borough, municipality, city, township, public authority, school district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under state law), regional or interstate government entity, or agency, or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity, for which an application for assistance is made by a State or political subdivision of a state.
Magma	Molten rock originating from the Earth's interior.
Municipality	A political subdivision incorporated under the laws of the state that is a home rule or general law city, a home rule or general law borough, or a unified municipality.
Natural Disaster	Any natural catastrophe, including any hurricane, tornado, storm, high water, wind, driven water, tsunami, earthquake, volcanic eruption, landslide, snowstorm, fire, or drought. (44 CFR Subpart M 206.401)
Orthophoto	An aerial photo that has been corrected to eliminate the effects of camera tilt and relief displacement. The ground geometry is recreated as it would appear from directly above each and every point.
Overlay Zone	Overlay zones (overlay districts) create a framework for conservation or development of special geographical areas. In a special resource overlay district, overlay provisions typically impose greater restrictions on the development of land, but only regarding those parcels whose development, as permitted under the zoning, may threaten the viability of the natural resource. In a development area overlay district, the provisions may impose restrictions as well, but also may provide zoning incentives and waivers to encourage certain types and styles of development. Overlay zone provisions are often complemented by the adoption of other innovative zoning techniques, such as floating zones, special permits, incentive zoning, cluster development and special site plan, or subdivision regulations, to name a few.
Period	In reference to tsunami, the length of time between two successive peaks or troughs. May vary due to complex interference of waves. Tsunami periods generally range from 5 to 60 minutes.
Planning	The act or process of making or carrying out plans; the establishment of goals, policies and procedures for a social or economic unit.
Preparedness	The steps taken to decide what to do if essential services break down, developing a plan for contingencies, and practicing the plan. Preparedness ensures people are ready for a disaster and will respond to it effectively.
Presidential Disaster Declaration	The formal action by the president to make a State eligible for major disaster or emergency assistance under the Robert T. Stafford Relief and Emergency Assistance Act, Public Law 93-288, as amended.

Term	Definition / Usage
Pyroclastic	Pertaining to fragmented rock material formed by a volcanic explosion or ejection from a volcanic vent.
Pyroclastic Flow	Lateral flow of a turbulent mixture of hot gases and unsorted pyroclastic material (volcanic fragments, ash, etc.) that can move at high speeds.
Recovery	The long-term activities beyond the initial crisis period and emergency response phase of disaster operations that focus on returning all systems in the community to a normal status or to reconstitute these systems to a new, less vulnerable condition.
Response	Those activities and programs designed to address the immediate and short-term effects of the onset of an emergency or disaster.
Retrofit	The strengthening or changing of structures or facilities to mitigate disaster risks.
Rift Zone	A rift zone is an elongate system of crustal fractures associated with an area that has undergone extension (the ground has spread apart).
Risk	The estimated impact that a hazard would have on people, services, facilities, and structures in a community; the likelihood of a hazard event resulting in an adverse condition causing injury or damage. Risk is often expressed in relative terms such as a high, moderate or low likelihood of sustaining damage above a particular threshold due to a specific type of hazard event. It can also be expressed in terms of potential monetary losses associated with the intensity of the hazard.
Riverine	Relating to, formed by, or resembling rivers (including tributaries), streams, creeks, brooks, etc.
Riverine Flooding	Flooding related to or caused by a river, stream, or tributary overflowing its banks due to excessive rainfall, snowmelt, or ice.
Run-up	In reference to tsunami, the maximum vertical height of a tsunami in relation to sea level.
Seiche	An oscillating wave (also referred to as a seismic sea wave) in a partially or fully enclosed body of water. May be initiated by long period seismic waves, wind and water waves, or a tsunami.
Slush Ice	A mixture of snow and ice crystals floating on the surface of the ocean. The ice crystals, called frazil, represent the first stages of sea ice growth. Slush ice can build up on vessels and equipment, and clog intake valves.
Stafford Act	1) The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended. 2) The Stafford Act provides an orderly and continuing means of assistance by the federal government to state, local, and tribal governments in carrying out their responsibilities to alleviate the suffering and damage which result from disaster.

SHMP Definitions

Term	Definition / Usage
State Disaster Declaration	<p>A disaster emergency shall be declared by executive order or proclamation of the governor upon finding that a disaster has occurred or that the occurrence or the threat of a disaster is imminent. The state of disaster emergency shall continue until the governor finds that the threat or danger has passed or the disaster has been dealt with to the extent emergency conditions no longer exist and terminates the state of disaster emergency by executive order or proclamation.</p> <p>Along with other provisions, this declaration allows the governor to utilize all available resources of the state as reasonably necessary, direct and compel the evacuation of all or part of the population from any stricken or threatened area if necessary, prescribe routes, modes of transportation, and destinations in connection with evacuation and control ingress and egress to and from disaster area.</p> <p>It is required before a Presidential Disaster Declaration can be requested.</p>
State Hazard Mitigation Officer (SHMO)	The SHMO is the representative of state government who is the primary point of contact with FEMA, other state and federal agencies, and local units of government in the planning and implementation of pre- and post-disaster mitigation activities.
Storm Surge	Rise in the water surface above normal water level on open coast due to the action of wind stress and atmospheric pressure on the water surface.
Tectonic Plate	Rigid, thin segments of the earth's lithosphere may be assumed to move horizontally and adjoin other plates. It is the friction between plate boundaries cause seismic activity.
Tephra	Tephra is a general term for fragments of volcanic rock and lava regardless of size are blasted into the air by explosions or carried upward by hot gases in eruption columns or lava fountains. Tephra includes large dense blocks and bombs, and small light rock debris.
Topography	The contour of the land surface. The technique of graphically representing the exact physical features of a place or region on a map.
Tribal Government	A federally recognized governing body of an Indian or Alaska Native tribe, band, nation, pueblo, village, or community the secretary of the interior acknowledges to exist as an Indian tribe under the Federally Recognized Tribe List Act of 1994, 25 U.S.C. 479a. This does not include Alaska Native corporations, the ownership of which is vested in private individuals.
Tsunami	A sea wave produced by submarine earth movement or volcanic eruption with a sudden rise or fall of a section of the earth's crust under or near the ocean. A seismic disturbance or land slide can displace the water column, creating a rise or fall in the level of the ocean above. This rise or fall in sea level is the initial formation of a tsunami wave.
Usteq	A catastrophic form of permafrost thaw collapse that occurs when frozen ground disintegrates under the compounding influences of thawing permafrost, flooding, and erosion
Vent	Vents are openings in the Earth's crust from which molten rock and volcanic gases escape onto the ground or into the atmosphere. Vents may consist of a single circular-shaped structure, a large elongated fissure and fracture, or a tiny ground crack.

Term	Definition / Usage
Vulnerability	Describes how exposed or susceptible to damage an asset is. Vulnerability depends on an asset's construction, contents, and the economic value of its functions. The vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power; if an electrical substation is flooded, it will affect not only the substation itself, but a number of businesses as well. Other, indirect effects can be much more widespread and damaging than direct ones.
Wildfire / Wildland Fire	Used interchangeably. An uncontrolled fire that spreads through vegetative fuels, exposing and possibly consuming structures.
Yedoma	Permafrost composition is highly variable, ranging from solid rock to soils that are composed almost entirely of ice.
Zoning Ordinance	An ordinance under the state or local government's police powers divides an area into districts and, within each district, regulates the use of land and buildings, height, and bulk of buildings or other structures, and the density of population.

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APPENDIX 13.6 ANNUAL SHMP REVIEW TOOLS AND FORMS

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Section Thirteen
Appendix 13.6 Annual SHMP Review Forms

State of Alaska Hazard Mitigation Plan

Annual Review Questionnaire

PLAN SECTION	QUESTIONS	YES	NO	COMMENTS
PLANNING PROCESS	Are there internal or external organizations and agencies that have been invaluable to the planning process or to mitigation action			
	Are there procedures (e.g. meeting announcements, plan updates) that can be done more efficiently?			
	Has the planning team undertaken any SHMAC or SHMP meetings or activities regarding the SHMP or mitigation action implementation?			
HAZARD PROFILES	Has a natural and/or manmade/ technologically caused disaster occurred during this reporting period?			
	Are there natural and/or manmade/ technologically caused hazards that have not been addressed in this SHMP and should be?			
	Are additional maps or new hazard studies available? If so, what have they revealed?			
VULNERABILITY ANALYSIS	Do any critical facilities or infrastructure need to be added to the asset lists?			
	Have there been development pattern changes that could influence the hazard impacts or that create additional risks?			
MITIGATION STRATEGY	Are there different or additional resources (financial, programmatic, human, or technical) that are now available for mitigation planning within the State, Cities or Tribal communities? Define.			
	Are the SHMP's goals still applicable?			
	Should new mitigation actions be added to the Mitigation Strategies' Mitigation Action Plan (MAP)?			
	Do existing MAP mitigation actions need to be reprioritized			
	Are the MAP mitigation actions appropriate for available resources?			

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Section Thirteen
Appendix 13.6 Annual SHMP Review Forms

State of Alaska Hazard Mitigation Plan

Mitigation Action Progress Report

Progress Report Period: _____ To _____
(Date) (Date)

Project Title: _____ Project ID#: _____

Responsible Agency: _____

Address: _____

: _____

Contact Person: _____ Title: _____

Phone #(s): _____ email Address(s): _____

List Supporting Agencies and Contacts: _____

Total Project Cost: _____

Anticipated Cost Overrun/Underrun: _____

Project Approval Date: _____ Project Start Date: _____

Anticipated Completion Date: _____

Description of project (describe each phase, if applicable, and the time frame for completing each phase: _____

Milestones	Complete	Projected Completion Date

Mitigation Action Progress Report (Continued)

Plan Goal(s) Addressed: _____

Goal: _____

Success Indicators: _____

Project Status

☐ On Schedule

☐ Completed

☐ Delayed*

* Explain: _____

☐ Canceled

Project Cost Status

☐ Cost Unchanged

☐ Cost Overrun**

** Explain: _____

☐ Cost Underrun***

*** Explain: _____

Summary of progress on project for this report:

A. What was accomplished during this reporting period? _____

B. What obstacles, problems, or delays did you encounter, if any? _____

C. How was each problem resolved? _____

Next Steps: What is/are the next step(s) to accomplish over the next reporting period?

Other Comments: _____

APPENDIX 13.7 2018 SHMAC MEMBERSHIP

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**State Hazard Mitigation Advisory Committee (SHMAC) and
SHMP Planning Team**

State Agencies	
Department of Military and Veterans Affairs (DMVA)	
Division of Homeland Security and Emergency Management (DHS&EM)	
DHS&EM	Division Director
DHSEM	Planning Program Manager
DHSEM	State Hazard Mitigation Officer (SHMO)
DHSEM	Pre-Disaster Mitigation (PDM) Manager
DHSEM	State Hazard Mitigation Planning (SHMP) Lead
DHSEM	Primary Security Vulnerability Assessment (SVA) Project Coordinator
DHSEM	Mapping and Geographic Information Systems (GIS) Support
Department of Commerce, Community and Economic Development (DCCED)	
DCCED	Local Government Specialist, Risk MAP, ACCIMP
DCCED	Local Government Specialist, Alaska Floodplain Coordinator
Department of Environmental Conservation (DEC)	
DEC	Environmental Program Specialist III
DEC	Spill, Prevention, and Response (SPR)-Prevention-Preparedness Representative
Department of Health and Social Services (DHSS)	
DIR, Office of Substance Misuse & Addiction Prevention	
DHSS	Health Emergency Response Operations, Planner II
Department of Natural Resources (DNR)	
DNR/Mining, Land, Water (MLW)	
DNR-Mining, Land, Water	Division Dir (SHMAC Member)
DNR-Mining, Land, Water	Division Operations Manager (Director's SHMAC Representative)
DNR-Mining, Land, Water	Dam Safety Engineer
DNR-Mining, Land, Water	Assistant Dam Safety
DNR/Division of Geophysical and Geographical Surveys (DGGS)	
DNR/DGGS	Chief, Engineering Geology Section
DNR/DGGS	Coastal Hazards Program Manager
DNR/Division of Forestry (DOF)	
DNR/DOF	State Forester and Director
DNR/DOF	Forester V
DNR/DOF	Forester IV
Department of Administration (DOA)	
DOA/DSS/DGS Mgmt	State Leasing & Facility Manager
DOA/Risk Management (RM)	Division Director
DOA/RM	Division Risk Manager
Department of Transportation and Public Facilities (DOT/PF)	
DOT/PF, Southcoast Region	DIR, Southcoast Region
DOT/PF, Southcoast Region	DOT/PF Safety Officer
DOT/PF, Central Region	Central Region Director
DOT/PF	Statewide Safety Coordinator
DOT/PF, Northern Region	Northern Region Director
DOT/PF, Northern Region	Northern Region Safety Officer

Department of Public Safety (DPS)	
DPS	Assistant State Fire Marshall and Code Compliance Officer
University of Alaska (UA)	
University of Alaska Anchorage	Office of Emergency Management
University of Alaska Fairbanks (UAF), Geophysical Institute (GI)	State Seismologist, Alaska Earthquake Center (AEC)
UAF/GI/AEC	Seismic Network Manager/ Seismologist
UAF/GI-Tsunami Modeler	Research Assistant Professor
UAF, School of Mgmt	Health and Safety (HS) Emergency Program Director (EM)
Federal Agencies	
Bureau of Land Management (BLM)	Coordination Center Manager
Denali Commission	Federal Co-Chairman
Denali Commission, PM	Project Manager-Transportation & Energy
Denali Commission/ PM	Project Manager
National Ocean and Atmospheric Administration (NOAA), National Weather Service (NWS)	
NOAA-Nat'l Tsunami Warning Center (NTWC)	Ex-Oficio Director
NOAA-NWS	Acting Warning Coordinating Meteorologist/Fire PM
NOAA-NWS	Regional Coordinator
NOAA-NWS	Climatologist
NOAA)/NWS	WCM
NOAA-NWS	Acting Chief Environmental-Scientific Service Division
NOAA-NWS	Acting Deputy Chief
US Army Corp of Engineers (USACE)-Alaska Region	
USACE	Chief-Hydraulics & Hydrology
USACE	P.E. PMP-AK
US Department of Housing and Urban Development (HUD)	
HUD-Field Office Director	Dir, Field Office
HUD	Senior Mgmt Analyst
US Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS)	
USDA-NRCS	State Resource Conservationist (SRC)
USDA-NRCS	State Conservation Engineer (SCE)
US Geological Survey (USGS)	
USGS	Alaska Regional Dir
USGS	Center Director
USGS-Water	USGS Water-Hydrologist
USGS-AVO	Center Dir Volcano Science Center
USGS-AVO	Scientist-in-Charge
USGS	Research Geologist
Borough and City Government Representatives	
Municipality of Anchorage (MOA)	
MOA	Watershed Manager, Floodplain Manager
MOA	Flood Hazard Administrator
MOA	Director Project Management and Engineering

Matanuska Susitna Borough (MSB)	
MSB	Development Services Manager
MSB	Planning & Land Use Department, Development Services Division, Planner II, Floodplain Manager
MSB	Emergency Manager
City and Borough of Juneau (CBJ)	
CBJ	Emergency Programs Manager
Kenai Peninsula Borough (KPB)	
KPB	Mayor's Community and Fiscal Project Manager
City of Seward	
City of Seward	Director Community Development
City of Seward	City Fire Chief, & Building Official
City of Seward	City Planner
Non-Government Organizations	
<i>Alaska Railroad (AKRR)</i>	<i>Director of Grants</i>
AKRR	Environmental Analyst II
AKRR	Chief Operating Officer
Alaska Municipal League (AML), Joint Insurance Arrangement (JIA)	Deputy Director
AK Institute for Justice (AIJ)	Exec Director
AIJ	Research Assistant
Chugach Electric	Senior Manager District Engineering
Tanana Chiefs Conference (TCC)	Sanitation Survey

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APPENDIX 13.8 2018 SHMP PARTICIPANT MEETING AGENDAS

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SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) –Project Kick-off Meeting

Community: Statewide Agencies and Participants

Date/Time: January 18, 2018/10:00 to 11:00

From: R. Scott Simmons

Attendees:

- AECOM: Scott Simmons, Jessica Evans
- DHSEM: Kim Stuart, Daniel Belanger
- Agencies: Participants List

Comments:

- **Project Description:**
 - Update the legacy 2013 SHMP to fulfill current FEMA criteria
 - June 23, 2018 completion date
- **Participant Involvement Necessity**
 - Include diverse participants with mitigation capabilities including agencies and stakeholders with responsibility for:
 - Hazard data
 - Climate projections and data
 - Emergency management
 - Economic development
 - Land use and development
 - Housing
 - Health and social services
 - Infrastructure and
 - Natural and cultural resources.
- **Consequences**
 - Not having a “current” FEMA-approved mitigation plan will negatively impact eligibility for the following FEMA programs:
 - Public Assistance Categories C-G (PA C-G)
 - Fire Management Assistance Grants (FMAG)
 - Hazard Mitigation Grant Program (HMGP)
 - Pre-Disaster Mitigation (PDM)
 - Flood Mitigation Assistance (FMA)
 - Only mitigation planning technical assistance will be available.
- **Project Description:**
 - DHS&EM contract
 - 2018 State Hazard Mitigation Plan Update Process
 - FEMA requirements
 - FEMA/State compliance
 - Agency knowledge centric
 - Planning Process
 - Team Development/member selection: In-Progress
 - Legacy HMP project and initiative integration into other State planning and project processes

- Have they been integrated
 - Identify what has been accomplished-details needed
 - Describe progress in statewide mitigation efforts
 - Describe changes in agency priorities
- Data Gathering
 - Collect new data from all agencies
 - For example: DGGs is updating all natural hazard profiles
 - Need: Manmade, technological, infectious disease, and infestation profile language review and potential statewide impacts
- Plan Writing
 - Agency centric – do to agency subject specificity, responsibilities, and regulatory requirements
 - Contractor formatting for SHMP consistency
- Hazard identification
 - Provide geographic specific profile description
 - Public risk, and infrastructure vulnerability assessment:

“Due to the inherent uncertainties with projections of future hazard events, states are expected to look across the whole community of partners (for example, public, private, academic, non-governmental, etc.) to identify the most relevant data and select the most appropriate methodologies to assess risks and vulnerability.”
- Mitigation Strategy review and update

“The mitigation strategy serves as the long-term blueprint for reducing the potential losses identified in the risk assessment, or in other words the mitigation strategy represents risk based decisions.”

 - Current project status, what worked, and roadblocks
 - Legacy project status review, reason for any changes
 - New project development
- State Mitigation Capabilities
 - Describe how the state’s existing capabilities aids our mitigation efforts
 - How do they strengthen Alaska’s capabilities
 - Define existing capabilities that demonstrate the state’s commitment to mitigation
 - Identify a wide range of resources used to implement mitigation activities
 - Provide actions that reveals improvement initiatives or areas that need improvement.
- Local Coordination and Mitigation Capabilities
 - Contractor will explain how the State supports local and tribal governments with mitigation planning through training, technical assistance, and funding.
- FEMA Plan Review, Evaluation, and Implementation
 - Does it reflect current and projected statewide conditions, trends and anticipated growth and development
 - Does the SHMP:
 - Assess previous goals and action plan,
 - Evaluate SHMP implementation progress
 - Contain a mechanism to adjust from current to projected changing conditions and environments
 - Still fit the State’s priorities and reflect current conditions
- Repetitive Loss Property Strategy
 - Repetitive Loss Properties are defined as:

“Single or multifamily residential properties that are covered under an NFIP flood insurance policy and;
1. Have incurred flood-related damage for which 4 or more separate claims payments have been made, with the amount of each claim exceeding \$5,000, with the cumulative amount of such claims payments exceeding \$20,000; or

2. For which at least 2 separate claims payments have been made under such coverage, with cumulative amount that exceeding the market value of the property.
3. At least 2 of the claims must be within 10 years of each other, (claims made within 10 days of each other will be counted as 1 claim.”

▪ Required actions include:

- Identifying specific actions the State has taken to reduce the number of repetitive loss properties (which must include severe repetitive loss properties),
- Specifying how the State reduces or, intends to reduce, the number of repetitive loss properties,
- Describing the strategy the State ensures that local jurisdictions with severe repetitive loss properties take actions to reduce the number of these properties, including local mitigation plan development requirements.

• **Teleconference Discussion Points**

- Scott Simmons, AECOM presented the agenda to the teleconference attendees stating the agenda contents is more extensive than normally presented because it forms the basis for SHMP updating activities. Therefore, only the gray shaded areas were covered during today's teleconference as essential to completing the SHMP update and to focus agency specific needs.
- Participants discussed the consequences for not having a “current” FEMA-approved mitigation plan, how it would negatively impact FEMA disaster assistance support during a disaster event.
 - FEMA regulations limits their support to emergency response Therefore recovery programs such as: PA Categories C-G, FMAG, HMCP, PDM, and FMA would not be available unless the State had a current FEMA approved SHMP.
- Participants discussed the need to analyze infrastructure vulnerabilities for Repetitive Flood Loss area, specifically needing to fulfill FEMA's “Required Actions” focused on either removing facilities and infrastructure away from or above (elevate) to prevent future or repetitive damages and losses.
 - Mr. Monteleone, AK DOT/PF stated that FHWA funding limited what could be constructed/ reconstructed even in known Repetitive Flood Damaged areas. This prevented agency staff from repairing beyond existing conditions. He questioned how they can fulfill mitigation requirements if the FHWA or PA funding does not allow or provide additional work to protect the facility?
 - Scott explained that FEMA has a 406 Mitigation program beyond strictly repairing back to pre-existing conditions (PA and FHWA). 406 Mitigation is used within the PA project allowing construction beyond pre-existing conditions if analysis showed the additional construction would prevent future damages from similar events. He stated he would send the applicable documents to Mr. Monteleone for his review and consideration.
- Ms. Stevens, DNR/DGGS, asked AECOM to define our project completion date.
 - Scott explained our completion date is from providing a FEMA approvable SHMP by the project completion date. This allowed for State and FEMA time (30-day and 45-day respectively) for their review processes.
- Ms. Brown, DNR/DOF, explained she is a member of the State Emergency Response Commission (SERC). She asked if the SHMP was going to be presented to the SERC for review and ultimately be housed under the SERC's charter or purview.
 - Scott explained the SERC typically focuses on Hazardous Materials accidents, response, storage, and transportation. DHS&EM will most likely present the SHMP update to the SERC as a courtesy but it does not have to be reviewed and approved by them because the SHMP focuses on natural hazard mitigation efforts or activities; not response actions.

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SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) – Teleconference #2

Community: Statewide Agencies and Participants

Date/Time: January 31, 2018/10:00 to 11:00

From: R. Scott Simmons

Attendees:

- AECOM: Scott Simmons, Jessica Evans
- DHSEM Planning Section Staff

Comments:

- **Project Description:**
 - Update the legacy 2013 SHMP to fulfill current FEMA criteria
 - June 23, 2018 completion date
- **Participant Involvement Necessity**
 - Please review as this list has changed
 - Include diverse participants with agency and stakeholder mitigation capability, responsibility, and authority for determining infrastructure and agency programmatic impacts from:
 - Hazard data
 - Climate projections and data
 - Emergency response and recovery efforts
 - Economic development
 - Land use and development trends and initiatives
 - Housing successes and roadblocks
 - Health and social services issues
 - Natural and cultural resource limitations, expectations, and coordination
- **This Meeting's Focus (Black Text Only):**
 - Planning Process
 - Team Development/member selection: In-Progress
 - Legacy HMP project and initiative integration into other State planning and project processes
 - Have they been integrated
 - Identify what has been accomplished-details needed
 - Describe progress in statewide mitigation efforts
 - Describe changes in agency priorities
 - Data Gathering
 - Collect new data from all agencies
 - For example: DGGs is updating all natural hazard profiles
 - Need: Manmade, technological, infectious disease, and infestation profile language review and potential statewide impacts
 - Hazard identification
 - Provide geographic specific profile description
 - Public risk, and infrastructure vulnerability assessment:
 - "Due to the inherent uncertainties with projections of future hazard events, states are expected to look across the whole community of partners (for example, public, private, academic, non-governmental, etc.) to identify the most relevant*

data and select the most appropriate methodologies to assess risks and vulnerability.

- Mitigation Strategy review and update
 - “The mitigation strategy serves as the long-term blueprint for reducing the potential losses identified in the risk assessment, or in other words the mitigation strategy represents risk based decisions.”
 - Current project status, what worked, and roadblocks
 - Legacy project status review, reason for any changes
 - New project development
- State Mitigation Capabilities
 - Describe how the state’s existing capabilities aids our mitigation efforts
 - How do they strengthen Alaska’s capabilities
 - Define existing capabilities that demonstrate the state’s commitment to mitigation
 - Identify a wide range of resources used to implement mitigation activities
 - Provide actions that reveals improvement initiatives or areas that need improvement.
- Local Coordination and Mitigation Capabilities
 - Contractor will explain how the State supports local and tribal governments with mitigation planning through training, technical assistance, and funding.
- FEMA Plan Review, Evaluation, and Implementation
 - Does it reflect current and projected statewide conditions, trends and anticipated growth and development
 - Update the legacy 2013 SHMP to:
 - Assess goals and action plan
 - Are they still accurate?
 - How should the be rewritten?
 - Evaluate SHMP implementation progress
 - Contain a mechanism to adjust from current to projected changing conditions and environments
 - Still fit the State’s priorities and reflect current conditions
- Repetitive Loss Property Strategy
 - Repetitive Loss Properties are defined as:
 - “Single or multifamily residential properties that are covered under an NFIP flood insurance policy and;
 - 1. Have incurred flood-related damage for which 4 or more separate claims payments have been made, with the amount of each claim exceeding \$5,000, with the cumulative amount of such claims payments exceeding \$20,000; or
 - 2. For which at least 2 separate claims payments have been made under such coverage, with cumulative amount that exceeding the market value of the property.
 - 3. At least 2 of the claims must be within 10 years of each other, (claims made within 10 days of each other will be counted as 1 claim.”
 - Required actions include:
 - Identifying specific actions the State has taken to reduce the number of repetitive loss properties (which must include severe repetitive loss properties),
 - Specifying how the State reduces or, intends to reduce, the number of repetitive loss properties,
 - Describing the strategy the State ensures that local jurisdictions with severe repetitive loss properties take actions to reduce the number of these properties, including local mitigation plan development requirements.

SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) Update – Teleconference #3

Date/Time: February 21, 2018/10:00 to 11:00

From: R. Scott Simmons

Attendees:

- AECOM: Scott Simmons, Jessica Evans
- DHSEM Planning Section Staff
- Statewide Agencies and Participants

Comments:

- **Project Description:**
 - Update the legacy 2013 SHMP to fulfill current FEMA criteria
 - June 23, 2018 completion date
- **Participant Involvement Necessity**
 - Include diverse participants with agency and stakeholder mitigation capability, responsibility, and authority for determining infrastructure and agency programmatic impacts from:
 - **Hazard data-Agency Reviews:**
 - Sent legacy plan to everyone for review – let me know the sections you need
 - Sent out DeAnne Stevens, DGGs Hazard Analysis project description
 - Sent DOT hazard analysis for editing
 - Sent DNR-Dams hazard analysis for editing
 - Climate projections and data
 - Emergency response and recovery efforts
 - Economic development
 - Land use and development trends and initiatives
 - Housing successes and roadblocks
 - Health and social services issues
 - Natural and cultural resource limitations, expectations, and coordination
- **This Meeting's Focus (Black Text Only):**
 - Please review as this list has changed
 - Planning Process Discussion how are you coming along with:
 - Team Development/member selection
 - Legacy HMP project and initiative integration into your State agencies' planning and project processes?
 - What portion of the SHMP has been integrated
 - What has been accomplished – details needed
 - Describe progress in statewide mitigation efforts
 - Describe changes in agency priorities
 - Data Gathering
 - Collect new data from all agencies
 - For example: DGGs is updating all natural hazard profiles
 - Hazard identification
 - Provide geographic specific profile description
 - Public risk, and infrastructure vulnerability assessment:
 - Need to know who is working on these:
 - Manmade, technological: DNR-dams, USACE & DGGs-water-levees, DOT/PF: DOT/roads, DOT/airports, AKRR, Utility & Communication companies

- Infectious disease: DHSS, DEC
- Infestation profile language review and potential statewide impacts: DEC , DNR, DOF, DF&G
- Others?:
- Mitigation Strategy review and update
 - “The mitigation strategy serves as the long-term blueprint for reducing the potential losses identified in the risk assessment, or in other words the mitigation strategy represents risk based decisions.”
 - Current project status, what worked, and roadblocks
 - Legacy project status review, reason for any changes
 - New project development
- State Mitigation Capabilities
 - Describe how the state’s existing capabilities aids our mitigation efforts
 - How do they strengthen Alaska’s capabilities
 - Define existing capabilities that demonstrate the state’s commitment to mitigation
 - Identify a wide range of resources used to implement mitigation activities
 - Provide actions that reveals improvement initiatives or areas that need improvement.
- Local Coordination and Mitigation Capabilities
 - Contractor will explain how the State supports local and tribal governments with mitigation planning through training, technical assistance, and funding.
- FEMA Plan Review, Evaluation, and Implementation
 - Does it reflect current and projected statewide conditions, trends and anticipated growth and development
 - Update the legacy 2013 SHMP to:
 - Assess goals and action plan
 - Are they still accurate?
 - How should the be rewritten?
 - Evaluate SHMP implementation progress
 - Explain how the SHMP is a mechanism to adjust from current to projected changing conditions and environments
 - Explain how the SHMP fulfills the State’s priorities and reflect current conditions
- Repetitive Loss Property Strategy
 - Repetitive Loss Properties are defined as:
 - “Single or multifamily residential properties that are covered under an NFIP flood insurance policy and;*
 - 1. Have incurred flood-related damage for which 4 or more separate claims payments have been made, with the amount of each claim exceeding \$5,000, with the cumulative amount of such claims payments exceeding \$20,000; or*
 - 2. For which at least 2 separate claims payments have been made under such coverage, with cumulative amount that exceeding the market value of the property.*
 - 3. At least 2 of the claims must be within 10 years of each other, (claims made within 10 days of each other will be counted as 1 claim.”*
 - Required actions include:
 - Identifying specific actions the State has taken to reduce the number of repetitive loss properties (which must include severe repetitive loss properties),
 - Specifying how the State reduces or, intends to reduce, the number of repetitive loss properties,
 - Describing the strategy the State ensures that local jurisdictions with severe repetitive loss properties take actions to reduce the number of these properties, including local mitigation plan development requirements.

SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) Update – Teleconference #4

Date/Time: March 7, 2018/10:00 to 11:00

From: R. Scott Simmons

Attendees:

- AECOM: Scott Simmons, Jessica Evans
- DHSEM Planning Section Staff
- Statewide Agencies and Participants

Comments:

- **Project Description:**
 - Update the legacy 2013 SHMP to fulfill current FEMA criteria
 - June 23, 2018 completion date
- **Participant Involvement Necessity**
 - Include diverse participants with agency and stakeholder mitigation capability, responsibility, and authority for determining infrastructure and agency programmatic impacts from:
 - **Hazard data-Agency Reviews:**
 - Sent legacy plan to everyone for review – let me know the sections you need
 - Sent out DeAnne Stevens, DGGs Hazard Analysis project description
 - Sent DOT hazard analysis for editing
 - Sent DNR-Dams hazard analysis for editing
 - Climate projections and data
 - Emergency response and recovery efforts
 - Economic development
 - Land use and development trends and initiatives
 - Housing successes and roadblocks
 - **Health and social services issues**
 - **Natural and cultural resource limitations, expectations, and coordination**
- **This Meeting's Focus (Black Text Only):**
 - Please review as this list has changed
 - **Planning Process Discussion how are you coming along with:**
 - Team Development/member selection
 - **Legacy HMP project and initiative integration into your State agencies' planning and project processes?**
 - What portion of the SHMP has been integrated
 - What has been accomplished – details needed
 - Describe progress in statewide mitigation efforts
 - Describe changes in agency priorities
 - Data Gathering
 - Collect new data from all agencies
 - For example: DGGs is updating all natural hazard profiles
 - **Hazard identification**
 - Provide geographic specific profile description
 - Public risk, and infrastructure vulnerability assessment:
 - **Need to know who is working on these:**
 - Manmade, technological: DNR-dams, USACE & DGGs-water-levies, DOT/PF: DOT/roads, DOT/airports, AKRR, Utility & Communication companies

- Infectious disease: DHSS, DEC
- Infestation profile language review and potential statewide impacts: DEC , DNR, DOF, DF&G
- Others?:
- Mitigation Strategy review and update
 - “The mitigation strategy serves as the long-term blueprint for reducing the potential losses identified in the risk assessment, or in other words the mitigation strategy represents risk based decisions.”
 - Current project status, what worked, and roadblocks
 - Legacy project status review, reason for any changes
 - New project development
- State Mitigation Capabilities
 - Describe how the state’s existing capabilities aids our mitigation efforts
 - How do they strengthen Alaska’s capabilities
 - Define existing capabilities that demonstrate the state’s commitment to mitigation
 - Identify a wide range of resources used to implement mitigation activities
 - Provide actions that reveals improvement initiatives or areas that need improvement.
- Local Coordination and Mitigation Capabilities
 - Contractor will explain how the State supports local and tribal governments with mitigation planning through training, technical assistance, and funding.
- FEMA Plan Review, Evaluation, and Implementation
 - Does the SHMP reflect current and projected statewide conditions, trends and anticipated growth and development
 - Update the legacy 2013 SHMP to:
 - Assess goals and action plan
 - Are they still accurate?
 - How should the be rewritten?
 - Evaluate SHMP implementation progress
 - Explain how the SHMP is a mechanism to adjust from current to projected changing conditions and environments
 - Explain how the SHMP fulfills the State’s priorities and reflect current conditions
- Repetitive Loss Property Strategy
 - Repetitive Loss Properties are defined as:
 - “Single or multifamily residential properties that are covered under an NFIP flood insurance policy and;
1. Have incurred flood-related damage for which 4 or more separate claims payments have been made, with the amount of each claim exceeding \$5,000, with the cumulative amount of such claims payments exceeding \$20,000; or
2. For which at least 2 separate claims payments have been made under such coverage, with cumulative amount that exceeding the market value of the property.
3. At least 2 of the claims must be within 10 years of each other, (claims made within 10 days of each other will be counted as 1 claim.”
 - Required actions include:
 - Identifying specific actions the State has taken to reduce the number of repetitive loss properties (which must include severe repetitive loss properties),
 - Specifying how the State reduces or, intends to reduce, the number of repetitive loss properties,
 - Describing the strategy the State ensures that local jurisdictions with severe repetitive loss properties take actions to reduce the number of these properties, including local mitigation plan development requirements.

SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) Update – Teleconference #5

Date/Time: March 28, 2018/10:00 to 11:00

From: R. Scott Simmons

Attendees:

- AECOM: Scott Simmons, Jessica Evans
- DHSEM Planning Section Staff
- Statewide Agencies and Participants

Comments:

- **Project Description:**
 - Update the legacy 2013 SHMP to fulfill current FEMA criteria
 - June 23, 2018 completion date
- **Participant Involvement Necessity**
 - Include diverse participants with agency and stakeholder mitigation capability, responsibility, and authority for determining infrastructure and agency programmatic impacts from:
 - **Hazard data-Agency Reviews:**
 - Sent legacy plan to everyone for review – let me know the sections you need
 - Sent out DeAnne Stevens, DGGs Hazard Analysis project description
 - Sent DOT hazard analysis for editing
 - Sent DNR-Dams hazard analysis for editing
 - Climate projections and data
 - Emergency response and recovery efforts
 - Economic development
 - Land use and development trends and initiatives
 - Housing successes and roadblocks
 - **Health and social services issues**
 - **Natural and cultural resource limitations, expectations, and coordination**
- **This Meeting's Focus (Black & Red Text):**
 - Please review as this list has changed
 - **Planning Process Discussion how are you coming along with:**
 - Team Development/member selection
 - **Legacy HMP project and initiative integration into your State agencies' planning and project processes?**
 - What portion of the SHMP has been integrated
 - What has been accomplished – details needed
 - Describe progress in statewide mitigation efforts
 - Describe changes in agency priorities
 - Data Gathering
 - Collect new data from all agencies
 - DGGs is updating nearly all natural hazard profiles
 - Project Categories list available upon request
 - **Hazard identification**
 - Provide geographic specific profile description
 - Public risk, and infrastructure vulnerability assessment:
 - **Need to know who is working on these:**

- **Manmade, technological:** DNR-dams, USACE & DGGs-water-levies, DOT/PF: DOT/roads, DOT/airports, AKRR, **Utility, Communication companies**
- **Infectious disease:** DHSS, DEC
- **Infestation profile language review and potential statewide impacts:** DEC , DNR, DOF, DF&G
- **Others?:**
- **Mitigation Strategy review and update**
 - “The mitigation strategy serves as the long-term blueprint for reducing the potential losses identified in the risk assessment, or in other words the mitigation strategy represents risk based decisions.”
 - **Current project status, what worked, and roadblocks**
 - All agencies
 - **Legacy project status review, reason for any changes**
 - All agencies
 - **New project development**
 - All agencies
- **State Mitigation Capabilities**
 - **Describe how the state’s existing capabilities aids our mitigation efforts**
 - All agencies
 - **How do they strengthen Alaska’s capabilities**
 - All agencies
 - Define existing capabilities that demonstrate the state’s commitment to mitigation
 - Identify a wide range of resources used to implement mitigation activities
 - Provide actions that reveals improvement initiatives or areas that need improvement.
- **Local Coordination and Mitigation Capabilities**
 - Contractor will explain how the State supports local and tribal governments with mitigation planning through training, technical assistance, and funding.
- **FEMA Plan Review, Evaluation, and Implementation**
 - Does the SHMP reflect current and projected statewide conditions, trends and anticipated growth and development
 - Update the legacy 2013 SHMP to:
 - Assess goals and action plan
 - Are they still accurate?
 - How should the be rewritten?
 - Evaluate SHMP implementation progress
 - Explain how the SHMP is a mechanism to adjust from current to projected changing conditions and environments
 - Explain how the SHMP fulfills the State’s priorities and reflect current conditions
- **Repetitive Loss Property Strategy**
 - **Repetitive Loss Properties are defined as:**
 - “Single or multifamily residential properties that are covered under an NFIP flood insurance policy and;
 1. Have incurred flood-related damage for which 4 or more separate claims payments have been made, with the amount of each claim exceeding \$5,000, with the cumulative amount of such claims payments exceeding \$20,000; or
 2. For which at least 2 separate claims payments have been made under such coverage, with cumulative amount that exceeding the market value of the property.
 3. At least 2 of the claims must be within 10 years of each other, (claims made within 10 days of each other will be counted as 1 claim.”



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- Required actions include:
 - Identifying specific actions the State has taken to reduce the number of repetitive loss properties (which must include severe repetitive loss properties),
 - Specifying how the State reduces or, intends to reduce, the number of repetitive loss properties,
 - Describing the strategy the State ensures that local jurisdictions with severe repetitive loss properties take actions to reduce the number of these properties, including local mitigation plan development requirements.

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SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) Update – Teleconference #6

Date/Time: April 18,, 2018/10:00 a.m. to 11:00 a.m.

From: Scott Simmons

Attendees:

- AECOM: Scott Simmons, Jessica Evans
- DHSEM Planning Section Staff
- Statewide Agencies and Participants

Comments:

- **Project Description:**
 - Update the legacy 2013 SHMP

I sent the attached four legacy Mitigation Strategy components for everyone's review and discussion for this week's teleconference.

- 2013 Legacy HM Goals replaced
- 2013 Legacy MH Actions Status
- 2013 Legacy HM Programs
- 2013 Legacy HM Success

Please follow the instructions provided at the top of each attachment

- Review the **legacy Goals**. I believe each legacy "goal" was more of a proposed action rather than an actual "global goal". Hence the very abbreviated "Goal" table that provides for three **new "Multi-Hazard"** categories that allows similar actions to address not only a primary hazard, but subsequent (secondary, tertiary, etc.) impacts
- Review and edit the **"MH Actions Status"** to reflect
 - any activity that your agency either "Leads" or "Supports"
 - state whether the project was
 - completed (include the completion date)
 - deferred (provide a reason it was deferred i.e. No funding, staffing, other resources)
 - deleted (no longer needed or feasible due to new technologies, etc.)
 - edited or combined with other actions (to better reflect agency needs, combined similar projects to reduce redundancy, reworded for clarity, etc.)
- Review, edit, and update the **"HM Programs"** to include any new programs initiated since the legacy 2013 SHMP was developed and implemented. (spanning 2012 to present).
- Review, edit, and update the **"HM Success"** to include any new action related initiatives that proved to be successful since the legacy 2013 SHMP was developed and implemented. (spanning 2012 to present)

Please don't forget to complete your **"Agency Capability Questionnaire"** and forward to me. The earlier the better to assure 2018 SHMP FEMA review compliance.

Please feel free to call or email to discuss or clarify my intent

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SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) Update – Teleconference #7

Date/Time: May 2, 2018/10:00 a.m. to 11:00 a.m.

From: Scott Simmons

Attendees:

- AECOM: Scott Simmons, Jessica Evans
- DHSEM Planning Section Staff
- Statewide Agencies and Participants

Comments:

- **Project Description:**
 - Update the legacy 2013 SHMP

I sent the attached four legacy Mitigation Strategy components for everyone's review and discussion for this week's teleconference.

- 2013 Legacy HM Goals replaced
- 2013 Legacy MH Actions Status
- 2013 Legacy HM Programs
- 2013 Legacy HM Success

Please follow the instructions provided at the top of each attachment

- Review the **legacy Goals**. I believe each legacy "goal" was more of a proposed action rather than an actual "global goal". Hence the very abbreviated "Goal" table that provides for three **new "Multi-Hazard"** categories that allows similar actions to address not only a primary hazard, but subsequent (secondary, tertiary, etc.) impacts

SS Comment: I received (*and agree with*) a few suggestions to even further trim the goals. The three I suggested would also fulfill the following suggested samples:

"Scott,

Below, please find our inputs for the 2013 Legacy Goals:

I agree with you that the Goals should be reduced. According to the FEMA guidance on preparing mitigation goals and objectives, goals are usually "general guidelines on what you want to achieve" and "they are usually broad policy-type statements, long term and represent global visions." In that light below are a few suggestions for Goals:

1. *Unless there's a priority or need, I think all the goals and objectives should be Multi-Hazard, incorporating both natural and man-made hazards. I think the actions should refer down the hazard and program levels, but maybe not down to the project level (project level should be local/tribal level)*
2. *Suggested Goals:*
 - a. *Minimize/eliminate statewide infrastructure, private property and business losses to natural and **man-made hazard** events through mitigation*
 - b. *Minimize/eliminate statewide injuries and loss of life due to natural **and man-made** hazard events through mitigation*

SS Comment to consider: The SHMP is not required to address manmade hazards as these are typically addressed in emergency response and homeland security as well as other infrastructure plans

Objectives: From the guidance, objectives define strategies or implementation steps to attain goals. I interpret these as the "How" from the State perspective

1. *Suggested multi-hazard objectives*
 - a. *Plan: Work with tribal, local, state. PNP and business entities and interagency partners to identify and characterize their hazards and risks, define their potential mitigation projects, priorities, and strategies through mitigation outreach and planning.*
 - b. *Protect: Work with tribal, local, state. PNP and business entities and interagency partners to fund their mitigation projects through project technical assistance, outreach and training*
 - c. *Educate: Work with tribal, local, state. PNP and business entities and interagency partners to educate themselves and their communities on hazards, disaster preparedness and mitigation*
 - d. *Recover with resilience: Work with tribal, local, state. PNP and business entities and interagency partners to include mitigation in disaster recovery efforts*
2. *You might consider whether you want measurable objectives such as*
 - a. *Having a certain number or percentage of active local/tribal hazard mitigation plans in the State*
 - b. *A certain percentage of available HMGP dollars obligated to projects and plans within a certain time frame; a certain percentage of available State PDM (share) projects submitted to FEMA*
 - c. *A certain number of local planning engagements and /or technical assistance (trainings, meetings, teleconferences, conference sessions) conducted annually*
 - d. *A certain percentage of eligible disaster project worksheets with mitigation included*

This document identifies priority goals (many of which are actions) by hazard. I'll address those in the response to the Mitigation Actions document.

SS comment:-I also heartily agree with this opinion as I expressed it within the legacy actions attachment.

SS comment: I think that Deanne Stevens and her team can provide an approach to accomplishing this suggestion:

Finally, I think it would be useful to have an analysis-based perspective of which hazards have the highest programmatic (mitigation) priority in this section. The analysis might be based upon assessed dollar amount damage and lives lost from state and federal level disasters by hazard type; programmatic funding available for mitigation by hazard type; or other. The State's priorities should be an important part of its mitigation strategy at the "high-level" perspective i.e., at the Goals and Objectives perspective.

Please don't forget to complete your **"Agency Capability Questionnaire"** and forward to me. The earlier the better to assure 2018 SHMP FEMA review compliance.

Please feel free to call or email to discuss or clarify my intent



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SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) Update – Teleconference #8

Date/Time: May 16, 2018/10:00 a.m. to 11:00 a.m.

From: Scott Simmons

Attendees:

- AECOM: Jessica Evans, Laura Young
- DHSEM Planning Section Staff
- Statewide Agencies and Participants

Comments:

Project Description: Update the legacy 2013 SHMP

I sent four legacy Mitigation Strategy components for everyone's review and additional discussion for ongoing teleconference discussions.

- 2013 Legacy HM Goals
- 2013 Legacy MH Actions status
- 2013 Legacy HM Programs status or changes
- 2013 mitigation project or action successes

Please follow the instructions provided at the top of each attachment

- Review the **legacy Goals**. I believe each legacy "goal" was more of a proposed action rather than an actual "global goal". Hence the very abbreviated "Goal" table that provides for new "Multi-Hazard" categories that allows similar actions to address not only a primary hazard, but subsequent (secondary, tertiary, etc.) impacts

SHMP Goals and Objectives:

Goals provide general guidelines on what the State (borough, community, or tribe) seeks to achieve. They are typically broad, policy statements with a long-term focus that represent a jurisdiction's global visions.

Unless there's a priority or need, goals and objectives should be Multi-Hazard focused to reduce redundancy, incorporating both natural and manmade hazards as applicable to their threat and impact. Actions should refer through hazard, program and even the project level to assure the overarching goal is fulfilled. There are two options to abbreviate the SHMP Goals.

Option 1: Abbreviated to focus on three categories:

Education/Outreach, Planning, and Active Mitigation (Construction)

No.	SHMP Goal Description
Multi-Hazards (MH)	
MH 1 Outreach	Provide outreach activities to educate and promote recognizing and mitigating natural and Other hazards that affect Alaska
MH 2 Planning	Cross-reference mitigation goals and actions throughout Alaska agency planning mechanisms and projects
MH 3 Construction	Develop construction activities that reduce potential natural and manmade hazard damages and losses

Option 2: *Slightly expanded to focus on four categories*

No.	Goal Description
Multi-Hazards (MH)	
MH 1	Maximize coordinated agency educational and outreach efforts and activities to promote recognizing and mitigation natural and manmade hazard impacts or threats.
MH 2	Encourage jurisdictions to minimize, eliminate, or avoid statewide natural and man-made hazard damage or loss to infrastructure, private property, and businesses by implementing focused mitigation initiatives.
MH 3	Encourage jurisdictions to minimize, eliminate or avoid statewide risks, injuries, and loss of life due to natural and manmade hazard events through focused mitigation initiatives.
MH 4	Maximize statewide agency efforts to coordinate and integrate hazard mitigation planning precepts and hazard vulnerability analysis within agency planning, funding, and construction initiatives and projects.

Objectives include or define strategies or implementation steps to attain goals. These are the “How-to” achieve identified goals from a high-level State (borough, community, tribal) perspective. Objectives are typical categorized as Planning, Protecting, Educating, and Recovering from hazard impacts

Suggested 2018 Multi-Hazard (MH) Objectives (three options) to replace 30 pages of agency hazard mitigation projects.

Option 1: No Mitigation Objectives

Option 2: Non-measurable MH objectives

- 1.1. Plan: Work with tribal, local, state. Public Non-Profits (PNPs), business entities, and interagency partners to identify and characterize their natural and manmade hazards and risks, define their potential mitigation projects, priorities, and strategies through mitigation outreach and planning.
- 1.2. Protect: Work with tribal, local, state. PNP and business entities and interagency partners to fund their mitigation projects through project technical assistance, outreach and training
- 1.3. Educate: Work with tribal, local, state. PNP and business entities and interagency partners to educate themselves and their communities on hazards, disaster preparedness and mitigation
- 1.4. Recover with resilience: Work with tribal, local, state. PNP and business entities and interagency partners to include mitigation in disaster recovery efforts

Option 3: Measurable MH objectives

- 1.1. Track multi-jurisdictional, local, and tribal hazard mitigation plans that are active, expired, or in-progress within Alaska.
- 1.2. Annually determine and track statewide HMGP and PDM obligated funding expenditures compared to actual agency and jurisdictional funding requests to determine future project funding needs and to focus future project prioritization.
- 1.3. Annually determine and track mitigation focused planning engagements and technical assistance activities (trainings, meetings, teleconferences, conference sessions, and community visits) were conducted annually
- 1.4. Annually review, and track eligible disaster project worksheets (PWs) with 406 mitigation program funding were reviewed and included
- 1.5. Finally, I think it would be useful to have an analysis-based perspective of which hazards have the highest programmatic (mitigation) priority in this section. The analysis might be based upon assessed dollar amount damage and lives lost from state and federal level disasters by hazard type; programmatic



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funding available for mitigation by hazard type; or other. The State's priorities should be an important part of its mitigation strategy at the "high-level" perspective i.e., at the Goals and Objectives perspective.

2. Agency GIS data critically needed:

Please provide your agency's GIS lead to assist us with obtaining your facilities data to identify their relative threat to each natural hazard classification. These data will assure we have accurately analyzed potential infrastructure threats to better enable the SHMAC and planning team members to guide education and funding to protect existing and site new future infrastructure.

Please don't forget to complete your "**Agency Capability Questionnaire**" and forward to AECOM for SHMP inclusion.

Please feel free to call or email to discuss or clarify questions

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Agenda

700 G Street, Suite 500
Anchorage, AK 99501
Phone: 907.261.9706
Fax: 907.562.1297

SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) Update – Teleconference #9

Date/Time: July 13, 2018/10:00 a.m. to 11:00 a.m.

From: Scott Simmons

Attendees:

- AECOM: Scott Simmons, Kelly Isham, Laura Young
- DHSEM Planning Section Staff
- Statewide Agencies and Participants

Comments:

1. Urgent: Please return your edited documents

Please forward to AECOM by July 14 for SHMP inclusion.

- Agency Capability Questionnaire required for FEMA regulatory compliance.
- 2013 Legacy HM Programs: current status, edits, changes, (complete, deleted, were they successful etc.)

2. Discuss DNR's Natural Hazard Research, Hazard Profiling, GIS data development status

3. 2018 SHMP Goals

Goals provide general guidelines on what the State (borough, community, or tribe) seeks to achieve. They are typically broad, policy statements with a long-term focus that represent a jurisdiction's global visions.

Unless there's a priority or need, goals and objectives should be Multi-Hazard focused to reduce redundancy, incorporating both natural and manmade hazards as applicable to their threat and impact. Actions should refer through hazard, program and even the project level to assure the overarching goal is fulfilled. There are two options to abbreviate the SHMP Goals.

Abbreviated to focus on four "objective" categories: Education/Outreach, Planning, Active Mitigation (Construction), and Funding

Goal Title	SHMP Goal Description
Multi-Hazards (MH)	
MH 1 Outreach	Coordinate agency outreach activities to educate and promote recognizing and mitigating natural and Other hazards that affect Alaska
MH 2 Planning	Coordinate agency efforts integrate hazard mitigation planning precepts and hazard vulnerability analysis within agency planning, funding, and construction initiatives and projects.
MH 3 Construction	Develop construction activities that reduce potential natural and manmade hazard damages and losses
MH 4 Mitigation Funding	Increase funding opportunities for hazard mitigation actions and initiatives

4. Economic, health, human-caused, technological, and terrorism-related hazards are beyond the scope of this plan. Any non-natural hazards (such as Dam Failure) will be contained within the SHMP appendices as non-natural hazards are typical subsequent to complicated natural hazard events.

5. Agency GIS data critically needed:

Please provide your agency's GIS lead to assist us with obtaining your facilities data to identify their relative threat to each natural hazard classification. These data will assure we have accurately analyzed potential infrastructure threats to better enable the SHMAC and planning team members to guide education and funding to protect existing and site new future infrastructure.

Please feel free to call or email to discuss or clarify questions

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Agenda

700 G Street, Suite 500
Anchorage, AK 99501
Phone: 907.261.9706
Fax: 907.562.1297

SUBJECT: DHSEM State Hazard Mitigation Plan (SHMP) Update – Teleconference #10

Date/Time: July 19, 2018/10:00 a.m. to 11:00 a.m.

From: Scott Simmons

Attendees:

- AECOM: Scott Simmons, Kelly Isham
- DHSEM Planning Section Staff
- Statewide Agencies and Participants

Comments:

1. Urgent: Please return your edited documents

Please forward to AECOM

- Agency Capability Questionnaire required for FEMA regulatory compliance.
- Legacy 2013 HMP integration
- Mitigation successes, and
- Implementation challenges.

2. DNR's Natural Hazard Research, Hazard Profiling, GIS data development status

- Received draft and final hazard profiles and GIS data sets
- Being integrated within 2018 draft SHMP

3. Agency GIS data critically needed:

Please provide your agency's facilities' as well as any critical infrastructure (roads, bridges, power generation, sanitation, water works, etc.) GIS data to enable us to identify their relative threat from each natural hazard threat.

These data will assure we have accurately analyzed potential infrastructure threats to better enable the SHMAC and planning team members to guide education and funding to protect existing and future infrastructure.

Please feel free to call or email to discuss or clarify questions



R. Scott Simmons, CFM, CPM
Senior Emergency Management Planner

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**APPENDIX 13.9 STATE EMERGENCY RESPONSE COMMISSION (SERC)
MEMBERSHIP**

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The State Emergency Response Commission (SERC) comprises 21 seated members:

Nine state department members

Seven public members

Six ex-officio members

State Department Members

Department of Military and Veterans Affairs (DMVA)

Commissioner Laurie Hummel, Chairperson

P.O. Box 5800

Fort Richardson, AK 99505-5800

Phone: (907) 428-6003

laurie.hummel@alaska.gov, or designees

Mr. Bob Doehl, Deputy Commissioner

Phone: (907) 428-6003

bob.doehl@alaska.gov, or

Mr. Michael Sutton, Director

Division of Homeland Security and Emergency Management
(DHS&EM)

Phone: (907) 428-7000

mike.sutton@alaska.gov

Department of Environmental Conservation (DEC)

Commissioner Larry Hartig

410 Willoughby Avenue, Suite 303

Juneau, AK 99801-1795

Phone: (907) 465-5066

larry.hartig@alaska.gov or designee

Kristin Ryan, Director

Division of Spill Prevention and Response

**Department of Commerce, Community and Economic
Development (DCCED)**

Commissioner Chris Hladick

P.O. Box 110800

Juneau, AK 99811-0800

Phone: (907) 465-2500

chris.hladick@alaska.gov or designee

Mr. Fred Parady

Phone: (907) 465-2500

Department of Fish and Game

Commissioner Sam Cotten

P.O. Box 25526

Juneau, AK 99802-5526

Phone: (907) 465-6141

sam.cotten@alaska.gov, or designee

Ms. Jill Klein

Phone: (907) 267-2228

jill.klein@alaska.gov

SERC Members

Department of Health and Social Services
Commissioner Valerie Davidson P.O. Box 110601 Juneau, AK 99811-0601 Phone: (907) 465-3030 val.davidson@alaska.gov, or designee
Dr. Jay Butler Phone: (907) 269-6680 jay.butler@alaska.gov
Department of Labor and Workforce Development
Commissioner Heidi Drygas P.O. Box 111149 Juneau, AK 99811-1149 Phone: (907) 465-2700 heidi.drygas@alaska.gov, or designee
Ms. Heather Beaty Phone: (907) 269-3569 heather.beaty@alaska.gov
Department of Natural Resources
Commissioner Andy Mack 550 W. 7th Ave Ste 1400 Anchorage, AK 99501-3561 Phone: (907) 269-8431 andy.mack@alaska.gov, or designee
Tim Dabney Phone: (907) 269-8476 tim.dabney@alaska.gov
Department of Public Safety
Commissioner Walt Monegan 5700 E. Tudor Road Anchorage, AK 99507-1225 Phone: (907) 269-5086 walt.monegan@alaska.gov
Department of Transportation and Public Facilities
Commissioner Marc Luiken 3132 Channel Drive, Suite 300 Juneau, AK 99801-7898 Phone: (907) 465-3900 Marc.luiken@alaska.gov, or designee
Mr. Steve Hatter Phone: (907) 465-3900 steve.hatter@alaska.gov

SERC Members

Public Members
LEPC/Urban (2 Seats)
Mr. George Vakalis 6311 Habicht Court Anchorage, AK 99507 Phone: (907) 223-5014 george.vakalis755@hotmail.com
Mr. Clint Brooks 1650 Cowles Street Fairbanks, AK 99701 Phone: (907) 452-8181 clint.brooks@bannerhealth.com
LEPC/Rural (2 Seats)
Mr. Tom Vaden P.O. Box 1506 Nome, AK 99762 Phone: (907) 443-3404 thvaden@gci.net
Mr. Chris Noel P. O. Box 480 Healy, Alaska 99743 Phone: (907) 683-1330 chris_noel@denaliborough.com
Local Government Representative (2 Seats)
Mr. Abner Hoage 70 Bawden Street Ketchikan, AK 99901 Phone: (907) 225-9616 abnerh@city.ketchikan.ak.us
Mr. Casey Cook 680 North Seward Meridian Parkway Wasilla, AK 99654 Phone: (907) 373-8800 casey.cook@matsugov.us
Public Member-at-Large
Mr. James Butler III 125 North Willow Street, Suite 100 Kenai, AK 99611 Phone: (907) 283-7167 jim@baldwinandbutler.com

Ex-Officio Members
Department of Administration
Commissioner Sheldon Fisher P.O. Box 110200 Juneau, AK 99811-0200 Phone: (907) 465-2200 sheldon.fisher@alaska.gov , or designees
Mr. Scott Jordan Phone: (907) 465-5723 scott.jordan@alaska.gov
Department of Education and Early Development
Commissioner Michael Johnson P.O. Box 110500 Juneau, AK 99801-1894 Phone: (907) 465-2802 susan.mccauley@alaska.gov , or designee
Ms. Sana Efird Phone: (907) 465-8691 Sana.efird@alaska.gov
Federal Emergency Management Agency
Mr. Scott Jordan Phone: (907) 465-5723 scott.jordan@alaska.gov
Alaskan Command
Col Richard T. Koch Alaskan Command 9480 Pease Avenue, Suite 301 Joint Base Elmendorf-Richardson, AK 99506 Phone: (907) 552-2280 richard.koch@us.af.mil , or Alternate
Mr. Don Jurewicz donald.jurewicz.1@us.af.mil
U.S. Coast Guard
Commander James Binniker US Coast Guard Sector Anchorage P.O. Box 5800 JBER, AK 99505-0800 Phone: (907) 428-4148 james.a.binniker@uscg.mil
Environmental Protection Agency
Mr. Robert Whittier Alaska Operations Office Room 537 Federal Building 222 West 7th Avenue, Suite 19 Anchorage, AK 99513-7588 Phone: (907) 271-3247 whittier.robert@epa.gov

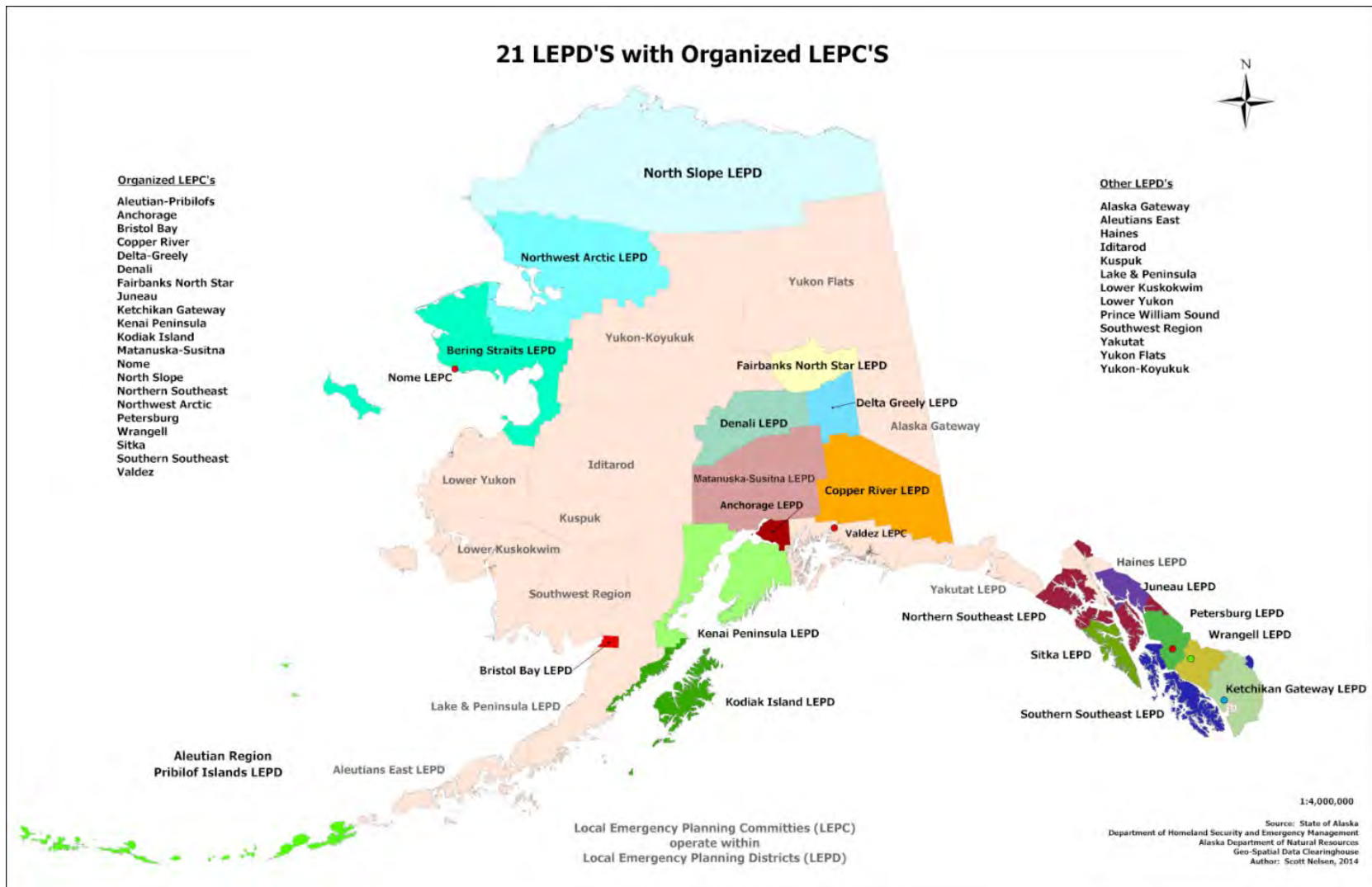
Source: https://www.ready.alaska.gov/SERC/SERC_membership

**APPENDIX 13.10 LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) AND
LOCAL EMERGENCY PLANNING DISTRICT (LEPD)
MEMBERSHIP LOCATION MAP**

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LEPC and LEPD Location Map

Local Emergency Planning Committee (LEPC) and Local Emergency Planning District (LEPD) Membership Locations



Source: <https://www.ready.alaska.gov/SERC/documents/LEPC%20map.pdf>

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APPENDIX 13.11 SEISMIC HAZARD SAFETY COMMISSION (SHSC) MEMBERSHIP

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Alaska Seismic Hazards Safety Commission

NAME	APPOINTED	REAPPOINTED	EXPIRES
Athey, Edward (Seward) Local Governments Representative	07/07/2017		06/30/2020
Gibbs, David (Fairbanks) Local Government Representative/Seismically Active Regions	04/05/2016	07/12/2018	06/30/2021
Gladsjo, Garret (Juneau) Public/Restricted	07/12/2018		06/30/2021
Kelly, Laura (Juneau) Federal Agency Representative	05/26/2005	07/07/2017	06/30/2020
Ruppert, Natalia (Fairbanks) University of Alaska Representative	07/12/2018		06/30/2021
Scher, Robert (Anchorage) Public/Restricted	10/26/2010	07/01/2016	06/30/2019
Shockley, Jennifer (Dutch Harbor) Local Government Representative/Seismically Active Regions	07/12/2018		06/30/2021
Stevens, De Anne (Fairbanks) DNR Representative	11/01/2015	07/01/2016	06/30/2019
Strait, Sterling (Anchorage) Public/Restricted	01/04/2017	07/07/2017	06/30/2020
Stuart, Kimberly (JBER) DMVA Representative	01/04/2017		06/30/2019
Vacant () Insurance Industry Representative			06/30/2018

Source: <https://gov.alaska.gov/services/boards-and-commissions/roster/?board=208>

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**APPENDIX 13.12 ALASKA PARTNERSHIP FOR INFRASTRUCTURE PROTECTION
(APIP)**

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APIP



Mission

The Alaska Partnership for Infrastructure Protection (APIP) works to integrate the private and public sector critical infrastructure owners into the municipal, state, and federal emergency framework, participating in all stages of the disaster cycle, from preparedness and mitigation through to response and recovery. APIP's purpose is to improve Alaska's emergency management capabilities through the following:

- Resource identification, management, and sharing
- Information sharing and management
- Emergency planning and response process improvement
- Infrastructure sector characterization to understand and address vulnerabilities, dependencies, and single points of failure
- Provide awareness of physical security, cyber security, law enforcement, and antiterrorism threats
- Strengthen individual business's response capacity
- Team building and partnering for exercises
- Make recommendations for priorities of protection, support, and recovery of critical infrastructure
- Provide a safe partnership environment for Critical Infrastructure owners/operators to increase resiliency statewide

To accomplish these broad mission areas, APIP may:

- Establish infrastructure maps
- Share infrastructure information with APIP partners and other parties, as required
- Foster a planning and response environment for critical infrastructure resource holders
- Develop internal communications procedures
- Conduct various types of internal exercises and training opportunities

Schedule:

- The first meeting of the 2018-2019 Season is scheduled for Thursday, September 20, 2018

Source: <https://ready.alaska.gov/APIP>

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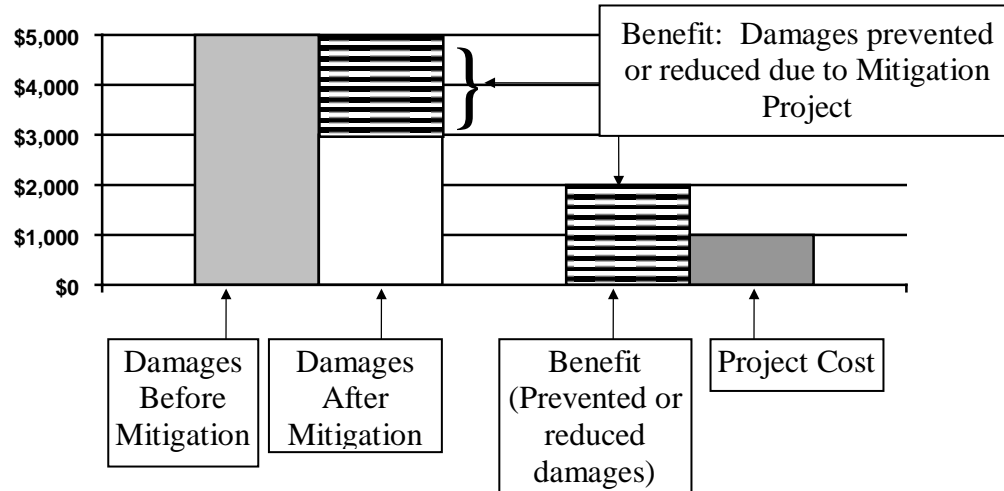
**APPENDIX 13.13 BENEFIT-COST ANALYSIS (BCA) PROCESS AND SAMPLE
FACT SHEET**

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Benefit Cost Analysis Process

How to Determine Cost-Effectiveness of Mitigation Projects

When Congress enacted the Stafford Act's mitigation provisions, one of the criteria to determine priorities for mitigation funding was cost effectiveness. This cost effective provision was in response to the recognition that there would never be enough funding to completely mitigate against every hazard. To determine the cost effectiveness of proposed mitigation projects, FEMA implemented a benefit cost analysis (BCA) requirement to mitigation grant funding applications. The basic requirement of the BCA is that the benefit of the mitigation project must equal or exceed the cost, a benefit cost ratio (BCR) of 1:1 or greater. Over several years, FEMA developed a set standard values for use in BCA and custom software that establishes mitigation benefits and calculates the BCR. Benefit cost analysis submitted to FEMA to justify mitigation funding requires substantial documentation of project costs and benefits. FEMA provides the custom BCA software and training online at <https://www.fema.gov/benefit-cost-analysis>. An overview of the BCA process for a mitigation projects follows.



FEMA Basic Benefit-Cost Model. For more information about FEMA's Benefit-Cost Modules, please contact the FEMA Region X Mitigation Division at 425-487-4600.

It is important to understand that benefit-cost analysis is basically the same for each type of hazard mitigation project. The only differences are the types of data that are used in the calculations, depending on whether the project is for floods, earthquakes, or other natural hazards. For example, whereas the depth of flooding is used to estimate damage for flood mitigation projects, the severity of ground shaking is used to estimate damage for earthquake mitigation projects.

Calculating the Benefit – Cost Ratio

In the graph above, cost-effectiveness is determined by comparing the project cost of \$1,000, to the value of damages prevented after the mitigation measure, which is \$2,000. Because the dollar value of benefits exceeds the costs of funding the project, the project is cost-effective. This relationship is depicted numerically by dividing the benefits by the costs, resulting in a benefit-cost ratio (BCR). The BCR is simply a way of stating whether benefits exceed project costs, and

Benefit Cost Analysis Process

by how much. To derive the BCR, divide the benefits by the cost ($\$2,000 \div \$1,000$); if the result is 1.0 or greater, then the project is cost-effective. In this instance, the BCR is 2.0, which far exceeds the 1.0 level. On the other hand, if the cost of the project is \$2,000 and the benefits are only \$1,000, the project would have a BCR of 0.50 ($\$1,000 \div \$2,000$) and would not be cost-effective.

Conducting a benefit-cost analysis determines one of two things: either the project is cost-effective ($BCR > 1.0$), or it is not ($BCR < 1.0$). If the project is cost-effective, then no further work or analysis needs to be done, there is no third step other than to move the project to the next phase in the approval process. However, if the project is not cost-effective, then it is generally not eligible for FEMA mitigation grant funding.

There are four key elements to all benefit-cost analyses of hazard mitigation projects:

1. An estimate of damages and losses before mitigation
2. An estimate of damages and losses after mitigation
3. An estimate of the frequency and severity of the hazard causing damages (e.g., floods), and
4. The economic factors of the analysis (e.g., discount rate and mitigation project's useful lifetime)

These four key elements and their relationships to one another are detailed in the following example.

Consider a 1,500 square foot, one-story, single family residence located in the Acorn Park subdivision along Squirrel Creek. A proposed mitigation project will elevate the structure four feet at a cost of \$20,000. Whether this project is cost-effective depends on the damages and losses from flooding without the mitigation project, the effectiveness of the mitigation project in reducing those damages and losses, the frequency that the house is flooded and the depth of the flood water, and the mitigation project's useful lifetime.

If the pre-mitigation damages are frequent and/or severe, then the project is more likely to be cost-effective. Even minor damage that occurs frequently can, over the life of a project, exceed the up-front costs of implementing a mitigation measure. On the other hand, if the building in the example above only flooded once, then it may not be cost-effective to elevate, unless the damages were significant in relation to the value of the structure and its contents.

Benefit Cost Analysis Fact Sheet

Hazard mitigation projects are specifically aimed at reducing or eliminating future damages. Although hazard mitigation projects may sometimes be implemented in conjunction with the repair of damages from a declared disaster, the focus of hazard mitigation projects is on strengthening, elevating, relocating, or otherwise improving buildings, infrastructure, or other facilities to enhance their ability to withstand the damaging impacts of future disasters. In some cases, hazard mitigation projects may also include training or public education programs if such programs can be demonstrated to reduce future expected damages.

A Benefit-Cost Analysis (BCA) provides an estimate of the “benefits” and “costs” of a proposed hazard mitigation project. The “benefits” considered are avoided future damages and losses that are expected to accrue as a result of the mitigation project. In other words, benefits are the reduction in expected future damages and losses (i.e., the difference in expected future damages before and after the mitigation project). The costs considered are those necessary to implement the specific mitigation project under evaluation. Costs are generally well-determined for specific projects for which engineering design studies have been completed. The timing and severity of benefits, however, must be estimated probabilistically because they depend on the improved performance of the building or facility in future hazard events.

All benefit-costs must be:

- Credible and well documented
- Prepared in accordance with accepted BCA practices
- Cost-effective ($BCR \geq 1.0$)

General Data Requirements:

- All data entries (other than FEMA) standard or default values) must be documented in the application.
- Data must be from a credible source.
- Provide complete copies of reports and engineering analyses.
- Detailed cost estimate.
- Identify the hazard (e.g., flood, wind, seismic).
- Discuss how the proposed measure will mitigate against future damages.
- Document the project’s useful life.
- Document the proposed Level of Protection.
- The Very Limited Data (VLD) BCA module cannot be used to support cost-effectiveness (screening purposes only).
- Alternative BCA software must be approved in writing by FEMA HQ and FEMA Region 10 staff prior to submittal of the application.

Damage and Benefit Data

- Well documented for each damage event.
- Include estimated frequency and method of determination per damage event.
- Data used in place of FEMA standard or default values must be documented and justified.
- The Level of Protection must be documented and readily apparent.

Benefit Cost Fact Sheet

- When using the Limited Data (LD) BCA module, users cannot extrapolate data for higher frequency events for unknown lower frequency events.

Building Data

- Should include FEMA Elevation Certificates for elevation projects or projects using First Floor Elevations (FFE's).
- Include data for building type (tax records or photos).
- Contents claims that exceed 30 percent of building replacement value (BRV) must be fully documented.
- Method for determining BRVs must be documented. BRVs based on tax records must include the multiplier from the County Tax Assessor.
- Identify the amount of damage that will result in demolition of the structure (FEMA standard is 50 percent of pre-damage structure value).
- Include the site location (e.g., miles inland) for the hurricane module.

Use Correct Occupancy Data

- Design occupancy for hurricane shelter portion of tornado module.
- Average occupancy per hour for the tornado shelter portion of the tornado module.
- Average occupancy for seismic modules.

Questions to Be Answered

- Has the level of risk been identified?
- Are all hazards identified?
- Is the BCA fully documented and accompanied by technical support data?
- Will residual risk occur after the mitigation project is implemented?

Common Shortcomings

- Incomplete documentation.
- Inconsistencies among data in the application, BCA module runs, and the technical support data.
- Lack of technical support data.
- Lack of a detailed cost estimate.
- Use of discount rate other than FEMA-required amount of 7 percent.
- Overriding FEMA default values without providing documentation and justification.
- Lack of information on building type, size, number of stories, and value.
- Lack of documentation and credibility for FFE's.
- Use of incorrect project useful life (not every mitigation measure equals 100 years).

APPENDIX 13.14 DHS&EM STANDARD OPERATING PROCEDURES

Disaster Mitigation Administrative Plan

Grants Management

Progress Reporting

Financial Reporting

Project:

- Advertisement
- Intent to Apply
- Selection
- Prioritization,
- Project monitoring,
- Follow-up
- Corrective actions, etc.

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DHS&EM Disaster Mitigation Standard Operating Procedures

Introduction

This appendix captures the following DHS&EM hazard mitigation section's operational policies and procedures

1. Alaska mitigation goals and project management
2. Local hazard mitigation planning 5-year plan
3. Mitigation planning and project selection processes
4. Community warning system selection criteria
5. HMGP procedural SOPs
6. Federal disaster Joint Field Office (JFO) Mitigation Strategies

Alaska Mitigation Initiatives

Primary Hazard Focus

1. Minimize loss of life and injuries
2. Eliminate or minimize potential damages from identified hazards
3. Restore public services
4. Seek Alaska appropriate mitigation solutions

Life-Safety Focus

1. Strive to maintain or improve quality of life
2. Identify potential hazard damages or impacts
3. Protect and maintain critical facilities in functional order
4. Assist local and tribal jurisdictions with preparing an effective Hazard Mitigation Plan
5. Minimize social dislocation and post disaster stress
6. Protect government and public official from legal liability
7. Reduce economic losses

Mitigation Measures

1. Protection

To protect or minimize facility structural damage during a hazard event

- Structural/Community Protective Works
- Retrofitting or rehabilitation
- Elevation, proofing
- Critical facilities protection

DHS&EM SOPs

2. Prevention

DHS&EM encourages communities to reduce their hazard exposure by applying effective hazard reducing methods through removing threatened structures from hazard areas using:

- Land-use planning
- Zoning
- Subdivision regulations
- Building codes
- Open space preservation
- Acquisition, relocation, or elevation
- Capital improvement programs
- NFIP participation

3. Educational

Educating Alaska's population concerning hazards and what can be done to protect themselves and their property using:

- Education outreach and presentations
- Technical assistance
- Disclosure requirements
- Understanding hazard warning systems
- Hazard mapping
- Hazard mitigation planning

Local Hazard Mitigation Planning 5 Year

State Planning Projections and Policy

Considerations / Rationale / Criteria for Selection

- History or risk of disaster damage (Disaster Cost Index, hazard and risk assessments, State Hazard Mitigation Plan, DHS&EM experience)
- Full time residents / population (threshold for inclusion approximately 100)
- Level of government: (borough, first class city, second class city, etc.)
- Community interest in mitigation planning and projects
- Significant infrastructure
- Plan will address multiple hazards which may include seismic, flood, wildland fire, coastal storms, avalanche, etc.
- Location in state (geographical grouping for contract efficient/value)
- Unplanned communities in a federally declared disaster area will be considered for immediate planning through the HMGP (7 percent for planning) program.

2018	2019	2020	2021	2022	2023
New	New	New	New	New	New
Seldovia Tribal	Aniak Tribal-New				
Update	Update	Update	Update	Update	Update
Angoon	Hydaburg	Akiakchak	Municipality of Anchorage	Petersburgh MJHMP	TBD
Gambell	Quinhagak	Akiak City	Hughes MJHMPe	Matanuska-Susitna Borough MJHMP	TBD
North Slope Borough	Kake	Tanana City	Kongignak MJHMP	Kenai	TBD
Holy Cross	New Stuyahok	Sleetmute	Nome	Tyonek MJHMP	TBD
Stebbins MJHMP	Lower Kalskag	Marhsall	White Mountain	Goodnews Bay	TBD
Eagle MJHMP	Thorne Bay	Koyuk	Point Hope MJHMP	State of Alaska SHMP	TBD
Toksook Bay	Russian Mission	Brevig Mission	Dillingham	Northwest Arctic Borough MJHMP	TBD
Whittier	Tuluksak CDP	Bettles/Evansville MJHMP	Haines Borough MJHMP	Valdez	TBD
Klawock	Scammon Bay	Chitna MJHMP	Kasaan MJHMP	Cordova MJHMP	TBD
		Copper Center MJHMP	Ketchikan MJHMP	Wasilla	TBD

Tribal Entities and Local Hazard Mitigation Planning

Funding Priorities and Policy for Mitigation Planning:

4. Planning Initiatives

Mitigation planning will be done primarily through PDM

- State managed will be funded through a state contract paid for through PDM (75 percent FEMA and 25 percent State match). This will follow the 5-year list for community planning.

Focus of HMGP funds will be projects. Planning will be funded through HMGP on a “case-by-case” basis including:

- Recent disaster experience makes mitigation planning a priority
- Special community circumstances which make immediate planning advisable.

School districts in the organized boroughs will be included within their borough mitigation plan for eligibility and planning

School Districts within the Unorganized Borough will be included in the State Hazard Mitigation Plan for eligibility and planning:

5. Plan Updates

Updates will ordinarily be funded through PDM or local funds not HMGP

- Communities should show engagement (“buy in”) with the planning update process through local funding, PDM 25 percent (10 percent rural and impoverished) match, local funds, direct legislative appropriations or soliciting other funds.

6. Grant Funding for Mitigation Plan Studies

Studies that lead to specific, identified “brick and mortar” mitigation projects and improve the communities hazard mitigation plans will be prioritized for grant funding.

State LEPC’s and Mitigation Planning:

State Local Emergency Planning Committees (LEPC’s) assist with local hazard mitigation planning through:

- Providing a forum for the annual reviews of local mitigation plans within their jurisdictions
- Providing a forum for review and input when communities within their jurisdictions are undertaking hazard mitigation planning.
- Providing a forum for review and input when communities within their jurisdictions are undertaking their required 5-year hazard mitigation plan update.

Governor’s Disaster Policy Cabinet

The Governor’s Disaster Policy Cabinet (DPC) originated in the State Emergency Operations Plan on May 6, 1994, and was activated September 20, 1995. Its mission is to advise the Governor on topics involving the State’s Emergency Management System. The members of the DPC are the Commissioners of the following departments, or as noted:

- Department of Military and Veterans Affairs (Chair)
- Department of Environmental Conservation
- Department of Natural Resources
- Department of Public Safety
- Department of Transportation and Public Facilities
- Department of Administration
- Department of Community and Economic Development
- Department of Health and Social Services
- Department of Law
- Office of Management and Budget (Director)
- Governor’s Office (or GAR)
- Other departments or agencies participate as required based on the nature of event.

State Reviews of Local Mitigation Plans

Community hazard mitigation plans submitted to DHS&EM, will be reviewed within 2 weeks of receipt. Following DHS&EM review, the plan will either be returned to the community for revision or forwarded to FEMA for their review.

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Hazard Mitigation Assistance (HMA) Application Selection and Prioritization Process

General Selection Criteria

The following general criteria are used by the State Hazard Mitigation Officer (SHMO) in selecting and prioritizing applications for hazard mitigation financial assistance.

- Consistency with the goals and priorities established in the State Hazard Mitigation Plan
- Consistency with the goals and priorities established in the applicant's local Hazard Mitigation Plan
- History or risk of disaster losses in the community based upon the Alaska Disaster Cost Index, hazard and risk assessments, the State Hazard Mitigation Plan, and DHS&EM experience
- The project's role in mitigating losses to critical facilities and infrastructure
- The community's interest in mitigation planning and long-term mitigation actions
- The jurisdiction's grant compliance history
- The community's population, level of government, and ability to take independent mitigation actions

Grant Specific Selection Processes

Disaster Funded, Hazard Mitigation Grant Program (HMGP)

State mitigation team members will travel to disaster areas and search for appropriate mitigation opportunities (Public Assistance 406 Mitigation and Robert T. Stafford Disaster Relief and Emergency Assistance Act 404 Mitigation).

Following a federal disaster declaration, DHS&EM announces that HMGP funding opportunity is available statewide to local jurisdictions, IRA tribes, and state agencies. The announcement explains HMGP eligibility criteria, necessity of submitting an "Intent to Apply" form, application submittal instructions and content, and the disaster period's application submittal deadlines.

HMGP applicant briefings are held in the most appropriate declared disaster area in conjunction with FEMA and State Public Assistance (PA) briefings. HMGP briefings are provided to other potential applicants around the state as requested. Potential applicants with formally adopted and approved hazard mitigation plans and those with previously identified mitigation projects in their local hazard mitigation plans are recruited to produce HMGP applications. DHS&EM staff provide technical assistance to applicants developing their project applications.

Submitted "Intent to Apply" forms are screened by the State mitigation staff for applicant and project eligibility and feasibility. State mitigation staff assist each eligible applicant with project development while ineligible projects are guided to other resources.

Complete HMGP applications are forwarded SHMAC review. The DHS&EM guides the SHMAC with determining the merit as to how each project application's mitigation approach meets the SHMP's mitigation goals. The SHMAC then jointly ranks each project application for funding priority.

***Note:** This ranking system is most needed when the number of eligible project applications exceeds available funds. Those that are not selected are filed and potentially funded when previous selected applications cannot be implemented, or when subsequent disaster grants become available.*

The SHMO submits the SHMAC's prioritized project application list to the GAR. The GAR then reviews applications and their respective ranking against State priorities and available funding, and subsequently approves for FEMA submittal.

The SHMO then submits the approved applications to FEMA for review and funding.

Non-Disaster Hazard Mitigation Assistance (HMA) Grants Including the Pre-Disaster Mitigation (PDM) Grant Program

Following the opening of FEMA's HMA Pre-Disaster Mitigation (PDM) application period, DHS&EM announces the nationally competitive PDM funding opportunity statewide to agencies, local governments, and IRA tribes. The announcement explains PDM eligibility criteria, the necessity of submitting an "Intent to Apply" form, application submittal instructions and content, and disaster period's application submittal deadlines.

The State conducts PDM briefings upon request. DHS&EM submits a State application for potential construction project applicants with previously identified mitigation projects in their local hazard mitigation plans. These applicants are recruited to produce PDM applications. PDM project applications must include as appropriate all required engineering drawings, plans, maps, and photos as well as an environmental impact statements. Applicants are provided with technical assistance throughout application development.

Submitted "Intent to Apply" forms are screened by the State mitigation staff for applicant and project eligibility, and feasibility. State mitigation staff assist each eligible applicant with project development while ineligible projects are guided to other resources.

The SHMO then submits each of the PDM sub-grant applications within the State's PDM grant application to FEMA for funding under the HMA program. FEMA reviews planning and project applications for eligibility and completeness. FEMA subsequently makes funding decisions based on the agency's priorities for the most effective use of available grant funds posted on Grants.gov and its Notice of Funds Opportunity announcement. The PDM program is a highly competitive grant program.

NOAA (Department of Commerce) Funded Grants

NOAA grant funding applications are evaluated based upon similar, general selection criteria listed above as they pertain to NOAA's specific grant programs' guidance.

State Hazard Mitigation Grants

Applications for State hazard mitigation grants are evaluated based upon the general selection criteria listed above as well as the State's specific grant program guidance. Priority is given to projects that are deemed to be effective mitigation by the SHMO and selected mitigation staff panel; potential agencies determine their viability and the project's mitigation effectiveness. The project would not be eligible for funding under FEMA grant requirements.

State Mitigation Prioritization Process

The DHS&EM's Resilience Section provides a thorough analysis of all communities based on vulnerability. The data used to assign a ranking is derived from outside sources and is not

influenced by the DHS&EM. Using “Community Score Methodology,” the data base assigns a numerical value that contains 12 areas as well as the associated risk values (Figure 9-2). Those values translate to a numerical value that ranks each city and factors in the overall priority of effort for mitigation and outreach. The cities are divided into categories for priority of effort. In the highest category are those cities deemed to have significant risk. The lowest category a city can achieve is minimal risk. The ranking system provides the State with an overall picture of where to address needs within the state based on community metrics.

Prior to the database being developed the state held a State Hazard Mitigation Advisory Committee (SHMAC) meeting quarterly, as warranted, to prioritize projects. Moving forward the SHMAC will be given the priorities and asked to vote on them.

Alaska Remote Community Challenges:

DHS&EM strives to address Alaska’s remote community challenges during grant application development by ensuring communities:

- Describe their specific challenges associated with shipping goods to their location such as severe weather conditions, barging, port availability, community access, river navigability, distance, materials costs, experienced labor costs, outside area payroll rate requirements etc.
- Address geographical separation, minimal road access combined with bridges (they allow safe travel across large rivers, but also create barriers if they are destroyed by hazard impacts such as earthquakes or flooding damages).
- Describe as appropriate how the community is distressed or located in an imperiled area of the state.
- Describe any language barriers, need for translation into native languages, or any limiting capacity such as qualified office staffing, office staff or leadership turn-over, or an extremely transient population.
- Describe if the jurisdiction, tribe, and/or impoverished community is unable to generate funds to enable them to meet project cost (25 percent) matching.

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Alaska Local Community Warning Siren System Plan August 2018

Tsunami Community Selection Criteria

Distant Tsunami Threat as determined by UAF/GI and NTWC

Rationale: The greatest need for a warning system exists in the event of a distant/off-shore seismic event which creates a wave that travels from a distance to inundate on-shore (distant tsunami). In this case the earthquake generating the tsunami may be felt lightly or not at all. In this case the only warning of an impending tsunami will be from NTWC. In contrast, in a locally produced tsunami, the earthquake is felt in the community and that earthquake must serve as the primary tsunami warning as the time to wave impact can be very short.

Order of Community Selection

- High distant tsunami threat
- Medium distant tsunami threat
- Low distant tsunami threat

Population at risk - density and profiles

Rationale: Communicating the warning is critical to effective tsunami evacuation and communities that are spread out and/or have significant numbers of tourists have greater difficulty in communicating warnings. “Spread out” communities are determined by using available community maps and DCCED data. “Significant numbers of tourists” are determined by using DCCED data, community data and DHS&EM staff knowledge.

System type: While cohesive communities, rural, isolated communities may be served by a simple siren warning system, communities with significant tourist populations are best served by a warning system that enables voice and multi-tone alerts.

Current warning system – operational and effectiveness

Rationale: Communities in high threat areas, which have warning systems that do not work or do not provide community coverage.

Non –Tsunami “Remote Community” Selection Criteria

Community threat would be diminished by installation of a warning system:

Purpose: The greatest need for a warning system exists in the event of a no-notice or short-notice community hazard.

Hazards for Community Selection

- Community fire
- Ice jam release flooding
- Wildland fire
- Dam burst or rapid inundation flooding
- Hazardous materials (HAZMAT) release

Funding for warning system unlikely through another source and community size makes local funding unrealistic

Note: an annual community warning system survey was initiated in the winter of 2009. Survey results are used to assess community siren system needs.

Warning Siren System Status and Future Plan

Community	Primary Tsunami Hazard	Status	Installation Date	Funded by
Chignik Bay	Distant	Complete	Installed 2006	NTHMP
Perryville	Distant	Complete	Installed 2006	NTHMP
KPB/Homer (5 sites)	Distant	Complete	Installed 2008	HMGP
KPB/Nanwalek	Distant	Complete	Installed 2008	HMGP
KPB/Port Graham	Distant	Complete	Installed 2008	HMGP
KPB/Seldovia	Distant	Complete	Installed 2008	HMGP
KPB/Seward (6 sites)	Distant/Local	Complete	Installed 2008	HMGP
Valdez (2 sites)	Distant/Local	Complete	Installed 2007	NTHMP
Valdez (7 sites)	Distant/Local	Complete	Installed 2009	SHSP
Kenai Pen Borough	Tsunami	Complete	Installed 2009	NTHMP
Cordova (2 sites)	Distant	Complete	Installed 2014	NTHMP
Sand Point	Distant	Complete	Installed 2009	NTHMP
Sitka	Distant	Complete	Installed 2009	NTHMP
Sitka (9 sites)	Distant	Complete	Installed 2009	SHSP
Yakutat	Distant	Complete	Installed 2009	NTHMP
Whittier	Distant	Complete	Installed 2009	NTHMP
St. Paul	Distant	Complete	Installed 2010	RCASP
King Cove	Distant	Complete	Installed 2010	NTHMP
Port Alsworth – L&P	All Hazard	Complete	Installed 2010	RCASP
Akutan	Distant	Complete	Installed 2010	NTHMP
Cold Bay	Distant	Complete	Installed 2010	NTHMP
Atka	Distant	Complete	Installed 2010	RCASP
Nikolski	Distant	Complete	Installed 2010	RCASP
Adak	Distant	Complete	Installed 2010	RCASP
Savoonga	All Hazard	Complete	Installed 2010	RCASP
KIB/Old Harbor	Distant	Complete	Installed 2010	NTHMP
KIB/Akhiok	Distant	Complete	Installed 2010	RCASP
KIB/Ouzinkie	Distant	Complete	Installed 2010	RCASP
KIB/Larsen Bay	Distant	Complete	Installed 2011	RCASP
KIB/Karluk	Distant	Complete	Installed 2011	NTHMP
Kake	Tsunami	Complete	Installed 2010	NTHMP
Port Lions	Distant	Complete	Installed 2012	NTHMP
Saint George	Distant	Complete	Installed 2011	NTHMP
Petersburg	Local	Complete	Installed 2016	NTHMP
Craig	Distant	Complete	Installed 2014	NTHMP
Kassan	Distant	Complete	Installed 2017	NTHMP
Ketchikan	Distant	Complete	Installed 2014	NTHMP
Klawock	Distant	Complete	Installed 2013	NTHMP
Tatitlek	Distant	Complete	Installed 2011	NTHMP
Chenega	Distant	Complete	Installed 2011	NTHMP
Port Alexander	Distant	TBD		
Elfin Cove	Distant	TBD		

HMGP Procedure & Schedule after a Disaster**Schedule****HMGP Application Development Timeline**

Timeline Post Declaration	Description
60 Days After	Organize a SHMAC teleconference to provide a disaster declaration “overview” that covers the disaster, HMGP dates, and overall State priorities
4 months after	DHS&EM publicizes HMGP funding availability
6 months	HMGP “Intent to Apply” forms are due
Within 1 month following “Intent to Apply” form due date	DHS&EM offers FEMA BCA training to potential applicants
7 months	SHMAC reviews the HMGP funding available under the disaster and the funding “Lock-in Report”
9 months	Final HMGP applications are due
3 weeks following the HMGP application deadline	Organize a SHMAC teleconference to review and prioritize final HMGP applications
3 weeks following the SHMAC	DHS&EM present SHMAC prioritized applications to GAR for review and authorization for FEMA submittal
11 months	Submit HMGP applications to FEMA

Community affected by disaster

- Fund new hazard mitigation plan or plan update for community: (HMGP 7 percent for planning)
- Develop 2-5 hazard mitigation projects for the community: (FEMA)
- Apply HMGP funds to incomplete PA and 406 mitigation projects.

Federally Declared Disaster JFO Mitigation Strategies

Future Mitigation Strategies for Federally Declared Disasters

7. *State Mitigation Planning and Hazard Analysis*

1. Produce Level 2 or above HAZUS studies for the disaster area including seismic, flood, etc.
2. Capture spatial data and attributes from disaster sites including:
 - High water marks
 - Seismic faulting
 - First floor elevation determination
 - Ownership of infrastructure and facilities
3. Review and assess any previous mitigation projects in the affected communities:
 - Project location (address, GPS lat/long)
 - Project description
 - Project funding mechanism
 - Project effectiveness

8. *Community Outreach*

1. With the Preliminary Damage Assessment (PDA) and all IA and PA teams, send appropriate education and outreach materials including:
 - Fact sheets appropriate to the disaster including:
 - Flood – mold mitigation instructions
 - Power interruption – CO and generator safety
 - Success stories
 - Rebuilding/ mitigation instructions specific to the disaster hazard.
 - Hazard mitigation guides including Flood, Seismic and Landslide
2. Seek JFO reproduction of:
 - “Spencer and the Volcano” book
 - “James and the Wildfire” book
3. Produce radio, TV, multimedia, and web-based Public Service Announcements (PSAs) and mitigation materials for Alaska communities in the disaster area:
 - “How to rebuild your damaged home to prevent future damage from a similar event.”
 - Mitigation success stories

9. *Mitigation Training and Education*

1. Request training for the State mitigation team and communities (as appropriate) in the following mitigation tools:
 - NEMIS
 - Benefit Cost Analysis (BCA)
 - Mitigation planning workshop for updating mitigation plans

2. Request a “Flood Management 101” course for State staff and community participants that includes:

- Basics of flood plain terminology

- Flood plain map reading

- Basics of flood plain management

- Basics of hydraulics and hydrology (H&H) including what is needed in the scope of work for an effective H&H study

10. Coordination with FEMA PA

1. Require a copy of all FEMA PA project worksheets with actual or potential 406 mitigation, to be provided to the State mitigation team.
2. Require that FEMA PA 406 mitigation projects be written up with enough detail to produce a 404 (HMGP) mitigation project if the 406 portion is not funded.
3. Capture data on facilities and infrastructure in the disaster area including:
 - Ownership: (e.g., who owns the road: state, community, BIA)
 - Location: (address and GPS Lat/long)
 - Damaged facility photos
 - Descriptions
4. Require FEMA PA staff to be alert for potential 404 mitigation project opportunities and when found to write them up fully for project application including:
 - Scope of work
 - Cost estimate
 - Photos labeled with exactly what the damage in the area was and what mitigation is needed.
 - GPS (Lat/Long)
 - Measurements
 - Project details, description, etc.
5. Develop a report sheet for instructions and to capture the information
6. Ask that FEMA JFO mitigation staff produce a binder and electronic files, prior to the JFO closing, with all the information relating to and requested by mitigation from PA including:
 - Each actual and potential 406 and 404 mitigation project listed
 - Each project listing should include the full details equal to the items listed in # 3 above
 - Critical facility and infrastructure data

11. Mitigation Project Development

1. Ask that FEMA JFO produce a mitigation project handbook / CDs / MS Word forms and training customized for Alaska that includes:
 - Project templates for specific hazards
 - Sample applications
 - Procedures and resources for developing:

DHS&EM SOPs

- The scope of work
 - The project budget
 - The required project and BCA documentation
 - Environmental and historical permitting and clearances
 - Project engineering
2. Ask that the JFO develop a customized Alaskan boardwalk mitigation strategy that includes:
The best methods for boardwalk mitigation (new wood-like materials, etc.)
Methods for clearing the environmental and historical requirement
 3. Ask that the JFO research and document potential methods for FEMA mitigation funding of seismic assessments lead to mitigation projects in public schools.
 4. Ask that the FEMA JFO provide for the full HMA grant application development for any repetitive loss properties in the declared disaster areas including:
Completing AW-501 forms
All items listed under #1
 5. Ask that the JFO update and produce current project applications for any community mitigation projects that were previously studied and developed but not funded.

12. *Severe Weather Related Disaster*

1. Request a JFO produced “point paper” on avalanche that covers the following topics:
What other states are doing to mitigate against avalanche risk including:
 - Avalanche mitigation projects
 - Outreach and training
 - ForecastingHow HMGP funding has been used for avalanche mitigation projects.

**APPENDIX 13.15 2008 FEMA HMP GUIDANCE FOR THE UNORGANIZED
BOROUGH**

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FEMA

November 17, 2006

MEMORANDUM FOR: Carl L. Cook, Jr.
Director
Flood Insurance and Mitigation Division

FROM: *David I. Maurstad*
David I. Maurstad
Director
Mitigation Division

SUBJECT: Clarification of 44 CFR Part 201 Mitigation Plan
requirements for communities within the unorganized
Borough in Alaska

RE: Carl L. Cook, Jr letter dated October 12, 2006, same subject

Per your request, I am providing clarification on the hazard mitigation plan requirements for the unincorporated communities and Alaskan Indian Reorganization Act villages located within Alaska's Unorganized Borough. Since these communities do not have governing nor adoption authority as required by 44 CFR Part 201, the State of Alaska may act on their behalf for the purposes of this regulation.

By State statute, the State of Alaska is the governing body for these communities and native villages. Therefore, the unincorporated entities in the Unorganized Borough may be included in the adopted State Hazard Mitigation Plan as entities of the State. The State must develop an annex to their State Mitigation Plan that specifically covers these communities and villages. The State of Alaska may use the concept of "other State agencies" and "multi-jurisdictional plans" in developing this annex. At a minimum the annex must: 1) include all entities covered by the plan, 2) demonstrate local participation, 3) identify any risks unique to each entity, and 4) propose mitigation actions applicable to each entity.

To summarize this clarification of policy:

- It applies to the unincorporated communities and villages located in the Unorganized Borough in Alaska.
- The communities must be specifically addressed in the State plan. The State may assist or take leadership in the development of the hazard assessments and mitigation strategies to be included in the state plan annex.
- The annex for communities in unorganized boroughs must be updated every three years along with the State Hazard Mitigation Plan.

Carl Cook
November 17, 2006
Page 2

- The State must be both the Grantee and Sub-grantee for any mitigation grants to these named villages.

Please note that the inclusion of these communities in the approved State mitigation plan, as outlined above, would provide eligibility to apply for mitigation project grants and does not indicate eligibility of the specific action identified within the plan for FEMA grant funding. Project grant applications must be evaluated individually by the State and FEMA according to the specific eligibility and other requirements of the particular hazard mitigation grant program.

Please communicate this clarification with the State of Alaska. If you or the State of Alaska have any questions, please contact Karen Helbrecht of my staff by telephone at (202) 646-3358.

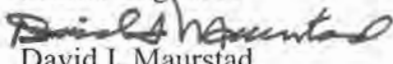
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FEMA

July 8, 2008

MEMORANDUM FOR: Mark Carey
Director
Mitigation Division
FEMA Region X

FROM: 
David I. Maurstad
Director
Mitigation Division

SUBJECT: Clarification of 44 CFR Part 201 Mitigation Plan
requirements for communities within the unorganized
Borough in Alaska

This memorandum provides clarification on the hazard mitigation plan requirements for the unincorporated communities and Alaskan Indian Reorganization Act villages located within Alaska's Unorganized Borough. This supersedes the November 17, 2006 memorandum "Clarification of 44 CFR Part 201 Mitigation Plan requirements for communities within the unorganized Borough in Alaska."

Since these communities do not have governing nor adoption authority as required by 44 CFR Part 201, the State of Alaska may act on their behalf for the purposes of this regulation. By State statute, the State of Alaska is the governing body for these communities and native villages. Therefore, the unincorporated entities in the Unorganized Borough may be included in the adopted State Mitigation Plan as entities of the State or may participant in a Local Mitigation Plan, which is adopted by the State.

In the first option, the State must develop an annex to their State Mitigation Plan that specifically covers these communities and villages. The State of Alaska may use the concept of "other State agencies" and "multi-jurisdictional plans" in developing this annex. At a minimum the annex must: 1) include all entities covered by the plan, 2) demonstrate local participation, 3) identify any risks unique to each entity, and 4) propose mitigation actions applicable to each entity.

In the second option, an unincorporated entity in the Unorganized Borough may participate in a single jurisdictional or multi-jurisdictional Local Mitigation Plan, which must be adopted by the State of Alaska. In this case, the plan must: 1) demonstrate local

participation, 2) meet all requirements of 44 CFR §201.6, and 3) be adopted by the State of Alaska.

To summarize this clarification of policy:

- It applies to the unincorporated communities and villages located in the Unorganized Borough in Alaska.
- The communities must be specifically addressed in the State Mitigation Plan or in a Local Mitigation Plan, either single or multi jurisdictional.
- The State may assist or take leadership in the development of the hazard assessments and mitigation strategies to be included in the State Mitigation Plan annex or Local Mitigation Plan.
- The State of Alaska is recognized as the adopting authority for an annex to the State Mitigation Plan and any Local Mitigation Plans for these communities.
- The State Mitigation Plan annex for communities in the Unorganized Borough must be updated every three years along with the State Mitigation Plan, whereas Local Mitigation Plans must be updated every 5 years based upon the plan's approval date.
- The State must be both the Grantee and Sub-grantee for any mitigation grants to these named villages.

Please note that the inclusion of these communities in the approved State Mitigation Plan or Local Mitigation Plans, as outlined above, would provide eligibility to apply for mitigation project grants and does not indicate eligibility of the specific actions identified within the plans for FEMA grant funding. Project grant applications must be evaluated individually by the State and FEMA according to the specific eligibility and other requirements of the particular hazard mitigation grant program.

Please communicate this clarification with the State of Alaska. If you or the State of Alaska have any questions, please contact Karen Helbrecht of my staff by telephone at (202) 646-3358

APPENDIX 13.16 2018 SMALL AND IMPOVERISHED COMMUNITY DETERMINATION

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Alaska's Small and Impoverished Community Determination Qualification Process

HMA Cost Share Guide (FEMA 2016): <https://www.fema.gov/media-library-data/1463766664964-4e6dd22652cb7c8a6162904f3b1b2022/FinalHMACostShareGuide508.pdf>

The Federal Emergency Management Agency (FEMA) offers three Hazard Mitigation Assistance (HMA) grant programs: the Hazard Mitigation Grant Program (HMGP), the Pre-Disaster Mitigation (PDM) Program, and the Flood Mitigation Assistance (FMA) Program. All share the common goal of reducing the risk of loss of life and property due to natural hazards. However, they have different funding authorization conditions, application time periods, and non-Federal cost share contribution requirements. In general, HMA funds may be used to pay up to 75 percent of eligible costs. The remaining 25 percent of eligible costs is derived from non-Federal sources. The non-Federal contribution must be used for an eligible cost in direct support of eligible mitigation activities under the applicable regulations (Title 44 of the Code of Federal Regulations [CFR] Sections 79.6 and 206.434), HMA Guidance, and the Federal award. Contributions of cash and donated resources, or any combination thereof, can be used for the non-Federal cost share. Table 1 provides an overview of Federal and non-Federal cost share requirements for the HMA programs.

Table 1: HMA Project Cost Share Requirements by Program

HMA Programs	Percent of Share Federal/Non-Federal
Hazard Mitigation Grant Program (HMGP) provides funds to States, territories, federally-recognized tribes, local governments, and eligible private nonprofits following a Presidential major disaster declaration.	75/25
Pre-Disaster Mitigation (PDM) is a competitive grant program with an annual Congressional appropriation. PDM provides funds to States, territories, federally-recognized tribes, and local governments.	75/25
<i>PDM – if the subapplicant or Applicant fits the definition of a small impoverished community</i>	90/10
Flood Mitigation Assistance (FMA) provides funds to mitigate National Flood Insurance Program–insured properties and has an annual appropriation from the National Flood Insurance Fund. FMA provides funds to States, territories, federally-recognized tribes, and local governments.	75/25
<i>FMA – if the project mitigates a repetitive loss property</i>	90/10
<i>FMA – if the project mitigates a severe repetitive loss property</i>	100/0

Typically, the Applicant or subapplicant requires those who would benefit from the mitigation project (homeowners, businesses, nonprofit organizations, or local communities) to provide the non-Federal cost share of the mitigation activity. However, in some cases, Applicants (the States or tribes) or subapplicants will provide some or all of the non-Federal cost share. Ultimately, it is the Applicant's responsibility to ensure that all cost share contributions are met...

Small and Impoverished Community (for the PDM program only): *Small and impoverished communities may receive a Federal cost share of up to 90 percent of the total amount approved under the Federal award to implement eligible approved mitigation activities in accordance with the Stafford Act. A small impoverished community must:*

Small and Impoverished Community Process

Be a community of 3,000 or fewer individuals identified by the Applicant as a rural community that is not a remote area within the corporate boundaries of a larger city or jurisdictional area or boundary

Be economically disadvantaged, with residents having an average per capita annual income not exceeding 80 percent of the national per capita income, based on best available data. For the most current information on the national income, see <http://www.bea.gov/>.

Have a local unemployment rate that exceeds by 1 percentage point or more the most recently reported, average yearly national unemployment rate. For the most current unemployment information, see <https://www.bls.gov/eag/eag.us.htm> ” (FEMA 2016).

Note: DHS&EM uses the U.S. Census Factfinder’s Census data and interim estimates and compares these data against the Alaska’s Department of Labor’s and the Department of Community, Commerce and Education Development’s (DCCED) most recent certified or estimated population data. The most current data is then submitted to FEMA Region Ten’s Regional Administrator for review. The RA then determines how applicants will meet non-federal cost share requirements.

Sample HMP Small and Impoverished Community Determination (Community Comparisons to National Criteria)								
Community	Plan Type	Population	Population ≤3,000	Community Per Capita Income	Per Capita Income < 80% Nat'l Income = \$xx,xxx	Community Unemployment %	Community Unemployment Rate (%) = >1% of Nat'l Rate (Yes/No)	Qualifies as S&I (Yes/No)
National Average:		>3,000	(Yes/No)	N/A	\$29,829*.8<= \$23,863 Comm =< \$23,863 (Yes/No)	201x Nat'l 9.2%	7.4*1.01=7.474% Comm.=>7.474% (Yes/No)	
Community 1	MJHMP	558	Yes	36,746	No	12%	Yes	No
Community 2	THMP	496	Yes	23,018	Yes	11.20%	Yes	Yes
Community 3	MJHMP	140	Yes	33,518	No	0%	No	No
Etc.								

**APPENDIX 13.17 EXISTING LOCAL AND TRIBAL HAZARD MITIGATION PLAN LIST
(UPDATED ANNUALLY)**

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**Existing Local HMPs
(As of August 2018)**

Local and Tribal HMP Summary

Local or Multi-Jurisdictional Hazard Mitigation Plans

<i>Approved</i>	<i>Pending Adoption</i>	<i>Awaiting Revision</i>	<i>In-Progress</i>	<i>Expired</i>	<i>Total</i>
134	25	10	8	58	235

Tribal HMPs Hazard Mitigation Plans

<i>Approved</i>	<i>Pending Adoption</i>	<i>Awaiting Revision</i>	<i>In-Progress</i>	<i>Expired</i>	<i>Total</i>
38	9	5	5	0	57

August 2018 Alaska Local Hazard Mitigation Plan Status

Plan Title	Plan Status	Community Name	Jurisdiction Type	Expiration Date
Akiachak Native Village Hazard Mitigation Plan	Approved	Akiachak ANVSA	Alaska Native Village	9/6/2018
Akiak City	Expired	Akiak city	City	6/20/2018
Alakanuk City	Approvable Pending Adoption	Alakanuk city	City	
Alatna Tribal Hazard Mitigation Plan	Approvable Pending Adoption	Alatna ANVSA	Alaska Native Village	
Aleut Community of St. Paul Island Tribal Mitigation Plan	Plan in Progress	St. Paul ANVSA	Alaska Native Village	
Aleutians East Borough	Expired - Plan in Progress	Akutan city	City	6/25/2015
Aleutians East Borough	Expired	Aleutians East Borough	Organized Borough	6/25/2015
Aleutians East Borough	Expired	Cold Bay city	City	6/25/2015
Aleutians East Borough	Expired	False Pass city	City	6/25/2015
Aleutians East Borough	Expired	King Cove city	City	6/25/2015
Aleutians East Borough	Expired	Nelson Lagoon ANV	Alaska Native Village	6/25/2015
Aleutians East Borough	Expired	Sand Point city	City	6/25/2015
Allakaket City	Expired	Allakaket city	City	4/12/2015
Allakaket (City of) and Allakakeet Village Hazard Mitigation Plan	Approvable Pending Adoption	Allakaket ANVSA	Alaska Native Village	
Allakaket (City of) and Allakakeet Village Hazard Mitigation Plan	Approvable Pending Adoption	Allakaket city	City	
Alutiiq Tribe of Old Harbor Tribal Mitigation Plan	Plan in Progress	Old Harbor ANVSA	Alaska Native Village	
Anchorage Municipality All Hazards Mitigation Plan	Approved	Anchorage municipality	Municipality	4/10/2022
Angoon City	Expired	Angoon city	City	2/28/2017
Angoon Native Village	Plan in Progress	Angoon ANVSA	Alaska Native Village	
Aniak City	Approved	Aniak city	City	12/8/2020
Anvik City	Expired	Anvik city	City	4/12/2015
Atmautluak HMP	Approved	Atmautluak	Unincorporated	11/2/2020
Atmautluak HMP	Approved	Atmautluak ANVSA	Alaska Native Village	11/2/2020
Bethel City Hazard Mitigation Plan	Approvable Pending Adoption	Bethel city	City	

**Existing Local HMPs
(As of August 2018)**

August 2018 Alaska Local Hazard Mitigation Plan Status				
Plan Title	Plan Status	Community Name	Jurisdiction Type	Expiration Date
Bettles City	Approvable Pending Adoption	Bettles city	City	
Brevig Mission City	Approved	Brevig Mission city	City	5/23/2019
Bristol Bay Borough Hazard Mitigation Plan	Approved	Bristol Bay Borough	Organized Borough	4/12/2023
Cheesh'na Tribal Mitigation Plan (Chistochina Native Village)	Plan in Progress	Chistochina ANVSA	Alaska Native Village	
Chefornak City	Approved	Chefornak city	City	7/25/2019
Chevak City	Awaiting Revisions	Chevak city	City	
Chevak City	Expired	Chevak city	City	9/22/2016
Chickaloon Native Village Tribal Mitigation Plan	Approvable Pending Adoption	Chickaloon ANVSA	Alaska Native Village	
Chitina HMP	Approved	Chitina	Unincorporated	11/20/2020
Chitina HMP	Approved	Chitina ANVSA	Alaska Native Village	11/20/2020
Chuathbaluk MJ Hazard Mitigation Plan	Approved	Chuathbaluk ANVSA	Alaska Native Village	5/7/2023
Chuathbaluk MJ Hazard Mitigation Plan	Approved	Chuathbaluk city	City	5/7/2023
Circle CDP	Approved	Circle	Unincorporated	7/23/2019
Cordova City	Approved	Cordova city	City	5/22/2023
Craig City	Approvable Pending Adoption	Craig city	City	
Craig Tribal Mitigation Plan	Approved	Craig ANVSA	Alaska Native Village	9/21/2021
Delta Junction City and Deltana CDP	Approved	Delta Junction city	City	8/1/2023
Delta Junction City and Deltana CDP	Approved	Deltana	Unincorporated	8/1/2023
Denali Borough	Expired	Anderson city	City	5/27/2015
Denali Borough	Expired	Denali Borough	Organized Borough	5/27/2015
Dillingham City HMP	Approved	Dillingham city	City	9/20/2021
Diomedes City and Native Village	Awaiting Revisions	Diomedes ANV	Alaska Native Village	
Diomedes City and Native Village	Awaiting Revisions	Diomedes city	City	
Eagle City and Eagle Native Village Hazard Mitigation Plan	Approved	Eagle ANVSA	Alaska Native Village	10/14/2019
Eagle City and Eagle Native Village Hazard Mitigation Plan	Approved	Eagle city	City	10/14/2019
Eek City	Approved	Eek city	City	9/11/2019
Elim City	Approved	Elim city	City	5/27/2019
Emmonak City	Approved	Emmonak city	City	11/20/2019
Evansville Native Village Local Mitigation Plan	Approved	Evansville ANV	Alaska Native Village	5/14/2023
Eyak ANV Hazard Mitigation Plan	Awaiting Revisions	Eyak ANV	Alaska Native Village	
Fairbanks Northstar Borough	Approved	Fairbanks city	City	10/8/2019
Fairbanks Northstar Borough	Approved	Fairbanks North Star Borough	Organized Borough	10/8/2019
Fairbanks Northstar Borough	Approved	North Pole city	City	10/8/2019
Fort Yukon City Hazard Mitigation Plan	Approved	Fort Yukon city	City	1/10/2023
Gambell City	Expired	Gambell city	City	3/14/2017
Glenallen CDP	Expired	Glennallen	Unincorporated	9/8/2016

**Existing Local HMPs
(As of August 2018)**

August 2018 Alaska Local Hazard Mitigation Plan Status

Plan Title	Plan Status	Community Name	Jurisdiction Type	Expiration Date
Golovin (City of) and Chinik Eskimo Community Hazard Mitigation Plan	Approved	Chinik Eskimo Community	Alaska Native Village	12/21/2020
Golovin (City of) and Chinik Eskimo Community Hazard Mitigation Plan	Approved	Golovin city	City	12/21/2020
Goodnews Bay (City and Village of)	Approved	Goodnews Bay AKNV	Alaska Native Village	5/31/2023
Goodnews Bay (City and Village of)	Approved	Goodnews Bay city	City	5/31/2023
Grayling HMP	Approved	Grayling ANV	Alaska Native Village	12/21/2020
Grayling HMP	Approved	Grayling city	City	12/21/2020
Gulkana CDP	Approved	Gulkana	Unincorporated	2/13/2019
Haines Borough	Approved	Haines Borough	Organized Borough	3/14/2021
Holy Cross City	Approved	Holy Cross city	City	11/7/2018
Hoonah City	Approved	Hoonah city	City	5/14/2023
Hooper Bay City	Approved	Hooper Bay ANVSA	Alaska Native Village	11/4/2020
Hooper Bay City	Approved	Hooper Bay city	City	11/4/2020
Houston, City of, LHMP	Approved	Houston city	City	4/23/2023
Hughes City and ANV Multi-Jurisdictional Hazard Mitigation Plan	Approved	Hughes ANVSA	Alaska Native Village	9/13/2021
Hughes City and ANV Multi-Jurisdictional Hazard Mitigation Plan	Approved	Hughes city	City	9/13/2021
Huslia City	Awaiting Revisions	Huslia city	City	
Huslia City	Expired	Huslia city	City	2/23/2015
Hydaburg City	Expired	Hydaburg city	City	10/18/2016
Hydaburg Cooperative Association Tribal Mitigation Plan	Plan in Progress	Hydaburg ANVSA	Alaska Native Village	
Juneau City and Borough	Expired	Juneau city and borough	Organized Borough	9/11/2017
Kake City	Expired	Kake city	City	10/14/2016
Kaltag City and ANV	Approvable Pending Adoption	Kaltag ANV	Alaska Native Village	
Kaltag City and ANV	Approvable Pending Adoption	Kaltag city	City	
Kasaan City of/ Village of Kasaan Hazard Mitigation Plan	Approved	Kasaan city	City	11/8/2022
Kasaan City of/ Village of Kasaan Hazard Mitigation Plan	Approved	Organized Village of Kasaan	Alaska Native Village	11/8/2022
Kenai Peninsula Borough Multi-Jurisdictional Hazard Mitigation Plan	Approved	Homer city	City	7/22/2019
Kenai Peninsula Borough Multi-Jurisdictional Hazard Mitigation Plan	Approved	Kenai Peninsula Borough	Organized Borough	7/22/2019
Kenai Peninsula Borough Multi-Jurisdictional Hazard Mitigation Plan	Approved	Soldotna city	City	7/22/2019
Ketchikan Gateway Borough	Approved	Ketchikan city	City	1/11/2022
Ketchikan Gateway Borough	Approved	Ketchikan Gateway Borough	Organized Borough	1/11/2022
Ketchikan Gateway Borough	Approved	Saxman city	City	1/11/2022

**Existing Local HMPs
(As of August 2018)**

August 2018 Alaska Local Hazard Mitigation Plan Status

Plan Title	Plan Status	Community Name	Jurisdiction Type	Expiration Date
Kipnuk ANV	Approved	Kipnuk	Alaska Native Village	5/30/2023
Kipnuk CDP	Approved	Kipnuk	Unincorporated	9/6/2018
Kivalina City	Approved	Kivalina city	City	11/20/2020
Klawock City	Expired	Klawock city	City	10/14/2016
Kluti-Kaah HMP	Approved	Copper Center	Unincorporated	12/8/2020
Kluti-Kaah HMP	Approved	Copper Center ANVSA	Alaska Native Village	12/8/2020
Kluti-Kaah HMP	Approved	Native Village of Kluti-Kaah	Alaska Native Village	12/8/2020
Kodiak Island Borough	Expired	Akhiok city	City	4/7/2011
Kodiak Island Borough	Expired	Kodiak city	City	4/7/2011
Kodiak Island Borough	Expired	Kodiak Island Borough	Organized Borough	4/7/2011
Kodiak Island Borough	Expired	Larsen Bay city	City	4/7/2011
Kodiak Island Borough	Expired	Old Harbor city	City	4/7/2011
Kodiak Island Borough	Expired	Ouzinkie city	City	4/7/2011
Kodiak Island Borough	Expired	Port Lions city	City	4/7/2011
Kongiganak HMP	Approved	Kongiganak ANVSA	Alaska Native Village	11/20/2020
Kongignak HMP	Approved	Kongignak	Unincorporated	11/20/2020
Kotlik City	Approved	Kotlik city	City	12/5/2018
Kotzebue City	Approved	Kotzebue city	City	12/29/2019
Koyuk HMP	Approved	Koyuk city	City	10/14/2019
Koyukuk City	Expired	Koyukuk city	City	10/3/2013
Kwethluk City	Expired	Kwethluk city	City	2/23/2015
Kwigillingok HMP	Approved	Kwigillingok	Unincorporated	12/8/2020
Kwigillingok HMP	Approved	Kwigillingok ANVSA	Alaska Native Village	12/8/2020
Lake and Peninsula Borough	Approved	Chignik city	City	11/4/2020
Lake and Peninsula Borough	Approved	Egegik city	City	11/4/2020
Lake and Peninsula Borough	Approved	Lake and Peninsula Borough	Organized Borough	11/4/2020
Lake and Peninsula Borough	Approved	Newhalen city	City	11/4/2020
Lake and Peninsula Borough	Approved	Nondalton city	City	11/4/2020
Lake and Peninsula Borough	Approved	Pilot Point city	City	11/4/2020
Lake and Peninsula Borough	Approved	Port Alsworth	Unincorporated	11/4/2020
Lake and Peninsula Borough	Approved	Port Heiden city	City	11/4/2020
Louden Tribal and City of Galena Multi-Jurisdictional Hazard Mitigation Plan	Approved	Galena city	City	9/8/2020
Louden Tribal and City of Galena Multi-Jurisdictional Hazard Mitigation Plan	Approved	Louden Tribal Council	Alaska Native Village	9/8/2020
Lower Kalskag City	Approved	Lower Kalskag city	City	10/29/2018
Marshall HMP	Approved	Marshall city	City	11/5/2019
Matanuska-Susitna Borough	Approved	Matanuska-Susitna Borough	Organized Borough	11/7/2018
McGrath City	Expired	McGrath city	City	2/26/2014
McGrath City and Tribe	Awaiting Revisions	McGrath ANV	Alaska Native Village	
McGrath City and Tribe	Awaiting Revisions	McGrath city	City	
Mekoryuk HMP	Approved	Mekoryuk ANVSA	Alaska Native Village	11/4/2020
Mekoryuk HMP	Approved	Mekoryuk city	City	11/4/2020
Metlakatla Native Village Tribal Mitigation Plan	Plan in Progress	Metlakatla Indian Community	Alaska Native Village	

**Existing Local HMPs
(As of August 2018)**

August 2018 Alaska Local Hazard Mitigation Plan Status

Plan Title	Plan Status	Community Name	Jurisdiction Type	Expiration Date
Mountain Village City	Approvable Pending Adoption	Mountain Village city	City	
Napakiak City	Approved	Napakiak city	City	8/12/2023
Napakiak City	Expired	Napakiak city	City	9/8/2016
Napaskiak HMP	Approved	Napaskiak ANV	Alaska Native Village	12/29/2019
Napaskiak HMP	Approved	Napaskiak city	City	12/29/2019
Nenana City	Approvable Pending Adoption	Nenana city	City	
New Stuyahok City	Expired	New Stuyahok city	City	1/25/2017
Newtok HMP	Approved	Newtok ANVSA	Alaska Native Village	10/26/2020
Nightmute HMP	Approved	Nightmute ANVSA	Alaska Native Village	12/8/2020
Nightmute HMP	Approved	Nightmute city	City	12/8/2020
Nome City	Approved	Nome city	City	2/1/2022
North Slope Borough	Approved	Anaktuvuk Pass city	City	9/21/2021
North Slope Borough	Approved	Atkasuk city	City	9/21/2021
North Slope Borough	Approved	Barrow city	City	9/21/2021
North Slope Borough	Approved	Kaktovik city	City	9/21/2021
North Slope Borough	Approved	North Slope Borough	Organized Borough	9/21/2021
North Slope Borough	Approved	Nuiqsut city	City	9/21/2021
North Slope Borough	Approved	Point Hope city	City	9/21/2021
North Slope Borough	Approved	Point Lay ANV	Alaska Native Village	9/21/2021
North Slope Borough	Approved	Wainwright city	City	9/21/2021
Northwest Arctic Borough	Expired	Ambler city	City	6/8/2014
Northwest Arctic Borough	Expired	Buckland city	City	6/8/2014
Northwest Arctic Borough	Expired	Deering city	City	6/8/2014
Northwest Arctic Borough	Expired	Kiana city	City	6/8/2014
Northwest Arctic Borough	Expired	Kobuk city	City	6/8/2014
Northwest Arctic Borough	Expired	Noorvik city	City	6/8/2014
Northwest Arctic Borough	Expired	Northwest Arctic Borough	Organized Borough	6/8/2014
Northwest Arctic Borough	Expired	Selawik city	City	6/8/2014
Northwest Arctic Borough	Expired	Shungnak city	City	6/8/2014
Nulato City	Expired	Nulato city	City	1/13/2015
Nulato City and ANV	Awaiting Revisions	Nulato ANV	Alaska Native Village	
Nulato City and ANV	Awaiting Revisions	Nulato city	City	
Nunam Iqua City	Approved	Nunam Iqua city	City	8/21/2022
Nunapitchuck HMP	Approvable Pending Adoption	Nunapitchuk City	City	
Petersburg Borough Hazard Mitigation Plan	Approved	Petersburg city	City	6/13/2023
Pilot Station City	Approvable Pending Adoption	Pilot Station city	City	

**Existing Local HMPs
(As of August 2018)**

August 2018 Alaska Local Hazard Mitigation Plan Status

Plan Title	Plan Status	Community Name	Jurisdiction Type	Expiration Date
Pilot Station City	Expired	Pilot Station city	City	9/23/2015
Quinhagak City	Expired	Quinhagak city	City	1/25/2017
Red Devil CDP	Expired	Red Devil	Unincorporated	9/12/2013
Ruby City	Approved	Ruby city	City	3/28/2023
Russian Mission City	Approved	Russian Mission city	City	10/18/2018
Saint Mary's City	Expired	St. Mary's city	City	2/16/2015
Saint Mary's City and Native Villages	Approvable Pending Adoption	Alqaaciq	Alaska Native Village	2/15/2015
Saint Mary's City and Native Villages	Approvable Pending Adoption	St. Mary's city	City	2/15/2015
Saint Mary's City and Native Villages	Approvable Pending Adoption	Yupiit of Andreafski	Alaska Native Village	2/15/2015
Saint Paul City HMP	Approved	St. Paul city	City	12/31/2020
Savoonga City	Expired	Savoonga city	City	1/25/2017
Scammon Bay City	Approved	Scammon Bay city	City	10/31/2018
Seldovia City HMP	Approved	Seldovia city	City	5/14/2023
Shaktoolik City	Approved	Shaktoolik ANVSA	Alaska Native Village	9/23/2020
Shaktoolik City	Approved	Shaktoolik city	City	9/23/2020
Shishmaref City	Approved	Shishmaref city	City	9/8/2020
Sitka City and Borough	Plan in Progress	Sitka city and borough	Organized Borough	
Sitka City and Borough	Expired	Sitka city and borough	Organized Borough	4/20/2015
Skagway Municipality	Plan in Progress	Skagway Municipality	Municipality	
Skagway Municipality	Expired	Skagway Municipality	Municipality	12/30/2014
Sleetmute CDP	Approved	Sleetmute	Unincorporated	2/13/2019
State of Alaska	Approved	Alaska	State/District/Territory	10/26/2018
Stebbins City	Approved	Stebbins city	City	12/5/2018
St. George HMP	Approved	St. George city	City	7/23/2020
St. Michael City	Approved	St. Michael city	City	12/5/2018
Tanacross CDP	Expired	Tanacross	Unincorporated	8/8/2018
Tanana City & ANV	Approvable Pending Adoption	Tanana ANVSA	Alaska Native Village	
Tanana City & ANV	Approvable Pending Adoption	Tanana city	City	
Teller City	Approved	Teller city	City	1/15/2023
Thorne Bay City	Expired	Thorne Bay city	City	1/25/2017
Tikigaq - Point Hope Tribal Mitigation Plan	Awaiting Revisions	Point Hope ANVSA	Alaska Native Village	
Togiak City	Awaiting Revisions	Togiak city	City	
Togiak City	Expired	Togiak city	City	2/16/2015
Tok CDP	Approvable Pending Adoption	Tok	Unincorporated	
Tok CDP	Expired	Tok	Unincorporated	8/19/2014
Toksook Bay City	Approved	Toksook Bay city	City	10/14/2019
Tuluksak CDP	Expired	Tuluksak	Unincorporated	8/8/2018
Tuntutuliak HMP	Approved	Tuntutuliak	Unincorporated	11/4/2020
Tuntutuliak HMP	Approved	Tuntutuliak ANVSA	Alaska Native Village	11/4/2020
Tununak HMP	Approved	Tununak	Unincorporated	11/4/2020
Tununak HMP	Approved	Tununak ANVSA	Alaska Native Village	11/4/2020

**Existing Local HMPs
(As of August 2018)**

August 2018 Alaska Local Hazard Mitigation Plan Status				
Plan Title	Plan Status	Community Name	Jurisdiction Type	Expiration Date
Tyonek AKNV	Approved	Tyonek AKNV	Alaska Native Village	3/11/2023
Unalakleet City	Approved	Unalakleet ANVSA	Alaska Native Village	12/21/2020
Unalakleet City	Approved	Unalakleet city	City	12/21/2020
Unalaska City	Approved	Unalaska city	City	12/5/2018
Unalaska City and Tribe	Approvable Pending Adoption	Unalaska ANVSA	Alaska Native Village	
Unalaska City and Tribe	Approvable Pending Adoption	Unalaska city	City	
Upper Kalskag City	Approved	Upper Kalskag city	City	12/5/2018
Valdez City	Awaiting Revisions	Valdez city	City	
Valdez City	Expired	Valdez city	City	6/27/2013
Wales HMP	Approvable Pending Adoption	Wales ANVSA	Alaska Native Village	
Wales HMP	Approvable Pending Adoption	Wales city	City	
Wasilla City	Approvable Pending Adoption	Wasilla city	City	
Wasilla City	Expired	Wasilla city	City	8/2/2017
White Mountain MJHMP	Approved	White Mountain ANV	Alaska Native Village	1/28/2023
White Mountain MJHMP	Approved	White Mountain city	City	1/28/2023
Whittier City	Approved	Whittier city	City	5/2/2019
Wrangell City and Borough	Expired	Wrangell city and borough	Organized Borough	1/21/2015
Yakutat City and Borough HMP	Approved	Yakutat City and Borough	Organized Borough	12/21/2020

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**Existing Tribal HMPs
(As of August 2018)**

August 2018 Alaska Tribal HMP Status					
Plan Title	Plan Status	Community Name	Plan Update Number	APA Date	Expiration Date
Akiachak Native Village Hazard Mitigation Plan	Approved	Akiachak ANVSA	1	8/21/2013	9/6/2018
Alatna Tribal Hazard Mitigation Plan	Approvable Pending Adoption	Alatna ANVSA	2	8/28/2017	
Allakaket (City of) and Allakakeet Village Hazard Mitigation Plan	Approvable Pending Adoption	Allakaket ANVSA	2	7/24/2018	
Saint Mary's City and Native Villages	Approvable Pending Adoption	Alqaaciq	1	7/25/2018	2/15/2015
Angoon Native Village	Plan in Progress	Angoon ANVSA	0		
Atmautluak HMP	Approved	Atmautluak ANVSA	0	9/13/2015	11/2/2020
Chickaloon Native Village Tribal Mitigation Plan	Approvable Pending Adoption	Chickaloon ANVSA	0	6/28/2018	
Golovin (City of) and Chinik Eskimo Community Hazard Mitigation Plan	Approved	Chinik Eskimo Community	2	10/24/2015	12/21/2020
Cheesh'na Tribal Mitigation Plan (Chistochina Native Village)	Plan in Progress	Chistochina ANVSA	0		
Chitina HMP	Approved	Chitina ANVSA	0	10/9/2015	11/20/2020
Chuathbaluk MJ Hazard Mitigation Plan	Approved	Chuathbaluk ANVSA	0	3/19/2018	5/7/2023
Kluti-Kaah HMP	Approved	Copper Center ANVSA	0	9/18/2015	12/8/2020
Craig Tribal Mitigation Plan	Approved	Craig ANVSA	2	9/12/2016	9/21/2021
Diomedes City and Native Village	Awaiting Revisions	Diomedes ANV	0		
Eagle City and Eagle Native Village Hazard Mitigation Plan	Approved	Eagle ANVSA	1	6/25/2014	10/14/2019
Evansville Native Village Local Mitigation Plan	Approved	Evansville ANV	1	4/27/2018	5/14/2023
Eyak ANV Hazard Mitigation Plan	Awaiting Revisions	Eyak ANV	0		
Goodnews Bay (City and Village of)	Approved	Goodnews Bay AKNV	0	4/5/2018	5/31/2023
Grayling HMP	Approved	Grayling ANV	0	10/24/2015	12/21/2020
Hooper Bay City	Approved	Hooper Bay ANVSA	2	10/15/2015	11/4/2020
Hughes City and ANV Multi-Jurisdictional Hazard Mitigation Plan	Approved	Hughes ANVSA	1	7/9/2016	9/13/2021
Hydaburg Cooperative Association Tribal Mitigation Plan	Plan in Progress	Hydaburg ANVSA	0		
Kaltag City and ANV	Approvable Pending Adoption	Kaltag ANV	1	7/5/2018	
Kipnuk ANV	Approved	Kipnuk	1	4/26/2018	5/30/2023
Kongiganak HMP	Approved	Kongiganak ANVSA	0	9/13/2015	11/20/2020
Kwigillingok HMP	Approved	Kwigillingok ANVSA	0	9/13/2015	12/8/2020

**Existing Tribal HMPs
(As of August 2018)**

August 2018 Alaska Tribal HMP Status					
Plan Title	Plan Status	Community Name	Plan Update Number	APA Date	Expiration Date
Louden Tribal and City of Galena Multi-Jurisdictional Hazard Mitigation Plan	Approved	Louden Tribal Council	2	7/27/2015	9/8/2020
McGrath City and Tribe	Awaiting Revisions	McGrath ANV	1		
Mekoryuk HMP	Approved	Mekoryuk ANVSA	0	10/25/2015	11/4/2020
Metlakatla Native Village Tribal Mitigation Plan	Plan in Progress	Metlakatla Indian Community	0		
Napaskiak HMP	Approved	Napaskiak ANV	0	8/26/2014	12/29/2019
Kluti-Kaah HMP	Approved	Native Village of Kluti-Kaah	0	9/18/2015	12/8/2020
Aleutians East Borough	Expired	Nelson Lagoon ANV	1	3/31/2010	6/25/2015
Newtok HMP	Approved	Newtok ANVSA	2		10/26/2020
Nightmute HMP	Approved	Nightmute ANVSA	0	10/25/2015	12/8/2020
Nulato City and ANV	Awaiting Revisions	Nulato ANV	1		
Alutiiq Tribe of Old Harbor Tribal Mitigation Plan	Plan in Progress	Old Harbor ANVSA	0		
Kasaan City of/ Village of Kasaan Hazard Mitigation Plan	Approved	Organized Village of Kasaan	0		11/8/2022
Tikigaq - Point Hope Tribal Mitigation Plan	Awaiting Revisions	Point Hope ANVSA	0		
North Slope Borough	Approved	Point Lay ANV	2	2/11/2016	9/21/2021
Shaktolik City	Approved	Shaktolik ANVSA	2	8/17/2015	9/23/2020
Aleut Community of St. Paul Island Tribal Mitigation Plan	Plan in Progress	St. Paul ANVSA	0		
Tanana City & ANV	Approvable Pending Adoption	Tanana ANVSA	1	5/11/2018	
Tuntutuliak HMP	Approved	Tuntutuliak ANVSA	0	10/25/2015	11/4/2020
Tununak HMP	Approved	Tununak ANVSA	0	9/13/2015	11/4/2020
Tyonek AKNV	Approved	Tyonek AKNV	0	12/22/2017	3/11/2023
Unalakleet City	Approved	Unalakleet ANVSA	2		12/21/2020
Unalaska City and Tribe	Approvable Pending Adoption	Unalaska ANVSA	1	7/26/2018	
Wales HMP	Approvable Pending Adoption	Wales ANVSA	0	10/25/2015	
White Mountain MJHMP	Approved	White Mountain ANV	0	12/19/2017	1/28/2023
Saint Mary's City and Native Villages	Approvable Pending Adoption	Yupit of Andreafski	1	7/25/2018	2/15/2015

APPENDIX 13.18 2018 DISASTER COST INDEX (CURRENT AS OF JUNE 2018)

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DISASTER COST INDEX

PURPOSE OF THE DISASTER COST INDEX

The purpose of this index is to establish a summary of State funds expended on disaster relief since the creation by the Alaska Legislature of the Division of Homeland Security and Emergency Management (DHS&EM) formerly the Division of Emergency Services. Much of the information contained in this index is readily available from other sources; the intention of this index is to bring this information together in a single source in order to provide the user with an immediate and ready reference regarding the cost of disasters to the State of Alaska. For numerous disasters, the accounts are still open, and it may be anticipated that the amount of expenditures for each category will change as assistance is provided and additional funds are expended.

TIME FRAME OF INDEX: JUNE 10, 1977 TO PRESENT

The decision to begin the index on June 10, 1977, is to a certain extent an arbitrary decision. This date marks the effective date of the Alaska Disaster Act. Obviously, disasters occurred in the state prior to that date and State funds were expended on disaster relief prior to this Act. But the Alaska Disaster Act established the mechanism of providing State assistance, which is currently in effect, and so beginning an index at this point provides a continuous monitor of expenditures since the adoption of the mechanism currently in use for providing State disaster assistance.

SCOPE OF INDEX: STATE EXPENDITURES

This index is limited in scope to State funds expended subsequent to a proclamation by the governor of a disaster emergency. These expenditures are categorized according to two types of assistance, which the Alaska Disaster Act provides subsequent to a governor's proclamation: public assistance to communities and political subdivisions for the purpose of restoring essential public services, and assistance provided to individuals and families. The index does not provide an indication of all public and private funds expended for the purpose of disaster relief. In many of the incidents included in the index other federal and private or volunteer organizations had the authority and did provide assistance (e.g., Small Business Administration, American Red Cross). Moreover, the Alaska Disaster Act requires that subsequent to a disaster incident, the state expend first those funds regularly appropriated to the affected state and local entities. If these funds are sufficient to alleviate the situation, there is no resulting proclamation by the governor and it is not necessary to draw from the Governor's Disaster Relief Fund (A.S. 26.23.300). This index therefore does not include all State funds expended in response to natural or manmade disasters, but is limited to those funds expended from the Governor's Disaster Relief Fund subsequent to a Proclamation of a Disaster Emergency. In addition to indicating the distinction between public assistance and assistance to individuals and families, this index indicates expenditures by DHS&EM for the administrative costs related to providing assistance to the affected residents and communities.

SUMMARY OF THE ALASKA DISASTER ACT (A.S. 26.23.010)

The Alaska Disaster Act, which was approved by the governor on June 9, 1977, and which became effective the following day, establishes the mechanism whereby the State of Alaska provides assistance to individuals and communities within the state who suffer damage due to natural or man-made peacetime disasters. The act grants the governor authority to declare that a disaster emergency exists "if he finds that a disaster has occurred or that such an occurrence is imminent." The Act defines a "disaster" as "the loss of life or property resulting from any natural or non-military manmade cause including but not limited to, fire, flood, earthquake, landslides, mudslides, avalanche, wind-driven water, weather condition, tsunami, oil spill or other water contamination requiring emergency action to avert danger or damage, volcanic activity, epidemic, air contamination, blight, infestation, explosion, riot, equipment failure, or shortage of food, water, fuel or clothing."

EFFECT OF DISASTER EMERGENCY PROCLAMATION: DISASTER ASSISTANCE

Besides granting the governor certain emergency powers, the act permits the State to provide assistance to the

2018 DHS&EM Disaster Cost Index

affected communities and individuals without prior approval by the Alaska Legislature. The funds necessary to provide this assistance are drawn from the Governor's Disaster Relief Fund established by A.S. 26.23.300. In general, State assistance permitted by the Act falls into two broad categories: public assistance provided in the form of grants to communities to enable them to restore essential services, individual assistance in the form of temporary housing, and grants to individuals and families of up to \$5,000.00 to enable them to repair or replace essential items damaged or destroyed by the disaster incident. Public assistance includes repair or replacement of buildings, levees, flood control works, channels, irrigation works, streets, roads, bridges, equipment and other public works except those used for only recreational purposes. This type of assistance is not necessarily limited to local governments. Essential public utilities, for instance, may receive public assistance even if they are owned and operated by private concerns.

Besides these two categories of assistance, the Act provides for State assistance to communities for the purpose of debris clearance if such clearance is necessary for health and sanitation purposes, and it provides for disaster loans to both individuals and communities.

In general, the Act intends to provide State assistance to a community and its residents that will enable the community to return to its pre-disaster condition. It thus contemplates replacement in kind with allowances for such incidental improvement as is necessary to comply with minimum adequate codes or standards of present day construction. With respect to grants to individuals and families, the intent of the Act is to repair or replace only those items deemed essential for the well-being of the affected party, and again to assist the affected party to return only to pre-disaster condition.

ROLE OF THE ALASKA DIVISION OF HOMELAND SECURITY AND EMERGENCY MANAGEMENT

The Alaska Disaster Act created DHS&EM under the Department of Military and Veterans' Affairs. A.S. 26.23.040 prescribes duties and powers of DHS&EM which demonstrate the intent of the legislature to establish a centralized office for the direction and coordination of the state's emergency management activities. These activities include the development and carrying out of the procedures to effectively employ the disaster relief funds made available under the governor's authority. The director of DHS&EM makes a recommendation to the governor to assist a community by determining whether an incident is of sufficient magnitude to warrant the Proclamation of a Disaster Emergency; he recommends the type and amount of assistance necessary to restore the community to its pre-disaster condition, and acting on behalf of the governor, the director carries out the administrative functions related to actually providing the assistance approved by the governor. Besides these responsibilities, the Act assigns to DHS&EM numerous duties related to disaster preparedness and civil defense.

DISASTER EMERGENCIES INCLUDED IN THE INDEX

Between the effective date of the Alaska Disaster Act (June 10, 1977), and at the time of this writing, a total of 190 events of sufficient magnitude to warrant a Proclamation of Disaster Emergency by the governor have occurred. On eight occasions, the West Coast Storm (1979), Kodiak (1980), Southeast Alaska Storm (1984), the Wainwright School Fire (1987), Valdez Oil Spill (1989), the Anchorage/Kenai Peninsula Flooding (1989), the Bristol Bay Fish Failure (1997), and the Western Alaska Fish Disaster (1998) the governor requested that the president declare a major disaster, which would have provided federal assistance in accordance with Public Law 93-288. However, these requests were denied by the FEMA Region 10 director, acting on behalf of the president. On eight other occasions, the Arctic Slope Storm of (1986), the October flooding in Southcentral Alaska of (1986), the Barrow School Fire of (1988), Omega Block Cold Spell (1989), Spring Breakup Flooding (1989), Spring Breakup Flooding (1991), the Southcentral Fall Floods (1995), and the Miller's Reach Fire (1996), the president declared major disasters, providing federal payment of up to 75 percent of the assistance provided. On two occasions, Statewide Fires (1990), and the Miller's Reach Fire (1996) the FEMA authorized federal payment of up to 70 percent of fire expenditures that exceeded the average annual fire management budget. On one occasion, the 1994 Koyukuk Flood, the president authorized federal payment of up to 85 percent of the assistance provided.

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In the federally declared disasters, and on several other occasions, federal assistance was also provided through the Army Corps of Engineers' emergency assistance programs, and the Federal Highway Administration. The Small Business Administration provided low interest disaster loans.

In other non-federally declared disasters various other forms of federal assistance has been provided such as loans through the Small Business Administration, disaster assistance through the Department of Agriculture, economic assistance through the Magnuson Stevens Act and assistance through the Federal Highway Administration.

The following incidents were determined by the governor to constitute Disaster Emergencies from the period of June 10, 1977 to present.

1. The Village of Karluk, January 21, 1978: As a result of a winter storm which struck Kodiak Island, wind driven waves broke over the top of a spit in Karluk and ultimately cut a channel through the spit. The storm destroyed a bridge connecting the mainland portion of the village with the spit, and thus isolated the only store and the post office from the rest of the community. The waves also washed away a 10,000 gallon fuel storage tank which provided the village's only fuel supply, and destroyed all but about 1,500 gallons of fuel. Loss of electric power destroyed frozen food stocks in the store and the owner subsequently went out of business. The loss of the bridge prevented some school children from walking from their homes to school, and in addition the new channel formed by the storm undercut the bank and threatened the village's community hall and an RCA antenna, as well as two private residences. In response to this Disaster Emergency, the State provided public assistance to restore the bridge and replace the village's fuel storage facility. A number of threatened houses were moved to safer locations. The Corps of Engineers conducted bank stabilization operations which alleviated the threat to the community hall and RCA antenna.

2. Campbell Creek (Anchorage), February 10, 1978: On this occasion the Governor proclaimed a Disaster Emergency as a result of flooding and glaciation in the south fork of Campbell Creek in Anchorage which affected an area bounded by East 80th Avenue, Spruce Avenue, Lake Otis Parkway, and Abbott Loop Road, threatening a number of homes in the area with water and ice, and contamination of surface and subsurface water. Public assistance was provided through private contractors and resources of the Alaska Department of Transportation (DOT) in order to thaw the stream bed and allow the water to flow and to remove the ice which had overflowed the creek's bank. Most of the property owners in the area were insured, and thus no form of assistance to individuals and families was necessary.

3. Wrangell/Craig, November 6, 1978: During this period an intense storm occurred in the Wrangell/Craig area in Southeastern Alaska generating high winds, torrential rains and heavy sea waves. The storm caused considerable damage to both private and public property in the two communities. Subsequent to the Governor's Proclamation of Disaster Emergency, DHS&EM provided both public assistance and assistance to individuals and families to assist the communities in recovering from the disaster. SBA made disaster loans available to affected businesses and homeowners.

4. Matanuska-Susitna Borough, February 9, 1979: As a result of a winter storm generating high winds and drifting snow, many roads in the Matanuska-Susitna Borough were rendered impassable to all traffic, including emergency vehicles. DOT was tasked by DHS&EM and public assistance was provided to clear the roads; the Alaska National Guard conducted rescue operations to provide to isolated and stranded individuals. Subsequent to the Governor's request, the Small Business Administration made disaster loans available to some 44 residents and 24 businesses which suffered damage as a result of the storm. The State did not make any direct grants to individuals or families.

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5. Delta Fire, June 18, 1979: During the period from May to June of 1979, abnormally dry weather resulted in over 200 wild forest and grassland fires in the interior of Alaska. At that time the Alaska Department of Natural Resources (DNR) was conducting its fire suppression activities with funds contained in a special account created by the Legislature in 1978 in the amount of \$750,000. When these funds were depleted, the Governor proclaimed a Disaster Emergency in order to permit the immediate transfer of funds from the Disaster Relief Fund to DNR's Fire Suppression Fund. This transfer thus represents public assistance provided through DHS&EM to a State agency, the Department of Natural Resources. In part as a result of this Disaster Emergency Proclamation and the depletion of DNR's Fire Suppression Fund, the Alaska Legislature increased the fund to \$5,000,000 in 1980-81, and again to \$9,000,000 in 1982. No assistance to individuals and families was provided as a result of this incident.

6. West Coast Storm, November 23, 1979: A major sea storm on the west coast of Alaska caused extensive damage in 14 villages in the area. The Governor proclaimed a Disaster Emergency effective from Sheldon Point to Togiak. At the request of the Governor, the SBA authorized disaster loans to affected individuals and businesses, and the State provided grants to individuals and families as well as some public assistance related to a fuel spill at Togiak.

7. Willow Creek, December 20, 1979: Abnormal weather conditions, caused by a combination of extreme debris jams, abnormal temperature variations and glaciation caused flooding of Willow Creek in the Matanuska-Susitna Borough, rendering roads in the area impassable and threatening homes.

8. Kodiak Island, February 5, 1980: The Governor proclaimed a Disaster Emergency subsequent to an intense winter storm which caused extensive damage to public and private properties on Kodiak Island during January and February of 1980. The storm caused damage to port facilities, docks and shoreline roadways in Kodiak, harbor facilities at Port Lions and Ouzinkie, and breakwaters at Old Harbor and Akhiok. On the day of his proclamation, the Governor requested that the President declare a Major Disaster in the area, but after an on-site inspection by officials of FEMA, this request was denied. The State provided disaster assistance for repair of the damaged public facilities. No grant assistance was provided to individuals and families.

9. Anchorage Windstorm, April 4, 1980: The Governor proclaimed a Disaster Emergency subsequent to a hurricane force windstorm which caused damage to over 5,000 residences and businesses in the Anchorage area and parts of the Matanuska-Susitna Borough. Though most of the residents were insured against their losses, the State provided a number of Individual and Family Grants and temporary housing, as well as public assistance to the Municipality. In addition, the SBA made disaster loans available to affected individuals.

10. Bristol Bay, September 2, 1980: Following a storm which generated high winds and heavy sea waves, causing damage to the equipment of numerous commercial fishermen, canneries and approximately 15 to 20 private houses, the Governor proclaimed a Disaster Emergency extending from Dillingham to Port Heiden. The State provided both public assistance to communities and grants to individuals and families; the SBA provided disaster loans to residents of the area. In addition, the State provided temporary housing assistance to one of the residents who were forced to relocate due to damage to his home.

11. Copper Center, December 11, 1980: A Disaster Emergency was proclaimed as a result of flooding of the Klutina River at Copper Center due to extreme cold temperatures combined with lack of snow insulation and a high volume of water flow in the river. All structures in the area were threatened, including the Fire Hall. Public assistance was provided by DHS&EM to alleviate the situation and prevent damage. A major portion of the Disaster Relief Funds were provided to the Alaska Department of Transportation for the purpose of conducting drainage operations and performing the work necessary to recommence the normal flow of the river. No funds were necessary for grants to individuals and families.

12. Angoon, June 8, 1981: In May 1981, the community of Angoon experienced a catastrophic failure of its submerged water main resulting in a failure of the water system, the sewer system, and the

interruption of firefighting capabilities in the area. The Governor's Proclamation of a Disaster Emergency enabled DHS&EM to provide the community with the funds necessary to repair these systems and restore these services. Only public assistance was provided as damage to individual and family properties was not sufficient to warrant the institution of an Individual and Family Grant Program.

13. Southcentral Alaska Rainstorm, July 22, 1981: A torrential rainstorm resulted in widespread flooding, stream over flow and damage to bridges and culverts in South-central Alaska. This condition made travel hazardous throughout the region and in some cases roads were impassable to all traffic, including emergency vehicles. The Governor's Proclamation of a Disaster Emergency enabled DHS&EM to provide the affected communities with immediate recovery assistance, resulting in the restoration of the area's transportation system. No direct assistance was provided to individuals and families.

14. Emmonak, February 12, 1982: On February 7, 1982, a catastrophic fire destroyed the safe water facility in the community of Emmonak, situated at the mouth of the Yukon River, resulting in a shortage of potable water, causing a health hazard, and forcing the closure of schools. The Governor's Proclamation of a Disaster Emergency enabled DHS&EM to provide the community with the public assistance necessary to replace the destroyed facility.

15. Fort Yukon, May 17, 1982: In May of 1982, ice jams, excessive stream flow and abnormal temperature variations resulted in flooding in the community of Ft. Yukon located at the juncture of the Porcupine and Yukon rivers. The flood resulted in extensive damage to public and private property and forced the dislocation of several hundred residents. The Governor's Proclamation of a Disaster Emergency enabled DHS&EM to draw on the Disaster Relief Fund to provide both public assistance and grants to individuals and families. In addition to State assistance, SBA made disaster loans in the area and the American Red Cross provided assistance using the organizations' Disaster Relief Fund.

16. Russian Mission, Akiak, Akiachak, October 1, 1982: During September of 1982, severe windstorms generating high waves caused extensive damage in the villages of Russian Mission, Akiak and Akiachak. The Governor proclaimed a Disaster Emergency to exist in the three villages and the State, through DHS&EM, provided both public assistance and grants to individuals and families in the affected villages.

17. Takotna, December 2, 1982: The Governor proclaimed a Disaster Emergency following a catastrophic fire at Takotna which destroyed the village's generator/equipment shop and storage facility. As a result of the fire, there was no electricity in the village, and heavy equipment necessary to maintain the airstrip and roads was damaged or destroyed. The Governor's proclamation provided public assistance from the Disaster Relief Fund to replace these facilities and equipment.

18. Kipnuk, April 1, 1983: During the winter of 1982, the bridge connecting the village of Kipnuk with the community school was damaged by high water and ice flows, and thus rendered unsafe for use. The Governor's Proclamation of Disaster Emergency enabled the State to provide public assistance in order to replace the bridge. At the time the Alaska Department of Transportation was able to provide a bridge that was surplus to its needs. Disaster Relief Funds were used to reimburse the Alaska National Guard for expenses incurred in transporting the bridge to the village.

19. Aniak, June 15, 1983: Flooding during spring break-up caused by ice jams and excessive stream flow resulted in damage to a public roadway and a number of public buildings in Aniak. Several families were forced to temporarily relocate due to high water. The Governor's Proclamation of a Disaster Emergency provided public assistance for the purpose of restoring the roadway to its pre-disaster condition. No assistance was provided for individuals and families.

20. City of Ketchikan, August 29, 1983: On August 27, 1983, a ferry mishap occurred in the City of Ketchikan which caused damage to the ferry dock on Gravina Island. The dock is needed for transport of fuel and supplies, as well as emergency fire support, between the city and the airport. The Governor's Proclamation of a Disaster Emergency enabled the State to provide temporary alternate transport capabilities using manpower and equipment of the Alaska National Guard. Public assistance from the Disaster Relief

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Fund will defray in part the expenses involved in the use of this personnel and equipment.

21. Cordova, September 16, 1983: The Governor proclaimed a Disaster Emergency after a flash flood generated by heavy rainfall destroyed portions of a pipeline system which provides the City of Cordova with, approximately 60% of its water supply. Public assistance was provided for the purpose of repairing the city's water system.

22. Chefornak, November 17, 1983: As a result of failure of the primary electrical generator, the city was without power. Public assistance was granted to purchase and install a new generator.

23. Unalakleet, March 5, 1984: Extreme cold for a period of 6-7 weeks caused a drastic reduction in the city water supply and eventual freezing of a major loop on the city water system. Public assistance has granted to repair/replace portions of the water system.

24. Mountain Village, March 8, 1984: Circumstances about the same as that in Unalakleet. Public assistance granted to repair/replace one loop of the city water system.

25. Elim, March 9, 1984: A reduction in water from the village source resulted in freezing and rupture in portions of the water and sewer system. Public assistance was granted to replace frozen portions of the water system and to assist in repairing service lines.

26. Kotzebue, April 30, 1984: The Governor declared a Disaster Emergency after prolonged cold weather caused freezing and ruptures in the city water system. A public assistance categorical grant was awarded to replace damaged portions of the system.

27. Cold Bay, May 5, 1984: Equipment failure of a private utility left the City of Cold Bay without electricity. Due to the critical needs of the residents, the Governor declared a Disaster Emergency to allow DHS&EM to transport a State-owned generator to the city for use on a temporary basis.

28. Alakanuk, June 13, 1984: Ice jam caused flooding caused extensive damage to the village road system. Subsequent to the Governor's Proclamation, the State awarded a categorical grant to the city to repair the roads.

29. Emmonak, June 15, 1984: The city requested disaster assistance to repair minor flood damage to a road. The State's categorical grant covered the cost of material to repair the road. The village provided manpower and equipment.

30. Cold Bay, July 31, 1984: In Cold Bay, the owner of the private electrical utility was unwilling to make the repairs necessary to provide reliable service to residents. The Governor's Declaration of Disaster Emergency authorized a disaster loan that assisted a buyer in purchasing the company.

31. Russian Mission, August 9, 1984: The Governor declared a Disaster Emergency after a fire destroyed the city power plant in Russian Mission. The State awarded a categorical grant to replace the plant.

32. Southeast Alaska, November 26, 1984: A hurricane force windstorm and wind driven tides caused extensive damage to public and private property in five Southeast Alaskan communities. The State provided public and individual assistance grants and temporary housing in Juneau, Sitka, Kake, Angoon and Tenakee Springs. SBA provided disaster loan assistance and the American Red Cross made grants to meet immediate needs of victims. The Governor's request for a Presidential declaration was denied.

33. Haines, January 25, 1985: After prolonged and excessive rainstorms caused permanent damage to the city sewer system, the Governor proclaimed a Disaster Emergency to provide funds to repair the system through a categorical public assistance grant.

34. Savoonga, February 26, 1985: The Governor proclaimed a Disaster Emergency to repair damage caused by freezing to the village water and sewer system in Savoonga. A categorical grant provided funds to repair the system.

35. Gambell, May 17, 1985: Unanticipated needs for fuel in Gambell throughout the winter depleted stocks in the village before re-supply by barge was possible. Since the freight charges of air resupply were prohibitive for residents, the Governor declared a Disaster Emergency to pay freight charges through a public assistance grant to the City.

- 36. Buckland, May 30, 1985:** Flooding of the Buckland River caused damage to public roads and public and private buildings in Buckland. The Governor's declaration provided a State grant to repair public property. American Red Cross disaster relief programs gave assistance to individuals and families.
- 37. Kobuk, May 30, 1985:** Ice moving through the village when the Kobuk River overflowed its banks caused damage to the city-owned fuel storage and distribution center. The Governor's declaration resulted in a categorical public assistance grant to repair the facility and replace lost fuel.
- 38. Anvik, June 5, 1985:** Flooding of the Yukon River caused damage to city roads and private property. The Governor's declaration provided a categorical grant to repair the roads. American Red Cross granted assistance to individuals and families.
- 39. Emmonak, June 11, 1985:** The Governor declared a Disaster Emergency after flooding caused damage to city roads. A categorical grant provided funds to assist in repairing the roads.
- 40. Pilot Station, June 18, 1985:** Flooding of the Yukon River damaged several city-owned buildings: a lodge, day care center, television station and warehouse. Subsequent to the Governor's declaration, the State provided a categorical grant to repair these facilities. American Red Cross provided assistance for individuals and families.
- 41. Upper Kuskokwim River, June 18, 1985:** The Governor signed a combined declaration to assist the communities of McGrath, Sleetmute and Red Devil in repairing flood damage to roads. In McGrath and Sleetmute, categorical grants assisted in restoring the roads to pre-disaster condition. The community of Red Devil elected to utilize a flexible funding option to construct an alternate road in a less hazardous location.
- 42. Pitka's Point, July 9, 1985:** Pans of river ice moving with flood waters destroyed the sewer leach field serving the village safe water facility and elementary school. A public assistance grant provided funds to replace the leach field.
- 43. Bethel, July 10, 1985:** High water accompanying breakup of the Kuskokwim River caused erosion damage at the city petroleum dock and washout of fill at the end of the seawall. Undercutting of river bank also threatened eight private residences. The Governor's Proclamation of Disaster Emergency provided public assistance to replace fill at the petroleum dock and seawall end. The State also provided funds to relocate the endangered homes, with the provision that the City of Bethel guarantee that the threatened property remain undeveloped.
- 44. Gambell, August 31, 1985:** A fire originating in the power plant owned by Alaska Village Electric Cooperative (AVEC), destroyed the plant, the adjacent tank farm and city shop, and six private residences and buildings. The State provided temporary housing, public and individual and family assistance to replace uninsured losses. American Red Cross provided additional assistance to individuals and families.
- 45. Cordova, October 31, 1985:** After heavy rains, a landslide destroyed water lines between Heney Creek catchment basin and the city. Disaster public assistance supported repair by the city.
- 46. Manokotak, November 22, 1985:** A fire destroyed the power plant, leaving the city without electricity. DHS&EM assistance provided emergency replacement of the primary generator and funding to repair the backup generator and power plant building.
- 47. Thorne Bay, December 5, 1985:** Cold weather precipitated catastrophic failure of the city water system. The Governor's declaration of disaster provided emergency assistance to restore water service and longtime recovery assistance.
- 48. Metlakatla, December 10, 1985:** Lack of rainfall in the generally rainy village reduced water levels to the point that the hydroelectric system could not generate sufficient power. Public disaster assistance provided supplemental generating capability with diesel generators.
- 49. Unalaska, December 13, 1985:** A severe windstorm caused mudslides, road and port public building damages. Public disaster assistance supplemented insurance settlements to assist in recovery.

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- 50. Thorne Bay, February 3, 1986:** Collapse of a public bridge isolated residents in sections of the village. DHS&EM provided public assistance to replace the bridge.
- 51. Venetie, March 3, 1986:** Catastrophic failure of the electrical power generating plant caused the village to declare a local disaster. The Governor's declaration provided a loan to replace the generator.
- 52. Pelican, March 19, 1986:** A windstorm destroyed the roof of the Pelican public school. DHS&EM provided emergency assistance to repair the roof. After the city received an insurance settlement, it reimbursed the State for the insured portion of the costs.
- 53. Crown Point (Moose Pass), May 1, 1986:** A railroad tanker car accident contaminated the Crown Point area with dangerous fumes. The disaster declaration provided IFG and temporary housing assistance for dislocated residents and public assistance for environmental quality monitoring.
- 54. Napakiak, May 15, 1986:** Severe bank erosion of the Kuskokwim River had reached a point where homes in Napakiak were in danger of falling in the river. The Governor's disaster declaration provided funds to move seven houses to a safe location.
- 55. Arctic (North Slope Major Disaster), September 25, 1986 & FEMA declared (DR-0781) on October 27, 1986:** After an intense windstorm generating wind driven tides and flooding, caused extensive damage to public property, the President declared a Major Disaster to assist the State and local governments in recovering.
- 56. Southcentral Alaska Flood (Major Disaster), October 12, 1986 FEMA declared (DR-0782) on October 27, 1986:** Record rainfall in South-central Alaska caused widespread flooding in Seward, Matanuska-Susitna Borough and Cordova. The President declared a Major disaster implementing all public and individual assistance programs, including SBA disaster loans and disaster unemployment insurance benefits.
- 57. Aniak, October 27, 1986:** The city experienced a catastrophic failure of the sewer system serving the public day care center, laundry, library and home canning facility. Disaster assistance in the form of a loan to the City of Aniak.
- 58. Venetie, January 9, 1987:** A structural fire destroyed the village owned electric plant and heavy equipment required for road and airport maintenance. The Governor's declaration provided public assistance to help the village recover.
- 59. Kotzebue, February 5, 1987:** Freezing of the municipal water system reduced supplies to a level that posed a threat to public health and safety, motivating the city to declare a local disaster. The corresponding State declaration allocated public assistance from the Disaster Relief Fund to repair the system.
- 60. Sleetmute/Red Devil, May 28, 1987:** Ice jam caused flooding inundated the Red Devil electric plant and tank farm, causing damage also to heavy equipment and power poles stored in Red Devil by the City of Sleetmute. The disaster declaration provided funds to repair or replace these items and to implement mitigation measures designed to prevent damage in future years.
- 61. Delta Junction, May 28, 1987:** When a wildland fire in the Delta Junction area threatened urban and developed property, DHS&EM joined the State Division of Forestry in responding. The Governor's disaster declaration covered DHS&EM costs in the response.
- 62. Aniak, May 29, 1987:** Flooding during breakup of the Kuskokwim River caused damage to the city dike, road system, waste dump and sewage lagoon. The city repaired these items using funds authorized by the Governor's Declaration of Disaster Emergency.
- 63. Buckland, June 16, 1987:** Flooding damaged city roads and a number of private homes. Individual and family assistance was provided. Since flooding is frequent in Buckland, the State disaster declaration included funds to mitigate the impact of future events.

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- 64. Richardson Highway, July 24, 1987:** The Governor declared a disaster after heavy rains washed out parts of the Richardson Highway. The declaration was required to obtain federal funds to repair the highway. No State funding was necessary.
- 65. Wainwright School, October 6, 1987:** A fire destroyed the high school and major source of power to the City of Wainwright. A State disaster declaration provided funds to fly in a temporary generator and to assist in the permanent replacement of both the school and power plant.
- 66. Angoon, November 6, 1987:** The City of Angoon sustained a threat to life and property as a result of damage to the fresh water transmission lines serving the community. The leaking lines threatened to deplete the city's entire water supply. State disaster funds were authorized to assist the community in repairing the water lines.
- 67. Togiak, October 1987:** The City of Togiak experienced a catastrophic loss of fuel. The funds were transferred from the Disaster Relief Fund to the Governor's Emergency Fuel Relief Fund for disbursement.
- 68. Klehini River Bridge, November 9, 1987:** Bridge failure was experienced when a snow plow attempted to cross. This bridge is on the only access route to several small communities in the area. A State disaster declaration provided the funds necessary to repair the bridge.
- 69. Barrow, February 16, 1988 & FEMA declared (DR-0813) on March 11, 1988:** A fire destroyed the only Early Childhood Education School in the city and damaged teachers living quarters. Two hundred thirty-five children were displaced from their classes. The State disaster declaration provided an initial \$1 million to provide immediate assistance. The President declared a Major Disaster to assist the State and local governments in recovering.
- 70. Haines, February 29, 1988:** The city experienced severe damage to streets from flooding and runoff triggered by extremely heavy rainfall. The State made available \$150,000 in disaster funds to assist in the repair of the city streets.
- 71. Beaver, March 8, 1988:** The village of Beaver experienced total failure of their electrical distribution system when several transformers faltered. The State disaster declaration helped the village replace the defective transformers and restore power.
- 72. Chefornak, March 23, 1988:** A fire destroyed the village's only electric generation plant leaving the community without power. State disaster funds were utilized to provide a replacement generator for the village.
- 73. Chenega Bay, March 25, 1988:** The village experienced failure of one of their two generators and failure of the other was imminent. A State disaster declaration provided the funds for a replacement generator to insure continued power for the community.
- 74. Pitka's Point, March 29, 1988:** A fire caused major damage to the safe water facility supporting the village with potable water. The State provided \$105,000 in disaster funds to help restore the facility.
- 75. Nondalton, April 5, 1988:** A fire destroyed the City Hall, fire station and fire fighting equipment. State disaster funds were made available to replace the facility and equipment.
- 76. Crooked Creek, May 12, 1988:** After flooding of the Kuskokwim River caused extensive damage to village roads, utilities, and homes, the Governor declared a disaster providing public and individual assistance.
- 77. Napakiak/Napaskiak, May 24, 1988:** Flood damage to roads in Napakiak and both roads and boardwalks in Napaskiak resulted in a declaration of Disaster Emergency. State disaster funds of \$200,000 were made available for public assistance.
- 78. Kaltag, May 26, 1988:** Flooding of the Yukon River and Tributaries washed out an essential bridge in the community of Kaltag. State disaster assistance provided funding to replace the bridge.

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- 79. Eagle, July 22, 1988:** The village of Eagle experienced a catastrophic failure of its electrical utility. The Governor's declaration of disaster made funds available for emergency repair of the system.
- 80. Shishmaref, August 5, 1988:** In late July and early August a series of intense windstorms with sea surges caused extensive damage to the seawall and erosion protection structure in the village of Shishmaref, leaving a number of critical public and private buildings subject to imminent damage. State disaster assistance provided funding to repair the damage.
- 81. Klawock, October 17, 1988:** In Klawock, a fire of unknown origin in the land fill caused a threat to public health. Disaster funding helped the community extinguish the fire by providing funding for equipment and manpower.
- 82. Yukon Flats, November 10, 1988:** Council of Athabaskan Tribal Governments requested assistance on behalf of trappers in the Yukon Flats for loss of trapping related essential items destroyed by the fires in the Summer of 1988.
- 83. Omega Block Disaster, January 28, 1989 & FEMA declared (DR-00826) on May 10, 1989:** The Governor declared a statewide disaster to provide emergency relief to communities suffering adverse effects of a record breaking cold spell, with temperatures as low as -85 degrees. The State conducted a wide variety of emergency actions, which included: emergency repairs to maintain & prevent damage to water, sewer & electrical systems, emergency resupply of essential fuels & food, & DOT/PF support in maintaining access to isolated communities.
- 84. Northwest Arctic Borough, February 1, 1989 & FEMA declared (DR-00826) on May 10, 1989:** During the Omega Block cold spell, the City of Kotzebue and five other villages in the Northwest Arctic Borough suffered extensive permanent damage to water & sewer systems. The City of Buckland suffered a total loss of its electrical system. The Governor declared a disaster to assist the Borough in making permanent repairs to these facilities.
- 85. St. George, February 9, 1989:** A severe windstorm caused sinking of a landing barge used as a dock by the City of St. George. The incident resulted in a blockage of the port and a loss of the capability to off-load essential supplies. The Governor declared a disaster to provide State assistance in recovering the barge.
- 86. Sand Point, February 27, 1989:** After the Omega Block cold spell caused permanent damage to the water main serving the Sand Point boat harbor, the Governor declared a disaster to provide assistance in repairing the line & restoring services.
- 87. Ahkiok, March 2, 1989:** The Governor declared a disaster to assist the village of Ahkiok in replacing its electrical power generating plant, which had experienced irreparable damage caused by prolonged cold weather.
- 88. North Slope Borough, March 8, 1989:** On February 24-28, 1989, a severe winter storm caused extensive damage to public and private property in North Slope Borough villages. The Governor's declaration of disaster authorized public, individual & family assistance in recovering.
- 89. Valdez Oil Spill, March 26, 1989:** The Governor's declaration provided needed funding for State agency operations mobilized in response to the "Exxon Valdez" oil spill. A request for federal assistance through a Presidential declaration of disaster was denied.
- 90. Galena, April 20, 1989:** Declared as a result of the Omega Block Cold Spell (temperatures to -85 in Galena), which caused extensive damage to water and sewer utilities in Galena.
- 91. Glennallen, May 6, 1989:** Ice damaged a bridge across Moose Creek, preventing access to the community sewage lagoon and a small subdivision. The Declaration of Disaster funded replacement of the bridge.

- 92. Circle, May 6, 1989:** Flooding of the Yukon River in Circle during Spring Breakup of 1989 caused damage to public and private property. Disaster was eventually included in the Presidential Declaration (#94 below).
- 93. Ft. Yukon, May 6, 1989:** Flooding of the Yukon River which occurred one day after the Circle flood, also included in the Presidential Declaration.
- 94. Spring Floods, FEMA declared (DR-0832) on June 10, 1989:** Presidential Declaration of Major Disaster, incorporated sixteen local declarations and applied to all communities on Yukon, Kuskokwim and Kobuk rivers and their tributaries. Provided public and individual assistance to repair damage.
- 95. Klawock, June 19, 1989:** A heavy Fall rainstorm washed substantial materials into the city's water reservoir, reducing capacity to the extent that during the following summer water shortages threatened health and safety and economic losses due to closure of a local fish hatchery. The disaster declaration funded restoration of the reservoir to its original, pre-disaster capacity.
- 96. Fairbanks/North Star Borough, August 1, 1989:** Flash flooding along the Tanana River in the Borough caused damage to public and private property. The Governor's declaration authorized public and individual disaster assistance.
- 97. Mat-Su Borough, August 4, 1989:** The Governor declared a disaster to mitigate a flood threat caused by high water in the Matanuska River and placed the Old Glenn Highway and private residences along the river at risk. Funding was applied towards construction of an earthen/gravel dike.
- 98. Whittier, August 8, 1989:** Provided funding to DOT/PF to repair the breakwater to the small boat harbor in Whittier, which was at risk of imminent collapse, threatening damage to the harbor itself and large numbers of privately owned boats.
- 99. Municipality of Anchorage, August 30, 1989:** The Declaration addressed widespread damage caused by heavy flooding along the drainage systems within the Municipality. State assistance was limited to public property damage, although the federal Small Business Administration implemented its Disaster Loan Programs for businesses and homeowners.
- 100. Seward/Kenai Peninsula Borough, August 30, 1989:** This Declaration relates to the same storm and flooding incident that affected Anchorage. Primary area of damage was in the city of Seward. As in Anchorage, State disaster assistance was limited to public property damage, with SBA loans available for individuals and businesses.
- 101. Richardson Highway, September 13, 1989:** The same torrential rains that impacted Anchorage and the Kenai Peninsula Borough caused extensive damage to the Richardson & Copper River Highways. The Governor's Declaration enabled DOT/PF to apply for and receive emergency assistance through the federal Dept. of Transportation. No State disaster funds were expended as a result of this Declaration.
- 102. Search & Rescue, September 13, 1989 :**The Governor made this Declaration of Disaster for the purpose of providing emergency funding to the Dept. of Public Safety for conducting search and rescue operations. The appropriated operating budget for these activities was depleted only two months into the fiscal year.
- 103. Mt. Redoubt Volcano, December 20, 1989:** When Mt. Redoubt erupted in December 1989, posing a threat to the Kenai Peninsula Borough, Mat-Su Borough, and the Municipality of Anchorage, and interrupting air travel, the Governor declared a Disaster Emergency. The Declaration provided funding to upgrade and operate a 24-hr. monitoring and warning capability.
- 104. KPB-Mt. Redoubt, January 11, 1990:** The Kenai Peninsula Borough, most directly affected by Mt. Redoubt, experienced extraordinary costs in upgrading air quality in schools and other public facilities throughout successive volcanic eruptions. The Borough also sustained costs of maintaining 24-hr. operations during critical periods. The Governor's declaration of Disaster Emergency supported these

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activities.

105. Tatitlek, January 31, 1990 : The Governor declared a disaster to assist in the restoration of electrical service in Tatitlek after a fire destroyed the village's generator plant.

106. Broadcast Emergency (KYUK/KDGL), February 22, 1990: Radio Station KYUK in Bethel, Alaska, a public radio station and the EBS station for a large portion of Western Alaska, experienced a failure in its transmission antenna. Concurrently, KDLG, the public radio station and EBS station for the Dillingham operational area, lost its source of emergency power. The Governor's declaration of disaster enabled these stations to immediately repair these shortfalls in their capability to serve as stations on the Emergency Broadcast System network.

107. Kongiganak, March 2, 1990: Inclement weather and equipment failures prevented normal barge deliveries of winter fuel to the village of Kongiganak, causing a shortage as the winter progressed. The governor's declaration of disaster supported air delivery of supplies sufficient to last the winter.

108. Moose Feeding Project, March 28, 1990: Recorded snow depths in interior Alaska resulted in a situation where moose, unable to walk to areas of their natural feeding, were starving to death or browsing along the cleared railway, where they were killed by train. To prevent catastrophic loss of the moose population, the Governor declared a disaster. Funding provided under the declaration supported the clearing of trails and provision of alternative supplies of food.

109. Manokotak, April 5, 1990: Due to an inadequate storage capacity for fuel and gasoline, the City of Manokotak experienced a shortage of fuel for resale to residents and for its own use. The Governor's declaration of disaster subsidized air transport of fuel.

110. Stebbins, April 9, 1990: After a fire destroyed the high school in Stebbins, the Governor declared a disaster to support the design and construction of a new high school. The declaration stipulated that the design emphasize safety and the mitigation of damage by fire or other hazards.

111. '89 Spring Floods Hazard Mitigation, April 14, 1990: The Major Disaster Declaration by the President in response to statewide flooding in the Spring of 1989 authorized the commitment of federal funds to projects designed to mitigate flood damage in future years. Since the federal funding required a State matching share, the Governor declared a disaster to provide these funds and authorize their expenditure.

112. Snow & Ice Removal, 1990: Because of record snowfalls in Southcentral Alaska, the Legislature appropriated a special grant to local governments affected in order to supplement normal snow and ice removal budgets. The Legislature directed that funds be managed by the Division of Homeland Security and Emergency Management. No Disaster Declaration occurred.

113. McGrath, May 16, 1990: Ice jam flooding washed out an extensive section of Cranberry Ridge road. The Disaster declaration provided funds for repair of the road and for mitigation to prevent a recurrence of the same event in the future.

114. Kobuk, May 17, 1990: Ice jam flooding threatened the City of Kobuk to the extent that the local government requested State assistance in evacuating the community. The Governor's declaration of disaster authorized this assistance.

115. Fire Suppression, May 29, 1990: An early wildland fire season depleted the Alaska Dept. of Natural Resources' fund for wildland fire suppression. The Governor's declaration of disaster authorized transfer of funds from the Disaster Relief Fund to this account.

116. Teklanika, May 31, 1990: Continued demands for suppressing early wildland fires resulted in a declaration of disaster authorizing transfer of additional money from the disaster relief fund to the Dept. of Natural Resources.

117. Bethel, July 2, 1990: Abnormally high water in the Kuskokwim River during breakup and continuing for an extended period after breakup resulted in scouring of toe material along the Bethel bulkhead, dislocation of the pipe pilings that form the bulkhead, and loss of material behind these pilings. The disaster declaration supported repair of the bulkhead and placement of riprap material along the toe of affected sections.

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118. Statewide Fires, July 4, 1990 :The wildland fire season, with all-time records in the number and gravity of fires, caused fire suppression requirements beyond the normal capability of the Dept. of Natural Resources. The Governor declared a disaster in order to authorize the use of the resources of the Alaska National Guard in support of the State's wildland fire management programs. The Federal Emergency Management Agency authorized federal payment of up to 70% of fire expenditures that exceeded the average annual fire management budget.

119. Hazard Mitigation Cold Weather, 1990: The Presidential Declaration of Major Disaster for the Omega Block cold spell of January and February 1989 authorized federal funds for mitigation of cold weather damage in future events. The Governor's declaration of disaster provided the State matching funds required for obtaining and using this federal money.

120. Lower Kuskokwim, September 4, 1990: A severe storm compounded by high tides caused extensive flooding in coastal communities of the Kuskokwim and Bristol Bay areas and along the lower Kuskokwim River. The flooding caused damage to both public and private property. The disaster declaration authorized assistance to local governments, individuals and families affected by the flooding.

121. Kotzebue, September 4, 1990: An unseasonable storm and wind driven tides damaged public and private property in Kotzebue and surrounding traditional use areas. The Governor's declaration of disaster provided assistance to the City of Kotzebue and to individuals and families. (closed after Jan 03)

122. Nome, September 10, 1990: An unseasonable sea storm caused the sinking & destruction of a transfer barge owned by the city. As a result the city was unable to receive essential goods that are customarily transported by sea. In addition the debris presents a hazard jeopardizing the structural integrity of the Nome causeway.

123. Teller, September 10, 1990: A storm on the Bering Sea caused major damage to the wood cribbing/gabion breakwater.

124. Lowell Creek Tunnel, September 27, 1990: A major rehabilitation of Lowell Creek Tunnel is required to insure continued protection of the City of Seward. This is a mitigation project.

125. Diomedes, November 21, 1990: A severe early winter storm with waves up to 25 feet destroyed several fuel storage facilities. The resultant loss of critically needed petroleum products along with other equipment, required the declaration of disaster.

126. Eagle, December 28, 1990: A fire destroyed the privately owned power generation facility that services Eagle and Eagle Village. A temporary replacement generator was delivered and power restored on December 30, 1990.

127. Togiak, February 8, 1991: An electrical failure lasting four days, combined with extreme cold temperatures, caused damage to the Municipal water system and the plumbing and heating systems of public buildings. Disaster assistance supported emergency work and permanent repair work.

128. Larsen Bay, February 14, 1991: Abnormal freezing conditions affected the City's water system, interrupting service to approximately fifty percent of the residents. The Governor's Declaration of Disaster enabled the City to obtain equipment and labor needed to restore service.

129. Karluk, February 22, 1991: A fuel shortage in the community threatened the loss of heat in private homes and the loss of electricity city-wide. The Governor declared a disaster to provide money to resupply the village with fuel. The funds were in the form of a disaster loan to the Village Council.

130. Marshall, February 25, 1991: Contamination of the water supply system for Marshall resulted in declaration of February 25, 1991. Funding was provided to Public Health Service to ensure potable water availability for residents of Marshall.

131. Angoon, May 3, 1991: Failure of an undersea water main reduced volume of water being provided to the city system to a critically low level. Declaration authorized public assistance to repair the main.

- 132-142. Fairbanks/North Star Borough, Aniak, McGrath, Red Devil, Anvik, Grayling, Emmonak, Holy Cross, Alakanuk, Shageluk, Galena. the Governor declared on May 3-23, 1991 FEMA declared May 30, 1991:** Flooding. Record snowfalls in the interior combined with sudden Spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State Declarations were combined into a single Presidential Declaration of Major Disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration.
- 143. Dept. of Natural Resources, July 11, 1991:** A severe, early, and intense wildland fire season caused rapid depletion of the State fire suppression funds. The Governor's Declaration of Disaster was made to comply with requirements for receiving Federal wildland fire suppression funds.
- 144. Mat-Su Borough, July 18, 1991:** Severe bank erosion near the Circle View Subdivision area along the Matanuska River destroyed one home and threatened several others, causing the Mat-Su Borough to support either construction of emergency bank protection measures or relocation of homes. The Governor's Declaration authorized a loan of up to \$500,000 dollars to the Mat-Su Borough. The following year the legislature converted this loan to a grant.
- 145. Whitestone Farms, July 25, 1991:** The electric plant in this community was destroyed by a fire thought to be caused by lightning. The Declaration authorized public assistance funds for replacement of the plant.
- 146. Little Diomed, July 25, 1991:** Mechanical system problems and lack of rainfall caused a critical shortage of safe water in the village of Little Diomed. Public assistance made available by the Declaration funded desalination equipment used to fill the village's storage reservoirs with processed seawater.
- 147. Aniak, August 7, 1991:** At the recommendation of OMB, the Alaska Energy Authority and the Office of the Attorney General, the Governor declared a Disaster to authorize an emergency loan from the Disaster Relief Fund to the City of Aniak. Funds were for the purchase of fuel and for averting a general fiscal crisis in the City.
- 148. Diomed Fire, September 20, 1991:** A fire in the City of Diomed destroyed the City electric plant and water treatment plant. Also damaged the water storage tank and destroyed equipment and materials essential to recovery from two previous disasters.
- 149. New Koliganek, October 14, 1991:** The village of New Koliganek sustained flooding which resulted in damage to a bridge and severe threat to public safety of residents. Immediate repair of the bridge was necessary in order to allow residents, school children, to safely transit within the village.
- 150. Kodiak, November 2, 1991:** Commencing on October 31, 1991, the City of Kodiak sustained severe damage and threats to life and property from heavy rains, flooding and landslides. The rains caused severe damage to the City's roads and buildings; and caused damage to homes, businesses and loss of personal property.
- 151. Earthquake Mitigation, November 7, 1991:** Under the authority granted in A.S.26.23.300, the Governor issued a declaration of emergency to prevent or minimize the effects of events that pose a direct and imminent threat of disaster to the State; and, to allow for training and exercise of State agency personnel, to familiarize responders with, and test the capabilities of the State's new Emergency Operations Center.
- 152. Seward Sewage Disaster, November 20, 1991:** On August 26, 1991, the City of Seward sewage treatment lagoon located on Lowell Point Road suffered a catastrophic failure from undetermined causes.
- 153. Eagle City, May 19, 1992:** On May 13, 1992, the ice jam precipitating the Eagle Village flood moved down to the City of Eagle flooding some private property and destroying an erosion control structure along the river front street. Both the public assistance and individual assistance programs were implemented as well as the SBA disaster loan program.

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154. Eagle Village, May 19, 1992: On May 12 through 13, the Native Village of Eagle was inundated by ice jam flooding causing the entire town to be evacuated high ground. Flood waters caused damage to a majority of the homes, eroded the street along the river front and caused damage to the clinic, washeteria and tank farm. Both public assistance and individual assistance programs were implemented as well as the SBA disaster loan program.

155. Galena-92 Flood: From May 26 through 29, 1992, both down town and up town Galena were flooded as a result of an ice jam at Bishop Rock several miles downstream of Galena. This was their third worst flood in recorded history. Extensive damage to State road systems, City streets, electrical distribution system, sewage lagoon and the majority of homes in down town area resulted. Both the public assistance and individual assistance programs were implemented as well as the SBA disaster loan program.

156. Flood Response, June 9, 1992: The Upper Yukon River drainage was experiencing the third worst snow melt flooding in recorded history according to the National Weather Service. The Declaration provided \$100,000.00 from the Disaster Relief Fund to cover DHS&EM expenses that began to occur as a result of the need to provide response activities and surveillance. An RSA was established with the Division of Environmental Quality, DEC to respond to and test for environmental contamination for assurance of public health.

157. Yukon River Flood, June 17, 1992 A very late spring combined with above average snow packs in the Canadian and U.S. portions of the Yukon drainage resulted in post-breakup (snow melt) Yukon River and tributary flooding from Fort Yukon to Rampart. Flood waters rose slowly over a period of days and receded gradually. The North Pole area was included in this declaration due to ground water to rise from the Chena River drainage area. High ground water was exacerbated the Moose Creek Diversion Dam (COE) activation. Public and private property received major damage. The IFG program was implemented in Fort Yukon, Beaver, Stevens Village and North Pole. No Public Assistance was implemented for the North Pole area. Rampart received only public damage. The Small Business Administration declared for the same geographic area and provided disaster loans.

158. Fire Disaster, July 7, 1992: The Department of Natural Resources exhausted fire suppression funds prior to the end of the fire season. A total of \$750,000 was appropriated from statewide funding lapse to the FY93 the Statewide Fire Suppression Program.

159. Norton Sound Herring Fishery Disaster, July 13, 1992: The Governor requested the Small Business Administration to declare an Economic Injury Disaster for Businesses and fishermen impacted by the Norton Sound herring fishery failure. Due to a very late spring, sea ice in the area did not breakup at the time the herring arrived in the Sound making them inaccessible to the fishermen. The Governor did not declare under AS 26.23.

160. Haines Highway Disaster, August 14, 1992: This disaster was declared in order for the State DOT/PF to request \$1.8 million in Federal Highway Administration emergency funds (under Title 23 U.S.C., Section 125) to repair damages relating to flooding of the Klehini River 30 miles north of Haines. No expenditure of State Disaster Relief Funds was required.

161. Mt. Spurr, September 21, 1992: Frequent eruptions and the possibility of further eruptions has caused health hazards and property damage within the local governments of the Municipality of Anchorage, Kenai Peninsula Borough and Mat-Su Borough. These eruptions caused physical damage to observation and warning equipment. Funds to replace equipment for AVO.

162. Nome Highway Disaster: On October 5, 1992, a major Bering Sea Storm with gale-force winds impacted the the Seward Peninsula's Norton Sound Coast in Western Alaska, producing an unusually high storm surge tide and very large waves, particularly in the Nome area. High tidal waves severely damaged two federal-aid highways, isolating the mining community of Council and endangering the traveling public in the Nome area. DOT/PF will request emergency relief funds from Federal Highway Administration.

163. Kuskokwim Disaster: On July 19, 1993, the Governor's Task Force issued a disaster

declaration of economic hardship to fishermen due to poor chum fishing in the Kuskokwim area.

164. Tenakee Springs Fire On July 19, 1993, a community-wide fire destroyed 10 single family homes, the hotel and electrical poles/power lines.

165. Department of Natural Resources: On August 3, 1993, funds were allocated to DNR for fire suppression.

166. Shaker IV: Under the authority granted in AS 26.23.300, the Governor issued a declaration of emergency to prevent or minimize the effects of events that pose a direct and imminent threat of disaster to the State; and, to allow for training and exercise of State agency personnel, to familiarize responders with, and test the capabilities of the State's Emergency Operations Center.

167. Prince of Wales Island: On October 29, 1993, funds were made available through emergency highway funding assistance to all roads on Prince of Wales Island eligible under the Department of Transportation ICTEA provision due to heavy rains and numerous mud slides.

168. Hazard Mitigation AK-0909: This is a pilot program in Ft. Yukon designed to confirm the need for long-range flood mitigation measures to prevent flooding.

169. McGrath Road Disaster: On May 23, 1994, a disaster declaration was signed for the City of McGrath due to damages to approximately 1,147 linear feet of Cranberry Ridge Road. This road provides access to 3 subdivisions occupied by two family homes, the community rifle range, the rock quarry, and the emergency air strip.

170. Galena Disaster: On May 10, 1994, the City of Galena sustained losses and threats to life and property resulting from flooding due to breakup. As a result of this disaster, roads and revetments suffered significant damage, and the sewer lagoon was breached.

171. Cummings Road Flood: On July 13, 1994, Cummings Road was severely damaged by an overflow of waters from the Gerstle River. As a result of this disaster, families were isolated, which constituted a significant threat to the lives and safety of those individuals.

172. Matanuska River Erosion: On July 1, 1994, Matanuska-Susitna Borough sustained serious damage and threats to life and property resulting from erosion of the Matanuska River, in the vicinity of Circle View Estates. As a result of this disaster authority was granted under Alaska Statutes, Section 26.23.020 to loan \$500,000.00 from the Disaster Relief Fund to the Matanuska-Susitna Borough.

173. 94 Fall Flood declared August 26, 1994 by Governor Hickle then FEMA declared (DR-1039) on September 12, 1994: On August 26, 1994, the Governor declared disaster emergencies for the communities of Kobuk, Kiana, and Kotzebue as a result of flood damage. As a result of this disaster, the conditions continue to create unprecedented losses of personal and public properties. The communities of Allakaket and Alatna had to be evacuated under emergency life-threatening conditions on Sunday, August 28, 1994, Hughes was also evacuated several days later. Active duty military assets (CH-47 Chinook helicopters) were used to evacuate Allakaket and Alatna. Guard assets were used to evacuate Hughes. Also affected by this disaster were the communities of Bettles and Wiseman.

174. Metlakatla Sea Storm: On November 10, 1994, the Governor declared that a condition of disaster exists in Metlakatla, as a result of high tides and storm driven waves that threaten coastal sections. The Metlakatla Community Senior Citizens Center and a nearby drainage culvert under the public right-of-way have been put at risk.

175. Skagway Submarine Landslide: On November 16, 1994, the Governor declared that a condition of disaster emergency exist in the City of Skagway, as a result of a submarine landslide. As a result of this disaster damages to Alaska Marine Ferry facilities have interrupted normal service and require emergency repairs, and damages to the small boat harbor exceed the capability of the City of Skagway to repair in an urgent manner to preclude ongoing collateral damages.

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176. Yukon Kuskokwim Delta: On June 5, 1995, the Governor declared a condition of disaster emergency exist in the Cities of Akiak, Kwethluk, Napaskiak, Emmonak, and Alakanuk, as a result of inundation. As a result of this disaster roads, boardwalks, and other public works essential to vital community services were damaged. (closed after Jan 03)

177. Aniak Ice Jam Flood: On June 5, 1995, the Governor declared that a condition of disaster emergency exist in the City of Aniak, as a result of ice jam flooding of the Kuskokwim River and Aniak Slough. As a result of this disaster sections of Birch Road, Airport Boulevard, and the landfill access road were severely damaged.

178. Bethel Sinkhole Erosion: On June 5, 1995, the Governor declared that a condition of disaster emergency exist in the City of Bethel, as a result of erosion during spring breakup. As a result of this disaster the face of the protective sea wall was damaged causing erosion under the City Dock to create and expand sinkholes on the dock.

95-179 Statewide Fire Suppression: On June 22, 1995, the Governor declared that a condition of disaster emergency exist in the State, as a result of insufficient money regularly appropriated to the Department of Natural Resources has been exhausted along with supplemental funds. As a result of this disaster authorization of sufficient funds were made available to continue fire suppression activities through June 30, 1995. DNR administers this funding; therefore, DHS/EM has no data to reflect the applicants or amount of funding.

96-180 South-central Fall Floods declared September 21, 1995 by Governor Knowles then FEMA declared (DR-1072) on October 13, 1996: On September 21, 1995, the Governor declared a disaster as a result of heavy rainfall in South-central Alaska and as a result the Kenai Peninsula Borough, Matanuska-Susitna Borough, and the Municipality of Anchorage were initially affected. On September 29, 1995, the Governor amended the original declaration to include Chugach, and the Copper River Regional Education Attendance areas, including the communities of Whittier and Cordova, and the Richardson, Copper River and Edgerton Highway areas which suffered severe damage to numerous personal residences, flooding, eroding of public roadways, destruction & significant damage to bridges, flood control dikes and levees, water and sewer facilities, power and harbor facilities. On October 13, 1995, the President declared this event as a major disaster (AK-1072-DR) under the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Individual Assistance totaled \$699K for 190 applicants. Public Assistance totaled \$7.97 million for 21 applicants with 140 DSR's. Hazard Mitigation totaled \$1.2 million. The total for this disaster is \$10.5 million.

96-181 Millers Reach Fire declared June 4, 1996 by Governor Knowles then FEMA declared (DR-1119) on June 8, 1996: A fire which began on June 2, 1996 near Houston, Alaska on Miller's Reach Road spread rapidly destroying 344 structures and burning 37,366 acres in the Houston-Big Lake area. Command and control of this fire was initially controlled from the Houston High School with a Type I Incident Management Team. Later a Unified Command structure was established at the Creekside Plaza Mall in Wasilla which consisted of Local, State and Federal representatives. On June 4th, 1996 Governor Knowles declared a State Disaster Declaration and President Clinton signed the Federal Disaster Declaration (AK-1119-DR) on June 8th, 1996. This provided the State with Federal Disaster relief funding for the incident. The fire was contained on June 10th and declared under control on June 15th. Individual Assistance totaled \$1.87 million for 425 applicants. Public Assistance totaled \$5.1 million for 7 applicants with 50 DSR's. Hazard Mitigation totaled \$1.75 million. The total for this disaster is \$9.35 million.

97-182 '96 Southeast Storm (Pelican/Elfin Cove): On Wednesday, September 25, 1996 a severe storm struck Southeast Alaska causing severe damage to some of the communities in the area. The community of Pelican sustained erosion damage to temporary construction (sandbags) placed to curtail erosion on Pelican Creek. The storm also caused additional erosion around the bridge that crosses the creek. In Elfin Cove the landslide damaged electrical distribution lines to homes, disrupted telephone service to 12 homes and caused remaining telephones to operate off battery power. Two homes sustained damage. Also the trail which provided the only means of access between the two sides of town was damaged causing residents to commute from one side of town to the other by boat. The Governor declared the area a disaster on

November 1, 1996 due to the threat to life and property. Public Assistance totaled \$486K for 1 applicant with 1 DSR. The total for this disaster is \$528K.

98-183 DNR Fire Suppression: On July 14, 1997, the Governor made a finding that regularly appropriated fire suppression funds were depleted and disaster relief funds to be insufficient to prevent ongoing and new fires from threatening life and property. The Department of Natural Resources implemented funding via the disaster declaration process, as referenced by legislative intent in Chapter 98, SLA 1997, Sec. 7 Pg. 3, L21-29. DNR administers these funds; therefore, DHS/EM has no data that reflect the applicants or the amount of funding.

98-184 Bristol Bay Distressed Salmon: On July 18, 1997 the Governor declared that as a result of low salmon harvest and depressed prices, municipalities in Bristol Bay and Kuskokwim river drainages suffered a sever reduction in anticipated fish tax revenue. DCRA was assigned the lead agency in a Coordinated Response Partnership of State agencies to act within their statutory authority to assist in restoring the economic health and stability in area communities and to develop goals and strategies for future economic development. Individual Assistance totaled \$500K for 446 applicants. Public Assistance totaled \$1.5 million. The total for this disaster is \$2 million.

98-185 Eastern Tanana River: Continuing heavy rains, glacial melt due to warm temperatures and glacial dam dumping in the Eastern Tanana and Northern Copper River Valleys produced unusually high volume of runoff. This caused severe flooding along the Taylor Highway, Alaska Highway, Nebesna Road, Tok Cutoff, Richardson Highway, Copper River Highway, and Northway Road. The Village of Northway was evacuated and several families remained in emergency housing for an extended period. All along these drainages, homes were flooded and public property was damaged. Individual Assistance totaled \$105K. Public Assistance totaled \$794K for 8 applicants with 20 DSR's.. The total for this disaster is \$946K. (closed after Jan 03)

98-186 Shishmaref Sea Storm: On October 6, 1997, under authority granted by the Alaska Statutes, Section 26.23.020, the Governor declared a condition existed in the City of Shishmaref to warrant a disaster declaration in order to provide for assistance. An unusually early sea storm caused severe damage resulting in homes being eroded into tidewater and being destroyed. Additional federal assistance under the Federal Emergency Management Agencies Flood Mitigation Assistance Grant in the amount of \$600,000 was provided to complete the move of additional damaged structures. In addition the Alaska Housing Finance Corporation provided \$200,000 in housing assistance for the match to the federal assistance. Individual Assistance totaled \$16K for 6 applicants. Public Assistance totaled \$1.2 million for 3 applicants and 14 DSR's. Hazard Mitigation totaled \$50K. The total for this disaster is \$1.46 million. (closed after Jan 03)

98-187 DNR Fire Suppression: On June 5, 1998, the Governor made a finding that insufficient money was regularly appropriated and money from the disaster relief fund was insufficient. DNR Commissioner was hereby authorized to utilize money made available necessary for fire protection and suppression for the balance of FY98 to prevent continuing and new fires from threatening life and property as referenced by legislative intent in sec 7(b), chapter 98, SLA 1997. DNR administered the funding for this disaster; therefore, DHS/EM has no date reflecting the applicants or amount of funding.

98-188 Endicott Mountains Flood 6/18/98: On June 18, 1998, under the authority granted by the Alaska Statues, Section 26.23.020, the Governor declared a disaster existed in the cities of Allakaket and Huslia, the communities of Wiseman and Evansville and along the Dalton Highway between Coldfoot and Atigun Pass. Acute erosion, flash flooding caused damaged to public infrastructures, fuel tank farms, private property, dikes and bridge abutment revetments. Only Public Assistance was granted. It totaled \$660K for 5 applicants with 8 DSR's. The total for this disaster is \$668K.

98-189 Western AK Fisheries Disaster: On July 30, 1998, under the authority granted by Alaska Statute 26.23.020 (c), the Governor declared a disaster existed in the Bering Sea that affected fishing communities along its coastal areas. The Bering Sea suffered a catastrophic rise in sea surface temperatures and as a result disrupted the salmon populations which in the food chain cause the starvation of seabirds and marine mammals. Families in this area depend on the salmon industry to earn salaries to pay for fuel oil to

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heat their homes, electricity, water and sanitation and food in the harsh winter climate. The Governor requested that the Small Business Administration made an administrative declaration of economic injury to provide loans to small businesses. On September 16, 1998 the Governor issued another declaration of disaster emergency adding the communities of Stebbins, St. Michaels, Minto and Manley Hot Springs. On October 16, 1998 the Governor amended his declaration of September 16, 1998 to include the communities of Nelson Lagoon, False Pass and Tyonek. Assistance was broken into two groups FEDA and ELE. The following is the total for both groups: Individual Assistance, for 4800 applicants, = \$19.4 million, and Public Assistance = \$348K. The grand total for the disaster is \$24.1 million.

98-190 Southeastern Storm: On October 27, 1998, the Governor declared a disaster to exist in the communities of Haines and the City and Borough of Juneau for the purposes of accessing federal highway administration funds after the worst two-day rainfall in fifty years occurred in Southeast Alaska on October 19-20, 1998. Over 6 inches of rain fell within a 48-hour period. As a result, extensive damage to many road systems, public, private and non-profits properties was caused from mudslides and water erosion. On November 24, 1998, under the authority granted by Alaska Statute 26.23.020, the governor amended his declaration of disaster in the City and Borough of Juneau, the City and Borough of Haines, to include the Chilkat Indian Village (Community of Klukwan) in order for public (infrastructure) assistance to public property and individual and family grant assistance. The Governor also requested that the Small Business Administration declare an administrative declaration for physical disaster damages to provide low interest loans to businesses and private property owners. Individual Assistance totaled \$167K for 65 applicants. Public Assistance totaled \$828K for 10 applicants with 30 PW's. The total for this disaster is \$1.12 million.

00-191 Central Gulf Coast Storm declared February 4, 2000 by Governor Murkowski
Murkowski then FEMA declared (DR-1316) on February 17, 2000: On Feb 4 2000, the Governor declared a disaster due to high impact weather events throughout an extensive area of the state. The State began responding to the incident since the beginning of December 21, 1999. The declaration was expanded on February 8 to include City of Whittier, City of Valdez, Kenai Peninsula Borough, Matanuska-Susitna Borough and the Municipality of Anchorage. On February 17, 2000, President Bill Clinton determined the event disaster warranted a major disaster declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288 as amended ("the Stafford Act). On March 17, 2000, the Governor again expanded the disaster area and declared that a condition of disaster exists in Aleutians East, Bristol Bay, Denali, Fairbanks North Star, Kodiak Island, and Lake and Peninsula Boroughs and the census areas of Dillingham, Bethel, Wade Hampton, and Southeast Fairbanks, which is of sufficient severity and magnitude to warrant a disaster declaration. Effective on April 4, 2000, Amendment No. 2 to the Notice of a Major Disaster Declaration, the Director of FEMA included the expanded area in the presidential declaration. Public Assistance, for 64 applicants with 251 PW's, totaled \$12.8 million. Hazard Mitigation totaled \$2 million. The total for this disaster is \$15.66 million.

00-192 Fire Suppression: Governor Knowles issued a disaster declaration on May 24, 2000 to make funds available for wildland fire fighting for the remainder of the fiscal year. DNR administers funding; therefore, DHS/EM has no data reflecting applicants or amount of funding.

00-193 Fire Suppression: On June 23, 2000, Governor Knowles writes to speaker of the House, Brian Porter mentioning the issuance of another fire suppression declaration, because the 30-day life period of his May 24, 2000 declaration had expired. Funding was still needed to fight fires through the end of Fiscal Year 2000. DNR administered funding; therefore, DHS/EM has no data reflecting applicants or amount of funding.

01-194 Identified as YKN: dated prior to Kake: On July 19, 2000 Governor Knowles declared a disaster due to failure of salmon returns to the Yukon, Kuskokwim and Norton Sound fishing districts. In some areas the return was significantly less than 50% of the long-term average. This catastrophic decline resulted in food shortages for subsistence fishermen and economic injury to businesses and individuals. The Governor initiated a coordination group named Operation Renew Hope (ORH) to manage this disaster. ORH was lead by DCED Deputy Commissioner Bernice Joseph. DHS&EM provided a full time Public

Information Officer (Kerre Fisher) and Department liaison (Michael Bird) in support of this operation. The group was charged with securing basic needs such as heating fuel, essential utilities, USDA commodities and chum salmon from the Kotzebue fishery. At Governor Knowles request, the federal commerce Department issued a declaration of a fishery disaster under the Magnuson-Stevens Act. On October 24, 2000 the U.S. Small Business Administration issued a Declaration of Economic Injury Disaster #9J35. SBA tied this event to the 1995 Fall Flood Disaster. The Kenai Peninsula borough was the primary declaration area. The contiguous Boroughs of Mat-Su, Lake and Peninsula and the Regional Education Attendance Area #10 and the Municipality of Anchorage were eligible. The total for this disaster is \$747K (mainly from Admin. Allowance). (closed after Jan 03)

01-195 Kake Water Containment Failure: On July 31, 2000 Governor Knowles submitted a financial plan in accordance with AS 26.23.020 (h) to the Alaska State House and Senate for immediate financial assistance to the City of Kake. As general fund appropriations were not made to the disaster relief fund for FY2001 to cover state costs to prevent, minimize or respond to an incident that poses direct and imminent threat to the community, a supplemental appropriation was submitted during the following legislative session. On July 27, 2000, the Mayor of Kake declared a disaster emergency due to public health threat resulting from the Gunnuck Creek Dam failure. The community does not have a potable drinking source available and was seeking assistance to fund an interim water supply system until the Alpine Lake Water Pipeline, which is under construction and projected to be operational in Spring of 2001, was completed. One applicant was funded, which totaled \$405. The disaster total was \$410K.

01-196 Middle Yukon Flood: On May 31, 2001 Governor Knowles declared a disaster for the communities of Koyukuk and Nulato due to ice jams on the Yukon River. On May 24, 2001, ice jams at Last Chance and Nine-Mile Island caused flooding in Nulato and Koyukuk. The ice jam persisted for several days and floodwaters continued to rise until there was little or no dry ground in the village of Koyukuk. Weather conditions were unseasonably cold, and windy. Both snow and rain showers exacerbated the human misery. As precautionary and planned event to avoid attempting to respond to a crisis on a long holiday weekend, 35 high-risk individuals were transported to Galena via helicopter. Able-bodied adults remained in town to minimize losses. Flooding occurred in the village of Nulato on the Yukon River. Homes sustained water damages inside of the structures. City owned fuel tanks at tank farm were unstable. Fuel intake heads were inundated and sustained damages. Water overtopped the public landfill. Individual Assistance totaled \$209K for 30 applicants. Public Assistance totaled \$250K for 4 applicants with 17 PW's. The total for this disaster is \$510,554.

Note: Chronicling major events through Administrative Order tracking and other Disaster Relief Fund access begin at this point.

02-197 KOTZ AM Radio (Admin Order 191): On August 13, 2001, the radio tower antenna for KOTZ AM, the radio station serving the northwest arctic area, was destroyed in a fatal aircraft accident. Because the radio station disseminates event warnings and notifications to local villages and numerous subsistence and hunting camps by way of the Emergency Alert System and programmed messaging services, the governor signed Administrative Order No. 191 on August 24, 2001. The prescribed assistance was to provide this essential service through several low-watt FM stations placed in 6 villages. KOTZ AM Radio is part of the Public Broadcasting System and is a non-profit entity. The Northwest Arctic Borough acted as the applicant in this incident. The total for this incident is \$41,226.77.

02-198 Shishmaref Seawall (Admin Order 194): Winds and high tides combined to strike the Shishmaref coastline from October 5 through October 7, 2001 and eroded inward as much as 50 feet. Some sections of the sand scarp were undercut as much as 16 to 20 feet due to the surf melting the underlying permafrost. In order to prevent further destruction of the coastline due to storms prior to tidewater freeze up, Governor Knowles issued Administrative Order No. 194 on October 27, 2001 which was not to exceed \$110K (including DHS&EM administrative costs). These Public Assistance funds were to be used to establish a sacrificial sandbag revetment to last through the storm season. The total for this incident is \$87,858.74.

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02-199 Sleetmute Core Service Facility Fire (Admin Order 196): At approximately midnight December 20th, 2001, a fire destroyed the community building in Sleetmute. The building housed the clinic, Council Office, VPSO office, washeteria and the TV equipment for the ARCS station. The Disaster Policy Cabinet recommended that disaster assistance be provided to Sleetmute for, “full recovery or temporary measures only as appropriate for the parameters that will provide for a safe, secure and sanitary community by measures that are unable to be addressed through other State (non-DRF), and federal and non-profit agency’s emergency funding resources.” On May 24, 2002, the Governor signed AO 196 and provided funding not to exceed \$150K. This was the unfunded balance after all other grant sources were exhausted. Total recovery costs for the village were estimated to be \$2.26M. Disaster Relief Funds provided were an “improved project” category. Sleetmute was funded for the entire \$150K.

02-200 02 Interior Floods (AK-DR-1423) Declared May 29, 2002 by Gov Knowles then FEMA Declared (DR-1423) on June 26 2002: Flooding occurred in various interior and western Alaska river drainages, including the Tanana, Kuskokwim, Nushagak, Susitna and Yukon River drainages beginning on April 27, 2002 and continuing. The floods caused widespread damage to and loss of property in the Fairbanks North Star Borough (Tanana River drainage); in McGrath, Lime Village, Sleetmute, Red Devil, Crooked Creek, Aniak and Kwethluk (Kuskokwim River drainage); Ekwok and New Stuyahok (Nushagak River drainage); in the Susitna River drainage from Chase to Montana Creek; and in Emmonak (Yukon River drainage). The following conditions exist as a result of this disaster: widespread damage to public facilities and infrastructure, including damage to public airports, roads, and buildings; to public utilities, including water, sewer, and electrical utilities; to personal residences, in some areas requiring evacuation and sheltering of residents; to commercial operations; and to other public and private real and personal property. Public & Individual Assistance provided as well as the 404 Mitigation Program. Added: Gov amendment dated July 12, 2002 added Alakanuk to the State Declaration. Gov declaration dated July 12, 2002 was also made for DOTPF to access FHWA Emergency Relief Funds for damages to roads in the State. Individual Assistance totaled \$292K for 60. Public Assistance totaled \$4.42 million for 29 applicants with 55 PW’s. Hazard Mitigation totaled \$725K. The total for this disaster is \$6.13 million. (closeout data: \$5.1 million total paid out(\$3.8 mil fed and 1.3 mil state)—includes \$419,000 mitigation and \$238,000 IA//posted 7/29/08-rbs)

03-201 Northwest Fall Sea Storm Declared October 23, 2002: Coastal storm surge flooding occurred in communities on the Northwestern coast of Alaska commencing on October, 8, 2002. A fall sea storm with 18-20 foot seas, extremely high winds, and strong tidal action caused severe damage. This storm was caused by a low pressure system moving down from the Arctic Ocean and settling over the Chukchi Sea and the Kotzebue Sound resulting in widespread damage and coastal flooding, including damage to public roads and other public real property. The Governor declared a disaster for the cities of Kotzebue and Kivalina in the Northwest Arctic Borough. On November 6, 2002, an amendment was made to the original declaration to include the community of Shishmaref. The Northwest Arctic Borough (NWAB) provided funds to the City of Kotzebue (\$10,000) and the City of Kivalina (\$5,000). NWAB was provided a grant to reimburse funds given to those communities. Shishmaref did not have any eligible damage or expenses. The total for this disaster is \$382K. This is only for Public Assistance totaling \$344K for 4 potential applicants with 1 PW.

03-202 Kenai Peninsula Borough Flooding (AK-DR-1445) Declared November 6, 2002 by Governor Knowles then FEMA Declared December 4, 2002. FEMA amended the Declaration to extend the incident period to December 20th: Starting October 23, 2002 through November 12, 2002, heavy rains (from three inches to fifteen inches) caused widespread damage, school closures, road washouts and stranded residents & hunters throughout the Kenai Peninsula Borough, the Kodiak Borough and the Chignik Bay area, including Chignik Lake and Chignik Lagoon. The driving rain continued for an extended time frame with multiple storm fronts. Although damages were widespread, the Kenai Peninsula Borough received the most damages. Damages in the Kenai Peninsula Borough consisted of road washouts, culvert damages, bridge damage at several locations, and private home damages caused by overflowing rivers and streams. The Kodiak Borough damages included road washouts, culvert damages, river spike damage, and damages to a pier caused by sea surge. The Four Dam Pool Power Agency received damages to their facility. The Chignik Bay area, including Chignik Lake and Chignik Lagoon damage consisted of sea surge damage

to docks and piers, damage a fuel of loading facility and dump truck, damage to a bridge in Chignik, and damage to the Department of Transportation-Chignik Lagoon Airport. The Kodiak Borough and Chignik Bay area also experienced private home damages. Federal Disaster Assistance for Individual Assistance, Debris Removal, Emergency Protective Measures and all categories of Permanent Work were provided under the Public Assistance Program. FEMA also authorized 404 Hazard Mitigation funding. Individual Assistance totaled \$142K. Public Assistance totaled \$16.6 million for 26 applicants with 118 PW's. Hazard Mitigation totaled \$582K. The total for this disaster is \$17.6 million.

03-203 Denali Fault Earthquake (AK-DR-1440) Declared November 6, 2002 by Governor Knowles then FEMA Declared November 8, 2002:

A major earthquake with a preliminary magnitude of 7.9 occurred on the Denali Fault in Interior Alaska on November 3, 2002, with strong aftershocks. The earthquake caused severe & widespread damage and loss of property, and threat to life & property in the Fairbanks North Star Borough, the Denali Borough, the Matanuska-Susitna Borough, and numerous communities within the Delta Greely, Alaska Gateway, Copper River, and Yukon-Koyukuk Regional Education Attendance Areas including the cities of Tetlin, Mentasta Lake, Northway, Dot Lake, Chistochina and Tanacross, and the unincorporated communities of Slana and Tok. The areas experienced severe damage to numerous personal residences requiring evacuations and sheltering of residences; extensive damage to primary highways including the Richardson Highway, the Tok Cutoff, the Parks Highway and road links to communities including the road to Mentasta and Northway. Damage to supports for the Trans-Alaska Pipeline necessitated the shutdown of the pipeline. Additionally; fuel spills from residential storage tanks, significant damage to water, septic, sewer and electrical systems also occurred. Not all of the areas listed in the State disaster were included in the Federal Individual Assistance Program. Assistance to those areas was thought the State Individual Assistance Program. Additionally, not all of the areas listed in the State declaration were eligible for all categories of assistance under the federal Public Assistance Program. Those areas were only eligible for Debris Removal & Emergency Protective Measures under the Federal Public Assistance Program but were eligible for all Permanent Work categories under the State public Assistance Program. FEMA also authorized 404 Mitigation funding. DOT submitted an appeal letter after funding was denied by FEMA for permanent repair of the runways at Northway and Gulkana Airports. On August 10, 2004, FEMA granted the second appeal, which awarded DOT an extra \$13.5 million to conduct the repairs. Individual Assistance totaled \$67K for 12 applicants. Public Assistance totaled \$24.8 million for 17 applicants with 53 PW's.

03-204 Southcentral Windstorm (AK-DR-1461) Declared March 28, 2003 by Governor Murkowski then FEMA declared April 26, 2003:

A major windstorm with sustained and severe winds that exceeded 100 mph occurred between March 6 and March 14, 2003. The windstorm affected the Matanuska-Susitna Borough, the Municipality of Anchorage, and the Kenai Peninsula Borough. Severe damage occurred to numerous personal residences and local businesses; extensive damage occurred to public facilities (i.e. schools, libraries, community centers, airports, buildings and utilities) in the Matanuska-Susitna Borough, Municipality of Anchorage and the Kenai Peninsula Borough. Although damages were widespread, Anchorage facilities received the most damages. Federal Disaster Assistance for Debris Removal, Emergency Protective Measures and all Permanent Work categories were approved under the Public Assistance Program. FEMA also authorized 404 Mitigation funding and individual assistance under the Individual and Household Program. Individual Assistance totaled \$48K. Public Assistance totaled \$2.5 million for 24 potential applicants with 87 PW's. Hazard Mitigation totaled \$532K. The total for this disaster is \$3.47 million. (closeout data: \$2.8 million total paid out (includes \$220,000 mitigation and \$47,600 State IA///posted 7/29/08 rbs).

03-205 Salcha Flood 2003 State Disaster (AK-03-205) Declared May 21, 2003 by Governor

Murkowski: Warm temperatures in Central Alaska triggered an ice blockage on the Tanana River. The subsequent flooding in the unincorporated community of Salcha impacted 100 homes and caused the evacuation of approximately 40 residents. Salcha is located in the jurisdictional boundaries of the Fairbanks North Star Borough (FNSB). Flooding began on April 29, 2003. Flood water continued to rise and fall through May 7, 2003 as the water volume changed and ice jams dislodged and reformed. An emergency

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shelter was opened by the American Red Cross at the Salcha School. The Shelter was never used because displaced residents chose to stay with family and friends. The FNSB Emergency Manager requested assistance from the State; an Emergency Management Specialist was dispatched to assist. The Civil Air Patrol was used to gather reconnaissance photos of the ice blockages and flooded area. During the incident period, a community meeting was held to listen to resident's concerns. Participants included the Commissioner for the Department of Transportation, the Commander for the Army corps of Engineers, and the Division of Emergency Management. Damages included residential homes, roads (local and state), culverts (local and state) and damage to a dike. Disaster Assistance for Debris Removal, Emergency Protective Measures and Permanent Work category C were approved under the State Public Assistance Program. No Federal Disaster Assistance was requested. Individual assistance totaled \$118k for 43 applicants. Public Assistance totaled \$230K for 6 potential applicants with 8 PW's.

04-206 03 July Riverine Flooding (AK-04-206) Administrative Order Number 212 by Governor Murkowski: Heavy flooding during the period July 14, 2003 through August 3, 2003 caused damages to the Department of Transportation roads and bridges, local businesses and some residential homes. The Denali Borough declared a local disaster and requested assistance from the State. An Emergency Management Specialist and Assistant were sent to assess damages. The Division of Homeland Security and Emergency Management procured and provided 2000 sandbags and 24 potable water containers to the Denali Borough for emergency response. The Department of Transportation damages included areas on the Chena Hot Springs Road, the Elliot Hwy, and the Parks Hwy at Honolulu Creek and Carlo Creek. Several businesses in the affected area were damaged. The American Red Cross responded to the area but residents did not require services. The Small Business Administration provided financial counseling to local residents and businesses. The Denali Borough's request for state assistance, beyond what was provided for emergency response, was denied by the Governor. Disaster Assistance for Debris Removal, Emergency Protective Measures and Permanent Work category C were approved under the State Public Assistance Program. No Federal Disaster Assistance was requested. Total for this disaster is \$340K. There were 2 applicants and 11 PW's for Public Assistance.

04-207 03 Fall Flood (AK-04-207) Declared November 3, 2003 by Governor Murkowski: Unseasonable amount of rain during the period of September 26 through October 3, 2003 caused heavy flooding in the Lake and Peninsula Borough, the Kenai Borough and the Kodiak Island Borough. The Lake and Peninsula Borough declared a local disaster emergency. The Kenai Borough did not declare a disaster emergency but extended a letter of support for the Lake and Peninsula Borough declaration. The heavy rains resulted in localized flash flooding and some general flooding. The Department of Transportation experienced extensive damage on the Chiniak Hwy in Kodiak and to multiple locations on the Williamsport-Pile Bay road in the Lake & Peninsula Borough and the Kenai Borough. The Department of Transportation requested emergency repair funds for the Chiniak Hwy; they will use Statewide Transportation Improvement Program funds for the permanent repair. Other damage to Department of Transportation facilities included damage at Pedro Bay and South Naknek airports. The Department of Transportation used in-house and deferred maintenance funds to make repairs to the damages at the airports. The Tanalian Electric Cooperative in Port Alsworth experienced damage to overhead power lines resulting in power failures. Disaster Assistance for Emergency Protective Measures and Permanent Work category C were approved under the State Public Assistance Program. No Federal Disaster Assistance was requested. Total estimate for this disaster was \$342,136. Actual expenditure was \$235,407. This is only for Public Assistance for 2 applicants with 4 PW's.

04-208 03 Kasaan Landslide (AK-04-208) Declared January 29, 2004 by Governor Murkowski: On October 17, 2003 a stream debris basin failure caused a large landslide that damaged the City of Kasaan's potable water system. The land/debris slide caused damage to the water treatment facility by washing out the road to the water treatment plant, filled the stream impoundment with rocks and debris, exposed a buried water transmission line, destroyed a small stringer bridge, and deposited debris around the water treatment plant preventing normal access. The City of Kasaan declared a local disaster emergency and requested State assistance. Although the water treatment plant was still operational, the repair of the system was beyond the ability of the community. The State did send a Department of Transportation hydrologic

engineer to assess the damages. Emergency Protective Measures and Permanent Work-category C were approved under the State Public Assistance Program. No Federal Disaster Assistance was requested. The total for this disaster is \$443K. This is only for Public assistance for 2 applicants with 3 PW's.

04-209 03 Fall Sea Storm (AK-04-209) Declared January 29, 2004 by Governor Murkowski: A series of sea storms with high winds and tidal surge during the period of November 1 to November 24, 2003 caused damages in the communities of Unalakleet, Diomedes, and Port Heiden. Damage was also reported by the Department of Transportation. The City of Unalakleet and Port Heiden declared local emergencies and Diomedes requested assistance in a letter to the Division of Homeland Security and Emergency Management. The Department of Transportation reported damages in Nome on the Nome-Counsel Road (MP 22 and 23.8) and at the Unalakleet airport. The City of Unalakleet had a large quantity of debris deposited throughout the road system. Damages to a gabion protection wall, roads and exposure of a water line were also experienced. Port Heiden experienced tidal erosion that exposed two grave sites, a power line and endangered a road. The US Air Force, under the coordination of the Division of Homeland Security and Emergency Management, addressed the issue of the two grave sites. Disaster Assistance for Emergency Protective Measures and Permanent Work category C for the City of Port Heiden, the Department of Transportation and Unalakleet, category F for Port Heiden and debris removal for Unalakleet were approved under the State Public Assistance Program. No Federal Disaster Assistance was requested. No Hazard Mitigation was applicable. The total for this disaster is approximately \$654K. This is for Public Assistance for 4 potential applicants with 5 PW's.

04-210 04 Interior Fires (DNR-Declared): On June 29, 2004 declaration was made for DNR to provide fire suppression activities to prevent continuing and new fires from threatening life and property. On July 1, 2004 the Fairbanks North Star Borough (FNSB), the Alaska Department of Natural Resources (DNR) and the Alaska Interagency Coordination Center (AICC) requested that the Alaska Division of Homeland Security and Emergency Services (DHS&EM) assist with evacuation of local residents threatened by growing wildfires. On July 1, 2004 the Alaska Department of Natural Resources and DHS/EM staff on scene determined that local resources, both within FNSB and the surrounding unorganized borough were becoming overwhelmed by the five major fires burning in the region. Dense smoke has limited visibility, hampered air operations in the region and prompted health warnings for residents of Interior Alaska. The funding and assistance for this disaster is administered by DNR; therefore, DHS/EM has not data on applicants or total amount of funding.

05-211 2004 Bering Strait Sea Storm declared October 28, 2004 by Governor Murkowski then FEMA declared (DR-1571) on November 15, 2004. Amended declaration to extend incident to October 24, 2004: Between October 18 and 20, 2004, a severe winter storm with strong winds and extreme tidal surges occurred along the Western Alaska coastline, which resulted in severe damage and threat to life and property, specifically in the Bering Strait Regional Educational Attendance Area (REAA), including Elim, Nome, Koyuk, Shaktoolik, Unalakleet, and other communities; in the Northwest Arctic Borough, including Kivalina, Kotzebue, and other communities; and the City of Mekoryuk; with potentially unidentified damages in adjacent areas, and additional storm surges likely from continuing weather patterns in this area. Northwest Arctic Borough's coastal communities included: severe roadway, power distribution systems, and drain field damages. The Bering Strait REAA received severe damage to gabions (used to protect shoreline), major damage to coastal highways and roads, damage to water and septic systems, damage to a bridge, damage to power distribution systems, damage to fuel storage tanks, fuel spills, and property damage. Conditions that exist in the City of Mekoryuk as a result of this disaster: major damage to sea wall and damage to roadways. On November 16, 2004, the declaration was amended to reflect a more accurate timeframe of the disaster. The City of St. George appealed the denial of funding decision for the breakwater. The appeal was granted, which increased the original estimate for total funding of this disaster by more than \$3 million. The dates of the severe storm were changed to October 18 through October 24, 2004. Individual assistance totaled \$1 million for 271 applicants. Public Assistance total \$13 million for 60 potential applicants with 125 PW's. Hazard Mitigation totaled \$800K. The total for this disaster is \$17 million.

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05-212 2005 Kaktovik Winter Storm declared January 15, 2005 by Governor Murkowski then FEMA declared (DR-1584) on March 14, 2005: Over a week-long period beginning on January 7, 2005, a severe winter storm with extremely low temperatures, 60-knot winds, and blizzard conditions enveloped the coastal city of Kaktovik, Alaska. The high winds blew down several power lines and caused the backload and subsequent shut down of the main electrical grid and generators. On January 8, 2005, approximately 60% of the city was without power. Attempts to restore power at the main power plant continued over the next day with intermittent success; however, power was lost to the entire city, including 107 homes, and the airport, by late afternoon on January 9, 2005. At 1700 hours, the North Slope Borough (NSB), which provides all public utilities for the city, notified the State Emergency Coordination Center (SECC) and Division of Homeland Security & Emergency Management (DHS&EM) that the city was in danger of city-wide freezing damage to water and sewer transmission pipelines, and requested emergency transportation of life safety repair technicians and repair equipment to the city of Kaktovik. Individual Assistance total \$85K for 63 applicants. Public Assistance totaled \$5.6 million for 6 applicants with 19 PW's. Hazard mitigation totaled \$455K. The total for this disaster is \$6.7 million.

05-213 2005 Spring Floods (AK-05-213) declared July 20, 2005 by Governor Murkowski: Beginning May 13, 2005, a large ice jam blocked the mouth of the Lower Yukon River and caused widespread flooding to the cities of Emmonak and Alakanuk. In both cities, several roads were inundated and eroded by the floodwaters. Floodwaters also inundated city infrastructure to include the above-ground circulating water and vacuum sewage systems which were displaced and/or knocked off their mounting supports. Both cities have submitted local disaster declarations requesting State assistance. There were no life safety issues during this event. Floodwaters subsequently subsided to normal levels within the river banks on or about May 18, 2005. Additionally, in the city of McGrath, beginning on May 3, 2005, ice jam flooding eroded several local roads, including Takotna Avenue and Cranberry Ridge Road, and unusually high water levels threatened city infrastructure and private homes, in the City of McGrath. The city infrastructure at risk included: the City Office building which housed the water plant, health clinic, fire station, laundromat, and State Trooper Office; the utility corridor containing power and water lines; two marine fuel headers and associated tank farms; and Federal and State offices and housing. Several private homes were cut off from emergency services due to impassable roads. Takotna Avenue is a main transportation avenue in town. The road also serves as a levee against rising river water that if breeched, would threaten a large portion of the City of McGrath. The City of McGrath signed a local disaster declaration and requested State assistance on May 13, 2005. The high water levels at McGrath receded slowly from May 14 to 18, 2005. Individual Assistance totaled \$300K for 75 applicants. Public Assistance totaled \$1.06 million for 3 applicants with 8 PW's. The total for this disaster is \$1.55 million.

06-214 2005 Bristol Bay Storm (AK-06-214) declared October 03, 2005 by Governor Murkowski: On August 23, 2005, a strong storm with high winds combined with high tides produced storm surges of 2 to 3 feet above the high tide levels and caused widespread coastal flooding in the upper Bristol Bay area. Public infrastructure, commercial property, and personal property damages were reported in the City of Clark's Point, the nearby unincorporated community of Ekuk, and the City of Togiak. Damages were also reported in Lake and Peninsula Borough, Bristol Bay Borough and the City of Dillingham. Lake and Peninsula Borough, Bristol Bay Borough and the City of Dillingham elected not to declare local disasters and are not seeking assistance. Clark's Point and Togiak have each signed local disaster declarations and are asking for state Individual Assistance and Public Assistance in response and recovery from this storm. Individual Assistance totaled \$131,890 for 39 applicants(w/admin=\$157,465). Public Assistance totaled ~~\$457K~~ (final amount was 77,111 + 29,427 admin=\$106,539)for 3 applicants and 11 PW's. The total for this disaster is ~~\$326K~~.(final total \$264,004). Administrative closeout on Jan 18, 2008. Formal closeout letter to DMVA/DAS was Nov 6, 2008. (RBS, Nov 7, 008)

06-215 2005 West Coast Storm declared October 24, 2005 by Governor Murkowski then FEMA declared (DR-1618) on December 9, 2005: Beginning on September 22, 2005 and continuing through September 26, 2005, a powerful fall sea storm produced high winds combined with wind-driven tidal surges resulting in severe and widespread coastal flooding and a threat to life and property in the Northwest

Arctic Borough, and numerous communities within the Bering Strait (REAA 7), the Kashunamiut (REAA 55), the Lower Yukon (REAA 32) and the Lower Kuskokwim (REAA 31) Rural Education Attendance Areas including the cities of Nome, Kivalina, Unalakleet, Golovin, Tununak, Hooper Bay, Chevak, Mekoryuk and Napakiak. The following conditions existed as a result of this disaster: severe damage to personal residences requiring evacuation and sheltering of the residents; to businesses; to drinking water systems, electrical distribution systems, local road systems, airports, seawalls, and other public infrastructure; and to individual personal and real property; necessitating emergency protective measures and temporary and permanent repairs. On October 25, 2005, a request for a federal time extension was submitted. On December 9, 2005 a presidential disaster was declared (DR-1618) for Public Assistance for the Northwest Arctic Boro, Bering Strait REAA, Kashunamiut REAA (Chevak) and the Lower Kuskokwim REAA however, they failed to include the Lower Yukon REAA in the federal declaration. The State will write Project Worksheets for the Lower Yukon REAA under or State Public Assistance Declaration. Individual Assistance total is estimated at \$209K, with 220 applicants. Public Assistance is around \$3.63 million for 16 potential applicants with around 20 PW's. Hazard Mitigation total is \$254K. The total cost for disaster is estimated at \$5.33 million.

06-216 2005 Southeast Storm (AK-06-216) declared December 23, 2005 by Governor Murkowski: Beginning on November 18, 2005 and continuing through November 26, 2005, a strong winter storm with high winds and record rainfall occurred in the City/Borough of Juneau, the City/Borough of Haines, the City/Borough of Sitka, the City of Pelican, the City of Hoonah, and the City of Skagway, which resulted in widespread coastal flooding, landslides, and severe damage and threat to life and property, with the potential for further damage. The following conditions exist as a result of this disaster: severe damage to personal residences requiring evacuation and relocation of residents; to individuals personal and real property; to businesses; and to a marine highway system dock, the road systems eroded and blocked by heavy debris that prohibited access to communities and residents, and other public infrastructures, necessitating emergency protective measures and temporary and permanent repairs. The total estimated amount of assistance is approximately \$1.87 million. This includes the following: Individual Assistance totaling \$500K for 52 applicants and Public Assistance totaling \$1.1 million for 14 applicants and 31 PW's. There was no hazard mitigation. Nov 21,08 update—Closeout later to DAS total cost of \$1,684,311 (included \$183,088 for IA, plus IA Admin of \$35,748, PA Grantee admin of \$133,779, and subgrantee admin allowance of \$30,290.) Lapse to DRF was \$183,586. RBS-11/28/08.

06-217 2006 South Central Storm (AK-06-217) declared March 13, 2006 by Governor Murkowski: Beginning on February 5, 2006 and continuing through February 11, 2006, a series of strong winter storms with high winds, heavy snow, and freezing rain occurred in the City of Seward and surrounding areas of the Kenai Peninsula Borough in South Central Alaska, causing avalanches that severely damaged power lines and other infrastructures, blocked roads, and threatened further damages. As a result of the disaster, there was severe damage to power transmission and distribution lines supplying the City of Seward and surrounding areas; disruption of normal power supply requiring the prolonged use of emergency backup generators with extraordinary expensive operation costs; and damage and threat to public and private property as a result of power disruption. On March 13, 2006, a letter was submitted to request a federal time extension of 30 days. As of 3/20/06, the decision is pending. Decision made not to seek Federal assistance. Current estimated cost for repairs is \$1,254,730; however, this does not include the ongoing cost of line repair. No federal declaration was sought; therefore, the State is limited to public assistance only (no HM or IA). As of 3/20/06, only the City of Seward and Sealife Center are applicants. Disaster administratively closed out and letter sent to applicants on 6/29/07. (7 Nov 08 update)--Formal closeout letter to DMVA/DAS was dated 6 Nov 08 (funds authorized = \$1,465,321; funds expended = \$1,306,509.72; funds lapsed to DFR = \$158,811.28. (7Nov08, R.B. Stewart)

06-218 2006 Spring Floods (AK-06-218) declared June 27,2006 by Governor Murkowski then FEMA declared (DR-1657) on August 04, 2006: Beginning May 5, 2006 continuing through May 30, 2006, the National Weather Service (NWS) issued flooding warnings and watches across the state as excessive snowmelt and ice jams caused flooding along the Yukon, Kuskokwim, and Koyukuk river drainages. The most serious impacts were reported in the communities of Hughes, Koyukuk, Kwethluk,

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Alakanuk, and Emmonak, along with substantial damage to State-maintained airports, roads, and highways. In each community, large portions of the village, city infrastructure, and several roads were inundated and eroded by the floodwaters. Total eligible state damages (item V.C. Remaining Costs, \$6,704,370) less ineligible repairs for Federal-Aid roads (\$469,600), less IA funds (\$485,000), less ERFO road costs (\$240,500) still leaves approximately \$5,509,270 that may be eligible under FEMA's Public Assistance program.

07-220 2006 August Southcentral Flooding (AK-07-220) declared August 29, 2006 by Governor Murkowski then FEMA declared (DR-1663) on October 16, 2006: Beginning on August 18, 2006 and continuing through August 24, 2006, a strong weather system centered causing severe flooding resulting in severe damage and threats to life and property, in the Southcentral part of the State including the Matanuska-Susitna Borough, the City of Cordova and the Copper River Highway area in the Chugach Rural Education Attendance Area (REAA), the Richardson Highway area in the Copper River REAA and Delta/Greely REAA, the Denali Highway area, and the Alaska Railroad and Parks Highway areas in the Matanuska-Susitna Borough and the Denali Borough. Damage cost estimates are near \$21 million in Public Assistance primarily for damage to roads, bridges and rail lines. Individual Assistance estimates are near \$2 million.

07-219 2006 Hooper Bay Fire (AK-07-219) declared August 6, 2006 by Governor Murkowski then FEMA declared (DR-1666) on October 27, 2006: Beginning on August 3, 2006 and continuing through August 4, 2006, the Second Class City of Hooper Bay, Alaska sustained severe losses and threats to life and property from a community structure fire that has destroyed the elementary school, the high school, school support facilities, and 14 homes. As a result of this disaster the homes and personal property of 17 families consisting of 66 people are lost and 400 students do not have educational facilities. There are also potential water contamination and air quality issues. The eligible damage estimate is \$10 million.

07-221 2006 October Southern Alaska Storm (AK-07-221) declared October 14, 2006 by Governor Murkowski FEMA declared (DR-1669) on December 8, 2006: Beginning on October 8, 2006 and continuing through October 13, 2006, a strong large area of low pressure that developed in the Northern Pacific and moved into the Southwest area of the state, produced hurricane force winds throughout much of the state and heavy rains in the Southcentral and Northern Gulf coast areas, which resulted in severe flooding and wind damage and threats to life in the Southern part of the state, to include the Kenai Peninsula Borough including the Cities of Seward and Seldovia, the Chugach Rural Education Area including the City of Cordova and the City of Valdez, and the Copper River Rural Education Area including the Richardson Highway to the Glennallen and highways and drainages in the McCarthy areas. Initial total damages are estimated at \$557,415 with a public assistance estimate of \$456,855. Federal declaration was made December 2006 including assistance for Public Assistance and Hazard Mitigation but not including Individual Assistance. Revised State of Alaska Cost estimates are \$1,265,000 in Individual Assistance and \$38,241,826 in Public Assistance for a total cost of \$39,506,826. There is \$26,825,918 available from the Federal Highway Administration leaving a requested amount of \$13,948,999. A total of 10 individuals or households applied for assistance through the State's IA Temporary Housing program. Six eligible applicants received a total of \$93,611.21 for home replacement, major repair and mitigation, and/or for temporary housing accommodations. Each TH applicant involved extensive case management. The temporary housing program closed 3/10/2008.

07-222 2006 October Kivalina Storm, Administrative Order #231, issued November 19, 2006 by Governor Frank H. Murkowski: October 11, 2006 through October 13, 2006 a fall sea storm with sustained high surf and storm surge caused severe wave damage and coastal erosion in the City of Kivalina. Through local declarations on October 19, 2006 the Northwest Arctic Borough and the City of Kivalina requested assistance to repair the seawall and protect community infrastructure. The Alaska village Electric Cooperative also requested state disaster emergency. In accordance with AS 26.23.020(h) assistance from the disaster relief fund was found appropriate by Governor Murkowski to cover eligible emergency response costs and emergency protective measures. Permanent repairs to or replacement of the seawall were not found

to be appropriate for funding. The amount of funding was not to exceed \$235,000 including administrative fees. Governor Murkowski also directed the Department of Commerce, Community, and Economic Development (consistent with AO 175) to coordinate with other state and federal agencies to propose long-term solutions to the ongoing erosion issues in Kivalina and other coastal communities in the state of Alaska.

07-223 2007 January Kenai Ice Jam Flood, AK-07-223, issued March 02, 2007 by Governor

Sarah Palin: Beginning on January 25 and continuing through February 4, 2007, Skilak glacier-dammed lake breached releasing a four-foot high surge of water into the Kenai River that ultimately dislodged river ice, moved the ice rafts downriver and created ice jams at various points along the river. These ice rafts, some up to 4 feet thick and weighing several tons destroyed or damaged public and private riverbank fishing platforms, stairs, and elevated walkways as they moved downriver. Where ice jams formed, the water and ice rafts overtopped the riverbanks (some up to 15 feet high) and flooded several public campgrounds, fishing parks, and residential homes from the community of Sterling to the City of Soldotna, within the Kenai Peninsula Borough. Approximately 150 homes and riverside businesses in the City of Soldotna and in the Big Eddy, Poacher's Cove, and River Quest portions of the Kenai Borough reported damage to their buildings, fishing structures, and/or docks; another 775 home properties within the borough were also impacted by floodwaters or ice. Some of the damaged fishing platforms were specially designed for handicap access. A voluntary evacuation program was instituted in several areas. Some roads were inundated and impassable due to high water. Ice jams also threatened the temporary highway bridge at Soldotna when the water level rose to 20 feet; however, the water dropped before damage could occur to the bridge or embankment. Preceding the flooding, the National Weather Service issued flood warnings, watches and advisories.

Confirmed damages occurred along the Kenai River in the Kenai Peninsula Borough, especially in the area of the City of Soldotna. Public infrastructure, commercial property, and personal property damages were reported in the metropolitan areas and the borough. The Division of Homeland Security and Emergency Management (DHS&EM) has received local disaster declarations from the City of Soldotna through the Kenai Peninsula Borough, requesting State disaster assistance; and from the Kenai Peninsula Borough, dated Feb 13, 2007, expanding the event date through February 5 and expanding the impacted area to include from Skilak Lake to the mouth of the Kenai River into the Cook Inlet. Due to the severity of the initial damage reports, the Governor inspected the flooding damage on February 3, 2007.

08-224 2007 Beaver Generator Fire, AK-08-224, issued September 14, 2007 by Governor

Sarah Palin: On July 29, 2007, during the installation of a new generator in the Beaver Village power plant, a welding spark ignited a fire that completely engulfed and consumed the power plant. The building and all of its contents including the new generator and two backup generators were completely destroyed. The Beaver Village Council had used Legislative Grant funding to purchase the new generator and hired Marsh Creek LLC to install the new generator. An employee of the contractor installing the generator was welding in the building at the time of the fire.

On August 6, 2007, The Division of Homeland Security & Emergency Management (DHS&EM) received a local disaster declaration and request from First Chief of the Beaver Village Council, Selina Petruska seeking State assistance in replacing the Power Plant Building and power generating facilities before the onset of winter.

08-225 2007 Kivalina Storm Admin Order # 239 issued by Governor Palin on January 22, 2008:

On September 12 and 13, 2007, a low pressure system from the Bering Sea generated storm conditions and coastal flood warnings for communities along the Chukchi Sea coast, including the Cities of Kivalina, Shishmaref, and Point Hope. Substantial coastal erosion by high winds, storm surge, and high waves generated by the storm further damaged the existing sea wall adjacent to the Alaska Village Electric Corporation (AVEC) bulk fuel facility. The Northwest Arctic Borough (NWAB) sent a disaster declaration to the Division of Homeland Security and Emergency Management (DHS&EM) on September 25 that included AVEC's response and tank farm relocation costs.

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09-226 2008 Tanana Basin Flooding (AK-09-226) declared August 4, 2008 by Governor Palin then FEMA declared (DR-1796) on September 26, 2008:

Beginning on July 27, 2008 through August 6, 2008, a strong large area of low pressure developed in the Beaufort Sea near the northern border of the state, bringing a series of storms that moved from the northwest coast into the interior. These severe storms caused losses of property and threats to life and property in the Fairbanks North Star Borough, the North Slope Borough including the cities of Wainwright and Kaktovik, the Yukon-Koyukuk Regional Educational Attendance Area (REAA) including the City of Nenana, and the Denali Borough. The preliminary life safety assessments and joint preliminary damage assessments with FEMA indicated the most severe impacts were to highways, roads, buildings, sea walls, runways, water, sewer, and electric utilities, homes, and businesses.

- The City of Nenana, suffered major damages to lift stations which are critical to the city sewer system. All of the lift stations serving the City of Nenana were either operating at reduced capacity or completely inoperable, placing the city at increased risk for public health hazards. The City of Nenana, Nenana City School District and Nenana Native Tribal Council all experienced significant impacts to buildings and/or equipment requiring major repairs or total replacement.
- The Fairbanks North Star Borough (FNSB) experienced damages to local roads and flood waters caused many homes and businesses to be inaccessible.
- Golden Valley Electric Association's supply routes in the borough were impacted, leaving some residents without power for several days.
- The North Slope Borough suffered extensive damages to its sea-wall located in Wainwright leaving the community susceptible to severe flooding associated with fall sea storms which typically occur this time of year. The North Slope Borough also experienced major damages to the seawall and runway located in Kaktovik preventing complete use of the runway by larger aircraft, which normally supply food and other essential items to the community.
- The Denali Borough experienced damages to local roads and bridges preventing access to homes, requiring transient accommodations until access could be re-established.
- The Department of Transportation and Public Facilities (DOT&PF), Department of Natural Resources (DNR), and the Alaska Rail Road Corporation (ARRC) suffered damages to their facilities as a direct result of this event. DOT&PF damages were limited to roads located within the FNSB and to some equipment and supplies in Nenana. DNR damages were also restricted to locations within the FNSB and consisted of damages to roads and recreational areas. ARRC damages were more extensive requiring total shutdown of all northbound freight and passenger service due to track failures in Nenana and in the Healy Canyon in the Denali Borough.

09-227 2009 Spring Flood declared by Governor Palin on May 6, 2009 then FEMA declared under DR-1843 on June 11, 2009:

Extensive widespread flooding due to snow melt and destructive river ice jams caused by rapid spring warming combined with excessive snow pack and river ice thickness beginning April 28, 2009 and continuing. The ice jams and resultant water backup along with flood waters from snow melt left a path of destruction along 3,000 miles of interior rivers, destroying the Native Village of Eagle and forcing the evacuation of multiple communities. The following jurisdictions and communities in Alaska have been impacted: Alaska Gateway Rural Regional Educational Attendance Area (REAA) including the City of Eagle and Village of Eagle; the Copper River REAA including the Village Community of Chisotchina; the Matanuska-Susitna Borough; the Yukon Flats REAA including the City Community of Circle, and City of Fort Yukon, the Villages Communities of Chalkyistik, Beaver, Stevens Village, and Rampart; the Yukon-Koyukuk REAA including the Cities of Tanana, Ruby, Galena, Koyukuk, Nulato, and Kaltag; the Iditarod Area REAA including the Cities of McGrath, Grayling, Anvik, and Holy Cross; the Northwest Arctic Borough including the Cities of Kobuk, and Buckland; the Lower Yukon REAA including the Cities of Russian Mission, Marshall, Saint Mary's, Mountain Village, Emmonak, Alakanuk and Pilot Station and the Community of Ohogamiut; the Lower Kuskokwim REAA including the Cities of Bethel, Kwethluk, Napakiak, Napaskiak, and the Village Community of Oscarville; the Yupiit REAA including the City of

Akiak, and the Villages of Akiachak, and Tuluksak; the Kuspuk REAA including the Cities of Aniak, Upper Kalskag, Lower Kalskag, and the Villages Communities of Stony River, Sleetmute, Red Devil, Crooked Creek, and Napaimute; the Fairbanks North Star Borough including the City of North Pole and Community of Salcha; the Bering Strait REAA including the City of Nome area.

09-228 Pelican Admin Order (AO 259) signed by Governor Parnell on September 29, 2009:

Beginning on August 16, 2009, the City of Pelican, Alaska experienced an extreme rainfall event with approximately 10 inches of rain over a 48-hour period. The event caused severe flooding that overwhelmed and weakened the primary water supply flume for the Pelican hydroelectric and the drinking water supply systems. Excessive debris entered the dam's water intake, caused several breaks in the water distribution system, and clogged supply lines. Four days later, approximately 30 feet of the flume collapsed disrupting the water supply to the community.

The reservoir, flume, and distribution systems are shared infrastructure between the City of Pelican and the Pelican Utility District (PUD). The City of Pelican water utility provides drinking water for community residents and cooling water for the refrigeration system at the Pelican Seafood fish-processing facility. The Pelican Seafood facility is now abandoned; however, cooling water is still supplied to the facility to maintain the freezers. PUD uses the same infrastructure to generate hydroelectric power for the community.

09-229 2009 October Kodiak Storms declared by Governor Sean Parnell on November 5, 2009 then FEMA declared on December 18, 2009 (DR-1865):

Beginning on October 9, 2009 and continuing, the Kodiak Island Borough, Kodiak, Alaska experienced a series of storms producing extreme rainfall within the Borough. Within 24-hours, the precipitation reached approximately 6.4 inches. On October 21, 2009 the Borough experienced another significant rainfall of 5.5 inches causing additional road failures and closures. The event caused severe rock/mudslides, road washout/sloughing, and flooding. Excessive debris clogged several culverts causing the water to flow over the roads and wash them out in several locations. Alaska Department of Transportation (DOT) closed roads and the airport. The hydroelectric plant was closed due to flooding; necessitating the use of the diesel generators in order to supply power to the community.

09-230 2009 Seward Storm Surge declared by Governor Parnell on December 31, 2009:

On December 1, 2009 the City of Seward experienced a winter storm event that caused damage to the shoreline and an important roadway within the community. High winds, 3 plus inches of rainfall, and a 12.6 foot tide, caused extensive damage to the wave barrier along Lowell Point Road, the Seward Greenbelt area and the seawall at the Alaska Sea Life Center.

10-231 2010 July Interior Flooding declared by Governor Parnell on July 26, 2010:

Beginning on July 10, 2010 and continuing through at least July 13, 2010, heavy rainfall through the Upper Tanana and Yukon River Basins caused severe flooding along several creeks along the Taylor Highway, Nabesna Road and the Alaska Highway. The damages are located within the Alaska Gateway Rural Education Attendance Area (REAA 3) and the Copper River Rural Education Attendance Area (REAA 11). There are no official jurisdictions in the areas.

Heavily damaged areas are primarily between MP 64 near Chicken MP 160 in Eagle. Damages include: landslides, washouts, erosion and bridge abutment and culvert damage. Minor damages are flood related on the Tok Cutoff at MP 123 and the Alaska Highway at MP 164.

11-232 2010 Savoonga Power Outage declared by Governor Parnell on January 14, 2011:

Beginning on December 26, 2010 and continuing through January 6, 2011, a severe winter storm with extremely low temperatures, 60 mph winds, wind chills to minus 50 degrees Fahrenheit, and blizzard conditions enveloped the coastal city of Savoonga, Alaska. The severe weather blew ice-laden transmission lines together and the resulting arcing shorted out the electrical system causing a community-wide power outage.

Approximately 60% of the city was without power including several public buildings, the ANICA store, health clinic, fire hall, the airport runway lighting and telecommunication systems, and most of approximately 160 private homes. On December 27, the Mayor of Savoonga notified the Governor's Office

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that the city was out of power and in danger of city-wide freezing damage to water and sewer transmission pipelines, and requested assistance. The outage caused water and sewer lines in several buildings and private homes to freeze requiring the evacuation and sheltering of up to 147 of the city's 721 residents (over 20% of the population) for six days. As a result of the freezing temperatures and/or warming after power and heat were restored, the frozen lines ruptured and flooded the interior of several buildings.

11-233 2011 Spring Flooding declared by Governor Parnell on May 17, 2011 then FEMA declared on June 10, 2011 (DR-1992): Beginning on May 8, 2011 and continuing through May 9, 2011, the Villages of Red Devil and Crooked Creek sustained flooding because of an ice jam that formed on the Kuskokwim River, which resulted in 54 residents being evacuated and extensive damage to homes and public infrastructure. A total of 15 homes were destroyed or otherwise not habitable. Middle Kuskokwim Electric Cooperative sustained approximately \$80,000 in damages to the electrical power distribution infrastructure.

- Labor Support of Volunteers (PW not written)- \$50,000.00
- Bus Barn cleaning
- Porta-Potty Maintenance
- Washeteria agreement
- Phone Line for SP
- Labor, equipment and fuel for building material movement and staging
- Equipment Support of Volunteers (PW not written)- \$20,000.00
- Fuel and maintenance costs for CCTC equipment to build housing pads
- Power extension to home sites (PW not written) - \$25,000.00
- Road repair necessary due to damage from heavy equipment usage (PW not written) - \$20,000.00
- School utilization in support of volunteers (PW not written) - \$25,000.00
- Bus Barn for sleeping/storage
- Cooking/feeding of volunteers

12-234 2011 Birch Creek Fire declared by Governor Parnell on August 9, 2011: On May 26, 2011 the tribal office building in Birch Creek caught fire. The fire spread and destroyed the community's power plant, tribal office, potable watering point, and telephone building. On June 2, 2011, The Division of Homeland Security & Emergency Management (DHS&EM) received a local disaster declaration and request from the Tribe seeking State disaster assistance for emergency protective measures, temporary and permanent repairs to village infrastructure, and technical and funding assistance needed to repair or replace damaged facilities. Since the fire, temporary power has been restored to the village. Alaska Energy Authority (AEA) has delivered and installed a 28kw generator at the old school that is providing power for the community. A satellite telephone was provided to the community as United Utilities attempts to restore some local and long distance telephone service. Arctic Resources Group, LLC, and Tanana Chiefs Conference Division of Environmental Health have provided bottled water for the community, and are working on a temporary water source.

12-235 2011 Dot Lake Fire declared by Governor Parnell on October 4, 2011: At approximately 11:00 PM, August 28, 2011, a fire at the village utility building occurred. Local efforts to suppress the fire with available equipment were unsuccessful and the entire building and its contents were destroyed. The building housed the local washeteria and showers. The facility also provided water and heat for several home homes in the community through an underground utilidor and is utilized as a watering point for other residents in the area. Due to the fire, electrical power has been lost to the local community building and the clinic. Six families are without water and five families are without adequate heat. Two families have Toyo stoves and two families have wood stoves as back up, these backup systems will not prevent their water lines from freezing nor is there any method of preventing the water lines in the underground system from freezing. This facility served 55 people in Dot Lake Village and the immediate area.

12-236 2011 West Coast Storm declared by Governor Parnell on December 5, 2011 then FEMA declared December 22, 2011 (DR-4050): On November 7, 2011 the National Weather Service (NWS) issued the first of several coastal flood warnings for the western coastline of Alaska from Hooper Bay to the North Slope. The NWS warned of “a rapidly intensifying storm...expected to be an extremely powerful and dangerous storm...one of the worst on record.” Over the next three days additional warnings in response to the 942 millibar (mbar) low pressure system were issued for coastal villages as the storm moved northerly from the Aleutian Islands into the Bering and Chukchi Seas. The west coast was impacted with hurricane force winds exceeding 85 mph, high tidal ranges, and strong sea surges up to 10-ft above mean sea level (msl). Before the first storm had passed, a second equally-low pressure system (e.g., 942 mbar) impacted the western coastline from the Yukon-Kuskokwim Delta south to Bristol Bay. This combined weather extended the incident period for the state to November 13, 2011. The FEMA declaration was limited to the incident period from November 8 – 10, 2011.

12-237 2011 Kenai Peninsula Windstorm declared by Governor Parnell on December 12, 2011 then FEMA declared February 2, 2012 (DR-4054): On November 1, 12, and 15, 2011, a series of major windstorms caused widespread power outages threatening life and property. Power was disrupted to 17,300 homes and businesses. Local utilities, Homer Electric Association (HEA) and Chugach Electric employed several work crews to restore power to the area. Public Infrastructure, commercial property, and personal property damages were reported in the metropolitan areas and throughout the borough. DHS&EM received local declarations from the Kenai Peninsula Borough (KPB) requesting state disaster assistance to cover immediate response, public and individual costs and from the City of Seward through the KPB requesting State assistance.

12-238 2012 Prince William Sound Winter Storm declared by Governor Parnell on February 9, 2012: Beginning in mid-December, 2011 and continuing through January 2012, the City of Cordova and Prince William Sound area began receiving snowfall that put them on a pace to approach or break record seasonal precipitation accumulations. On December 12, the City of Cordova began working in emergency snow removal status. The Cities of Valdez and Yakutat had been facing similar challenges. Avalanches across roadways and extreme conditions have limited or cut off access to airports and other critical infrastructure and endangered public, private and commercial facilities throughout the communities.

12-239 Kivalina Water Issue declared by Governor Parnell on September 7, 2012: On August 13th, a week of record rainfall began in Kivalina which resulted in record flows on the Wulik River. The high water washed several sections of the surface water piping into the river and overtopped the City’s landfill, washing landfill debris into the community. The City of Kivalina and NWAB declared a disaster emergency to make repairs “to the water and landfill infrastructure” and “technical assistance and funding to evaluate damage and perform needed repairs.”

12-240 2012 September Storm declared by Governor Parnell on October 17, 2012 then FEMA declared November 27, 2012 (DR-4094): Beginning on September 4, 2012, and continuing, a strong weather system produced high winds and heavy rains, resulting in severe and widespread wind damage and flooding throughout much of South-central and Interior Alaska. The series of storms created a threat to life and property in the Matanuska-Susitna Borough, Kenai Peninsula Borough, Alaska Gateway Regional Educational Attendance Area (REAA), and the Chugach area. The magnitude of the storm resulted in wind damages and flooding which necessitated debris clearance, emergency protective measures, damage to public facilities including roads, bridges, railroad, electrical distribution and water systems; and damage to private residences to include losses of personal property.

12-241 2012 October Kuskokwim Delta Flood declared by Governor Parnell on November 26, 2012: On October 5, 2012, a strong Fall storm moved north into the Bering Sea and produced severe winds, heavy rain, and storm surges up to 4 feet above mean tide levels in the Kuskokwim Delta, with severe impact to the Native Village of Napaskiak. The impact of the storm resulted in floodwaters surrounding the tribal-owned maintenance garage undermining and shifting the building and foundation; damage to the driveway ramp to the maintenance yard; and substantial damage to community boardwalks.

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13-242 2013 Spring Floods declared by Governor Parnell on May 30, 2013 then FEMA declared on June 25, 2013 (DR-4122): Beginning on May 17, through June 10 2013, excessive snow pack and ice thickness, combined with rapid spring warming caused ice jams and severe flooding. The following jurisdictions and communities in Alaska have been impacted: Alaska Gateway Rural Regional Educational Attendance Area (REAA) including the City and Village of Eagle; the Copper River REAA including the Village Communities of Chisotchina and Gulkana; the Yukon Flats REAA including the Community of Circle, and City of Fort Yukon; the Yukon-Koyukuk REAA including the Cities of Galena; the Lower Yukon REAA including the Cities of Emmonak and Alakanuk. The impact of the flooding resulted in severe damage to approximately 194 homes (requiring evacuations and sheltering) to include loss and damage to personal property, multiple businesses (including loss of revenue), and public infrastructure to include: hazardous and non-hazardous debris removal, emergency protective measures (leading to ongoing mass care operations), damage to city and state roads, bridges, water and sewer systems, electrical generation and distribution systems, recreation areas and fuel storage facilities.

13-F-243 2013 October KPB Flood Disaster declared by Governor Parnell on November 18, 2013 then FEMA declared January 16, 2014 (DR-4161): Beginning October 27, 2013, the Kenai Peninsula received substantial amounts of rain following several weather systems that had previously inundated low-lying areas. On October 26, the National Weather Service issued a flood watch for areas around Western Prince William Sound due to a slow moving system which brought widespread rainfall to the mainland. The forecast was calling for local amounts in excess of 5 inches of rain. Seward, Homer, and other areas of the Kenai Peninsula received heavy rain and flooding which caused landslides, bridge, and airport and road closures. Damages were reported in Seward, Homer, Kenai, Anchor Point, and the Tyonek area along Beluga Road. Flood damages affecting many individual homes were reported and several businesses were also impacted. Disaster Declarations were received from the Kenai Peninsula Borough and the City of Seward on October 29, 2013.

13-S-244 2013 November Storm Disaster declared by Governor Parnell on November 16, 2013 then FEMA declared January 23, 2014 (DR-4162): On November 5, 2013 the National Weather Service (NWS) issued the first of several coastal flood and winter storm warnings ranging from the central Aleutians to and including the western coastline of Alaska from Bristol Bay to the North Slope. In their published message the NWS warned of very strong low pressure system south of Shemya, moving to the central Bering and Chukchi Sea's bringing a combination of gale, high surf, high wind, freezing spray, coastal flooding and sea surge warnings and watches. The west coast was impacted with hurricane force winds exceeding 85 mph, high tidal ranges, and strong sea surges. The resultant impact culminated to, damage to public facilities including roads, seawalls, bridges, airports, and public buildings; damage to electrical distribution systems and drinking water systems; damages to private residences and the losses of personal and real property; and coastal flooding and power outages which necessitated evacuation and sheltering operations. Overall, the series of storms created a threat to life and property in 23 cities and villages in the Bering Strait Regional Educational Attendance Area (REAA), Lower Yukon REAA, and Lower Kuskokwim REAA, and the Fairbanks North Star Borough.

13-Z-245 2013 December Kwethluk Power Outage, Administrative Order # 267 signed by Governor Parnell on December 27, 2013: On December 12, 2013, the City of Kwethluk suffered a power system failure after its two main generators failed due to extreme cold winter temperatures approaching negative 15 degrees Fahrenheit. The City rationed power using a single small auxiliary generator, which restored limited power to all but 12 structures in the community. Upon request, the Alaska Energy Authority (AEA) provided technical assistance to remotely repair the system. After several unsuccessful attempts, it was determined the damage to the system was too severe to affect remote repairs. AEA contacted the State Emergency Operations Center (SEOC) for emergency authorization to deploy electrical workers and supplies to the City to affect repairs and also to avoid further damage to the power system and other infrastructure in the community.

13-Z-246 2013 December Diomedé Power Issues, Administrative Order # 268 signed by Governor Parnell on December 27, 2013: On December 18, 2013, the City of Diomedé suffered a complete power system failure after the last of three generators failed due to extreme cold winter temperatures approaching negative 15 degrees Fahrenheit. Due to a lack of a community power plant operator, the City requested technical assistance from the Alaska Energy Authority (AEA) to instruct the mayor to restart one of the three generators. After the mayor restarted one of the generators, the limping generator continued to have distribution and cooling problems. AEA continued to provide remote assistance however, they were not able to stabilize the generators and restore full power to the community. After several unsuccessful attempts, it was determined the damage to the system was too severe to affect remote repairs. AEA contacted the State Emergency Operations Center (SEOC) for emergency authorization to deploy electrical workers and supplies to the City to affect repairs and to avoid further damage to the power system and other infrastructure in the community.

AK-15-247 2015 Alatna Washeteria Fire declared by Governor Walker on April 25, 2015: On the morning of 15 April, 2015, the Multi-Purpose Building in Alatna caught fire in the boiler room. The building houses the water treatment facility, Washeteria, and clinic. The fire was extinguished, but not before it caused substantial damage to the water treatment facility and heating components, rendering both inoperable. The Washeteria and clinic sustained substantial smoke damage. Extensive damage to the electrical wiring in the Multi-Purpose Building has been reported and the entire building is without power. Damage to the water treatment facility has cut off the supply of potable water to the village. The cause of the fire is unknown at this time. Currently, village residents are able to drive across the Koyukuk River to Allakaket, five miles away on the other bank, and access potable water and the clinic; however, this option will not be viable for long as break-up is imminent.

AK-15-248 2015 North Slope Borough Flooding declared by Governor Walker on May 21, 2015: Beginning the week of March 13, 2015, the Sagavanirktok (Sag) River near the Dalton Highway began overflowing the highway between Mile 390 and Mile 405, reaching up to 30 inches above road level in several areas. This flooding continued for over a month disrupting normal traffic and commerce between Fairbanks and the petroleum facilities on the North Slope near Deadhorse. On April 7, Governor Walker declared a disaster for the Alaska Department of Transportation and Public Facilities (DOT&PF) for their emergency protective measures to reopen and repair the highway.

After two weeks of record-high temperatures accelerated spring snow melt in the Brooks Range, the additional runoff overflowed the Sag, Kuparuk and Colville rivers, causing additional flooding along Mile 335 to Mile 415 of the Dalton Highway, Deadhorse Airport and nearby facilities. The flooding has severely impacted and damaged highway infrastructure, including the road surface, embankments, and drainage structures; as well as restricted or prohibited travel, causing economic hardship to local regional and international business; and created an urgent need for immediate road repairs and flow diversion efforts to alleviate future threats to that infrastructure.

AK-15-249 2015 Sockeye Wildfire declared by Governor Walker on June 15, 2015: Beginning on June 14, 2015, a large urban interface wildfire exacerbated by record high temperatures caused widespread damage to the community of Willow and surrounding areas of the Matanuska Susitna Borough. The response to the wildfire is hampered by red flag warnings for record warm temperatures, strong winds, low humidity, and dry thunderstorms this month that affects the entire central portion of the state, including the Matanuska Susitna Borough. The wildfire has damaged or destroyed at least 50 private homes and/or secondary structures and damaged several more, and resulted in 175 residents seeking refuge in temporary shelters, although these numbers are expected to rise. The following conditions exist as a result of this disaster: a robust emergency response and management operation requiring substantial additional labor, equipment, and support costs to combat the fire; activation of the emergency operations center; damage or destruction of at least 50 homes and other structures; evacuation and sheltering of 175 residents and hundreds of pets/work animals to date; severe damage to personal and real property; disruption of power, natural gas, communications, and other utility infrastructure requiring

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temporary and permanent repairs. A federal FMAG was authorized to assist with suppression costs.

AK-15-250 2015 Kenai Wildfire declared by Governor Walker on June 19, 2015: Beginning on June 15, 2015 a series of wildfires have occurred in the Kenai Peninsula Borough as a result of prolonged hot, dry weather and human error. The most significant of these is the Card Street Wildfire which began on June 15 and damaged 11 buildings in Sterling, including 3 primary residences. The fire moved away from residences into the Kenai Wildlife Refuge but is not yet fully contained. The Alaska Division of Forestry, local firefighters, and national wildland firefighter teams are currently working to gain control of the Card Street fire and numerous other fires within the Borough. A federal Fire Management Grant (FMAG) has been authorized to assist in the cost of suppression. The SEOC has been fully activated to support firefighting efforts. In addition, the AK National Guard and DOD are providing fire suppression support with troop and resource deployments as well as supporting SEOC operations.

AK-15-251 2015 Summer Alaska Wildfires declared by Governor Walker on June 26, 2015: Beginning on June 14, 2015 and continuing, wildland fires have impacted multiple communities throughout the state requiring emergency response, evacuations, and sheltering. Due to ongoing fire growth and new fire starts, the number of communities that will be impacted or threatened and the extent of community fire damage is unknown. Current and forecasted weather including warm temperatures, strong winds, low humidity, and dry thunderstorms indicate a continued wildland fire threat to the state. The following conditions exist as a result of this disaster: a robust emergency response and management operation requiring substantial additional labor, equipment, and support costs to combat the fire; activation of the emergency operations center; evacuation and sheltering of over 200 residents from five different communities.

AK-15-252 2015 Fort Yukon Flooding declared by Governor Walker on June 26, 2015: Warmer than normal temperatures in mid-May caused rapid snowmelt in the highlands of northeastern Alaska causing a corresponding rise in runoff in the Yukon and Porcupine Rivers. On May 19, the National Weather Service (NWS) issued a flood advisory for the Fort Yukon area due to rising water levels in the upper portions of the Porcupine River. By May 20, the water levels in the Porcupine River had risen to bank full in some locations and low-lying areas and roads near the main channel were inundated with up to two feet of water. Water levels in Fort Yukon remained high for about a week. After the water levels receded, the City of Fort Yukon began a damage assessment of the area and discovered flood-related damage to three roads, and the embankment of the sewage lagoon. The following information provides a more detailed view of the damages incurred by the event: Flood waters caused sloughing and erosion to all of the outside sections of the constructed sewage lagoon. This weakens and greatly undermines the integrity of the outside berms. The Landfill Road was flooded and has washed out sections; culverts are plugged with grave, mud and debris. The Gravel Pit Road has several washed out sections; culverts are plugged with grave, mud and debris. The Airport Access Road which is owned and maintained by DOT&PF Northern Region has several washed out sections; culverts are plugged with grave, mud and debris.

AK-15-253 2015 Dalton Highway Flooding declared by Governor Walker on April 7, 2015: Beginning on March 13, 2015 and continuing, the Sagavanirktok (Sag) River experienced a major ice jam that resulted in unprecedented Dalton Highway flooding between Mile 390 and 415; about 25 to 30 miles south of Deadhorse. Road clearing and overflow diversion work has been ongoing since mid-March, was hampered by very cold temperatures, high winds, and low- to no-visibility conditions. The flooding and emergency work has disrupted normal commercial and private traffic along the Dalton Highway, including critical fuel shipments to the petroleum production and distribution facilities at Deadhorse. The flooding has severely impacted and damaged highway infrastructure: to road surfaces, embankments, and drainage structures; restricted or prohibited travel, causing economic hardship to local regional and international business; and has created an urgent need for immediate road repairs and flow diversion efforts to alleviate future threats to that infrastructure. The Department of Transportation and Public Facilities (DOT&PF) requires this State Disaster Declaration to request Federal Highway Administration (FHWA) funding. Additionally, the Declaration waives State permitting necessary for response and repair activities for the 30-day emergency period of the declaration. If response and recovery efforts

require permit waivers beyond this period a disaster declaration extension will be required. Per AS 26.23 .202(c) an extension requires approval by the Legislature through a concurrent resolution.

AK-15-254 2015 August Southeast Raines declared by Governor Walker on August 27, 2015:

Commencing on August 14, 2015, the City and Borough of Sitka received almost three inches of rain in six hours. This intense rainfall was accompanied by heavy wind and came on the heels of an unusually wet summer. Due to ground saturation and the wind, the hillsides within the borough failed resulting in **three deaths**, seven landslides and a sinkhole. The landslides and heavy rain, damaged homes, roads, and other infrastructure. The City and Borough of Sitka, along with state staff and contracted engineers, are monitoring slope stability to ensure safety of search and rescue and assessment efforts. On August 18, the City and Borough of Sitka declared a local disaster and requested state assistance. They have been fully engaged in debris removal operations since August 19th. After the failure of the slope on August 18, the Borough activated and staffed an emergency operations center to coordinate the response efforts and provide guidance to first responders, with utility and engineering specialists conducting body recovery as well as evaluating the slopes and affected residential areas.

AK-15-255 2015 August North Slope Borough Sea Storm declared by Governor Walker on October 14, 2015 then FEMA declared on October 30, 2015 (DR-4244):

Beginning the week of August 27, 2015, a strong arctic coastal sea storm along the Northern Arctic Coast produced high waves and accelerated beach erosion that redeposited much of this beach gravel atop seven miles of borough roads, as well as loss of material along road surfaces and embankments. There is also reported damage to portions of the community water and sewer infrastructure that services both residential and commercial areas within Barrow in the North Slope Borough. This event most severely affected roads located within the community of Barrow; however, some minor damage was reported in the community of Wainwright.

The North Slope Borough Resolution 53-2015, entitled A Resolution Ratifying the Mayor's Declaration of Emergency for Barrow as a Result of the August 27, 2015 Fall Storm Surges, which includes a request for state assistance, dated September 11, 2015, was received by the State of Alaska Division of Homeland Security and Emergency Management (DHS&EM) on September 14, 2015. The initial damages reported by the Borough exceeded \$7.2 million. The Borough has refined their estimated response and recovery costs over the past few weeks and this amount has dropped slightly to \$6,844,431.

AK-15-256 2015 December Bering Sea Storm declared by Governor Walker on January 29, 2016 then FEMA declared on February 17, 2016 (DR-4257):

Beginning December 12, 2015 and continuing for several days, the low pressure system reached 933 mbars moving northeast from the Central and Western Aleutian Islands past the Pribilof Islands, and into the Yukon-Kuskokwim Delta region. These communities were impacted by hurricane force winds exceeding 100 miles per hour (mph) and gusts of up to 122 mph, high tidal ranges, and strong sea surges up to 10 feet above mean sea level (msl). Island communities also experienced extreme wave heights of 40–50 feet. This combined weather system began on December 15, 2015 and extended the incident period to December 19, 2015.

As a result of this storm, the Cities of Adak and St. George have each issued local disaster declarations and requested State assistance. The State Emergency Operations Center (SEOC) was contacted by the President of the Kipnuk Native Village about storm damage to their community-wide boardwalk system and a few surrounding homes. Other minor storm damage has been reported in the Native Villages of Atka and Kwingillingok.

AK-15-257 2015 December Windstorm declared by Governor Walker on January 29, 2016:

On December 24, 2015, a storm moved from the Pribilof Island area northeasterly to the mainland. The storm damaged the City of Togiak's protective sea wall, city dock, power distribution lines, City building roof tops, and residential home roof tops. Subsequent sea surges dislodged road surface material from City roads.

On December 30, 2015, The City of Togiak's Mayor, signed a local disaster emergency specifically requesting individual disaster relief for homeowners with flooded homes and damaged personal, real, and subsistence property. The declaration also requested our public assistance program aid for emergency protective measures, technical assistance to evaluate damage, and financial assistance for temporary and

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permanent repairs to public infrastructure including the sea wall and City water collection and transmission lines.

Our damage assessment conducted in partnership with community leadership shows damage to 750 feet of the 1,500 foot long seawall. Damage includes sections that have heaved and bowed, as well as the separation of sections from the main wall. Damage to the dock is also evident.

AK-16-258 2016 Mat-Su River Erosion declared by Governor Walker on August 22, 2016: During the week of August 14 through 20, 2016 there was imminent threat of flooding in the Matanuska-Susitna Borough from the Matanuska River along the Old Glenn Highway from mile 12 through mile 15. Flooding in this area had the potential to cause substantial damage to the highway, infrastructure, and local homes. The Alaska Department of Transportation and Public Facilities (DOT&PF) was immediately called to accomplish the necessary emergency protective measures to prevent damaging flooding from public and private infrastructure.

AK-16-259 2016 Kotlik Fire Disaster declared by Governor Walker on October 4, 2016: On August 18, 2016, a structural fire destroyed the old school facility and several nearby buildings in the Lower Yukon River community of Kotlik. Since construction of a new school in Kotlik in 2003, the old school was boarded up and utilities shut off to preserve it for future use. The fire also destroyed: a small city building used by the Native Village of Hamilton as their tribal office; a 100-foot section of boardwalk; and the teacher housing, a generator building, and two storage buildings owned by the Lower Yukon School District (LYSD).

The City of Kotlik Local Government submitted a local Disaster Declaration with Request for State Assistance, dated September 9, 2016 which was received by the DHS&EM on September 12, 2016. In their declaration, the City of Kotlik specifically requested disaster relief for debris removal/clean up, technical assistance and funding to reconstruct the City gymnasium, public disaster assistance for emergency protective measures, temporary and permanent repairs to school water and sewer pipe lines and electrical systems.

AK-16-260 2016 West Coast Storm Disaster declared by Governor Walker on February 1, 2017: Beginning on December 28, 2016 and continuing through January 1 2017, a series of back-to-back strong winter sea storms with extremely low temperatures, hurricane-force winds, and 4 – 9 foot storm surges moved into the Bering Sea and impacted the St. Lawrence Island, Yukon-Kuskokwim Delta, Bering Strait Sea Coast, Norton Sound, Seward Peninsula, and Kotzebue Sound regions of the State of Alaska. At one point, approximately 1,500 miles of Alaska's Coastline and about 50% of the State, including the Alaska Interior, was under a Winter Weather Warning. Several communities within the affected area reported storm-related impacts (e.g., roof and siding lost, porches blown from doorways, coastal flooding, deposition of ice blocks onto roads and runways, power outages, movement and sheltering of residents in the local school, etc.

Although several communities reported minor storm-related impacts, only the communities on St. Lawrence Island (Savoonga, and Gambell) reported damages beyond their local capabilities to handle. On January 1, 2017, Mr. Myron Kingeekuk, Mayor of Savoonga, reported power was out or disrupted to 18 homes, 30 homes and two community buildings had sustained roof damage, and 90 persons were being sheltered at the school. On January 8. Mr. Curtis Silook, Mayor of Gambell also declared a local declaration with request for state assistance for damage to nine homes and lost and/or damaged insulation on the community water tanks in Gambell.

AK-17-261 2017 September North Slope Borough (NSB) Storm Disaster declared by Governor Walker on November 14, 2017, FEMA declared December 12, 2017 (DR-4351): Beginning September 28 and continuing through the morning of September 30, 2017, a strong arctic coastal sea storm along the Northern Arctic Coast produced high winds up to 47 miles per hour (mph), strong waves, and a storm surge of one to two feet above normal high tide levels that overtopped and breached protective berms flooding roads and low-lying areas within the community of Utqiagvik (formerly known as Barrow) within the North Slope Borough (NSB). As a result, the community sustained widespread erosion and severe damages to several miles of coastal beach berms, Borough roads, and cultural and historical areas. The Borough also performed emergency protective measures to protect residential areas, the community freshwater supply, the local access road to whaling and subsistence areas, and other important facilities from flooding and erosion.

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On September 29, the NSB Mayor declared a local disaster emergency and request State technical and financial assistance. The Borough also provided an initial cost estimate for temporary and permanent repairs for this storm exceeding \$10 million. This declaration was continued by North Slope Borough Resolution 61-2017 entitled A Resolution Ratifying the Mayor's Declaration of Emergency for Utqiagvik as a Result of the September 28-30, 2017 Fall Storm Surges, and Extending the Condition of the Emergency, dated October 5, 2017.

AK-17-262 2017 December KPB Storm declared by Governor Walker on January 19, 2018 then FEMA declared on June 8, 2018 (DR-4369):

On December 4, 2017 a fast moving storm system moving northward out of the Gulf of Alaska brought widespread high winds to coastal areas on both the east and west sides of the Kenai Peninsula. These high winds, gusting 30-40 mph, produced 3-4 foot waves that lasted for 4-8 hours in Seward, coinciding almost perfectly with the highest astronomical tide of the year, causing significant wave action damage to occur. Resurrection Bay in Seward experienced a 13.4 foot-high tide in conjunction with high southerly winds on December 4. This combination of events caused serious erosion to the Lowell Point Road that connects South Seward with the community of Lowell Point and the Lowell Point State Recreation Area (SRA). In the summer, this is the second highest travelled road in the area. Much of the armor rock on Lowell Point Road has been washed free of the roadside. In some areas, 10 feet or more of road has been washed away by wave action. The road, through an easement, has critical city sewer and electric infrastructure buried under the surface. The city's waterfront RV/camping areas also experienced erosion.

In the Lower Cook Inlet area, this storm system created high winds gusting 30-40 mph, reaching a maximum wind speed of 58 mph, producing 7-10 foot waves that impacted the Cook Inlet coastline from Homer to Kenai. Two SRAs, the Anchor River SRA and the Deep Creek SRA, each sustained extensive damages to campgrounds, parking areas, boat launches, and beach areas.

EXPLANATION OF THE DISASTER COST INDEX

To date this Disaster Cost Index includes a total of 261 incidents.

The index presents cost data related to these incidents in nine columns. Column one indicates the disaster, which resulted in the expenditure of public funds; column two indicates the disaster number. In column two, the first two numbers indicate the State fiscal year based on the declared date signed by the Governor and the second set of numbers indicate the number of declared disasters since the creation of the disaster relief fund. Column three indicates the total amount of funds disbursed in the form of grants to individuals and families; column four indicates the number of grants awarded for each disaster; while column five gives the average amount of each grant. In column six, the amount of public assistance provided to the community is indicated; column seven indicates the cost to DHS&EM in expenditures related to the administration of the assistance program. Column eight summarizes the cost data, giving the total cost of both Federal and State expenditures for each disaster emergency. Column nine represents the total federal contribution for the disaster.

REFERENCES

- AS 26.23.010 Alaska Disaster Act.
- AS 26.23.300 Disaster Relief Fund.
- State of Alaska Administrative Plan for Disaster Public Assistance, all applicable.
- State of Alaska Individual Assistance Disaster Grant Program Administrative Plan, all applicable.

17-262	2017 December KPB Storm, 1/19/18, 6/8/18 (DR-4369)	2/1/17	16-259	2016 August Kotlik Fire, 10/04/16
17-261	2017 September NSB Storm, 11/14/17, 12/12/18 (DR-4351)		16-258	2016 Mat-Su River Erosion, 8/22/16
16-260	2016 2016 West Coast Storm,		15-257	2015 December Windstorm, 1/29/16

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15-256	2015 December Bering Sea Storm, 1/29/16, 2/17/16 (DR-4257)	10-231	2010 July Interior Flooding, 7/26/10
15-255	2015 August NSB Sea Storm, 10/14/15, 10/30/15 (DR-4244)	09-230	2009 Seward Storm, 12/31/09
15-254	2015 August Southeast Rains, 8/27/15	09-229	09 October Kodiak Storms, 11/5/09, 12/18/09 (DR-1865)
15-253	2015 Dalton Highway Flooding, 4/7/15	09-228	2009 Pelican Water System Failure (AO 251) 9/29/09
15-252	2015 Fort Yukon Flooding, 6/26/15	09-227	2009 Spring Flood Declared 5/6/09
15-251	2015 Summer Alaska Wildfires, 6/26/15	09-226	2008 Tanana Basin Flood Declared 8/4/08 (DR-1796)
15-250	2015 Kenai Wildfires, 6/19/15	08-225	2007 Northwest Storm (AO 239) 1/22/08
15-249	2015 Sockeye Wildfires, 6/15/15	08-224	2007 Beaver Fire State Declared 9/14/07
15-248	2015 North Slope Borough Flooding, 5/21/15	07-223	2007 Kenai River Flood 3/2/07 Declared
15-247	2015 Alatna Washeteria Fire, 4/25/15	07-222	2006 Kivalina Seawall 11/29/06 (AO)
13-246	2013 December Diomedea Power, 12/27/13	07-221	2006 Oct Southern Storm State Dec 10/14/06
13-245	2013 December Kwethluk Power, 12/27/13	07-220	2006 South Central Flood State 8/19/06
13-244	2013 November Storms, 11/16/13, 1/23/14 (DR-4162)	07-219	2006 Hooper Bay Fire Declared 8/6/06 (DR-1666)
13-243	2013 October KPB Floods, 11/18/13, 1/16/14 (DR-4161)	06-218	2006 Spring Flood Declared 6/27/06 Fed 8/4/06
13-242	2013 Spring Floods, 5/30/13, 6/25/13 (DR-4122)	06-217	06 South Central Storm State Declared 3/13/06
12-241	2012 October Kuskokwim Delta Flood, 11/26/12	06-216	2005 Southeast Storm State Declared 12/23/05
12-240	2012 September Storm, 10/17, 11/27/12 (DR-4094)	06-215	2005 West Coast Storm State Declared 10/24/05
12-239	Kivalina Water Issue, 9/7/12	06-214	2005 Bristol Bay Storm 10/3/05 State Declared
12-238	2012 Prince William Sound Winter Storm, 2/9/12	06-213	2005 Spring Flood 7/20/05
12-237	2011 KPB Windstorm, 12/12/11, 2/12/12 (DR-4054)	05-212	2005 Kaktovik Power Loss 1/15/05
12-236	2011 West Coast Storm, 12/5/11, 12/22/11 (DR-4050)	05-211	2004 Bering Strait Sea Storm 10/18/04
12-235	2011 Dot Lake Fire, 10/4/11	04-210	2004 July Interior Fires Declared DNR 5/29/04
12-234	2011 Birch Creek Fire, 8/9/11	04-209	2003 Fall Sea Storm Declared 1/29/04
11-233	2011 Spring Flooding, 5/17/11, 6/10/11 (DR-1992)	04-208	2004 Kasaan Landslide Declared 1/29/04
11-232	2010 Savoonga Power Outage, 1/14/11	04-207	2003 Fall Flood 11/3/03
		04-206	2003 Riverine Flood 7/30/03
		03-205	2003 Salcha Flood 4/29/03
		03-204	2003 South-Central Windstorm 3/13/03
		03-203	Denali Earthquake AK-1440-DR 11/6/02
		03-202	2002 Kenai Flood AK-1445-DR 11/6/02
		03-201	2002 Northwest Fall Sea Storm 10/23/02
		02-200	2002 Interior AK-1423-Drdeclared 5/29/02

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02-199	2002 Sleetmute Core Facility Fire (AO 196) 5/24/02	11/16/94
02-198	2001 Shishmaref Seawall (AO 194) 10/27/01	95-174 1995 Metlakatla Sea Storm 11/10/95
02-197	2001 Kotzebue Am Radio (AO 191) 9/24/01	95-173 1994 Fall Flood 09/27/94 FEMA 1039
01-196	2001 Middle Yukon Flood 5/31/01	95-172 1994 Matanuska River Erosion 07/01/94
01-195	2000 Kake Water Containment Failure, 7/31/00	95-171 1994 Cummings Road Flood 08/2/94
01-194	2000 Operation Renew Hope Yukon 7/19/00	94-170 1994 Galena Flood
00-193	2000 Fire Suppression #2 6/00	94-169 1994 McGrath Road Disaster 05/23/94
00-192	2000 Fire Suppression #1 5/24/00	94-168 Hazard Mitigation - 909
00-191	2000 Central Gulf Coast Storm 2/4/00, 2/8/00, 3/17/00	94-167 1993 Prince of Wales Island 10/29/93
99-190	1998 Southeastern Storm 10/27 & 11/24/98	94-166 1993 Shaker IV
99-189	1998 Western Alaska Fisheries 7/30/98, 9-16-98, 10/16/98	94-165 1993 DNR 08/04/93
98-188	1998 Endicott Mountains Flood 06/18/98	94-164 1993 Tenakee Springs 07/19/93
98-187	1998 DNR Fire Suppression 06/05/98	94-163 1993 Kuskokwim Chum 07/19/93
98-186	1997 Shishmaref Sea Storm 10/06/97	93-162 1992 Nome Hwy 10/12/92
98-185	1997 Eastern Tanana River 08/26/97	93-161 1992 Mt. Spurr 09/21/92
98-184	1997 Bristol Bay Distressed Salmon 07/18/97	93-160 1992 Haines Highway 08/14/92
98-183	1997 DNR Fire Suppression 07/14/97	93-159 1992 Norton Sound Fishery 07/13/92
97-182	1996 Southeast Storm (Pelican/Elfin Cove) 01/13/97	93-158 1992 Fire Disaster 07/07/92
96-181	1997 Miller's Reach Fire 11/19 06/04/97	92-157 1992 Yukon River 06/17/92 (92 Spring Flood)
96-180	1995 South-Central Fall Floods 10/21/95-DR 1072	92-156 1992 Response 06/09/92
95-179	1995 Statewide Fire Suppression 06/22/95	92-155 1992-Galena Flood 06/04/92
95-178	1995 Bethel Sinkhole Erosion 06/05/95	92-154 1992 Eagle City 05/19/92
95-177	1995 Aniak Ice Jam Flood 06/05/95	92-153 1992 Eagle Village 05/19/92
95-176	1995 Yukon Kuskokwim Delta 06/05/95	92-152 1991 Seward Sewage 11/20/91
95-175	Skagway Submarine Landslide	92-151 1991 Earthquake Mitigation 11/07/91
		92-150 1991 Kodiak 11/02/91
		92-149 1991 New Koliganek 10/14/91
		92-148 1991 Diomedes Fire 09/20/91
		92-147 1991 Aniak Loan 08/07/91
		92-146 1991 Little Diomedes 07/25/91
		92-145 1991 Whitestone Farms 07/27/91
		92-144 1991 Mat-Su Borough 07/18/91
		92-143 1991 DNR 07/11/91
		92-142 1991 Galena 91 S.F. 06/01/91
		91-141 1991 Shageluk 05/23/91
		91-140 1991 Alakanuk 05/23/91
		91-139 1991 Holy Cross 05/23/91
		91-138 1991 Emmonak 05/23/91
		91-137 1991 Grayling 05/16/91
		91-136 1991 Anvik 05/16/91
		91-135 1991 Red Devil 05/13/91
		91-134 1991 McGrath 05/10/91 (FEMA 0909)
		91-133 1991 Aniak 05/13/91

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91-132	1991 FMSB/07/91 (91 Spring Flood)	90-95	1989 Klawock 06/19/89
91-131	1991 Angoon 05/03/91	89-94	1989 Spring Floods 06/10/89
91-130	1991 Marshall 02/25/91	89-93	1989 Fort Yukon 05/06/89
91-129	1991 Karluk 02/22/91	89-92	1989 Circle 05/06/89
91-128	1991 Larsen Bay 02/14/91	89-91	1989 Glennallen 05/06/89
91-127	1991 Togiak 02/08/91	89-90	1989 Galena 04/20/89
91-126	1990 Eagle 12/28/90	89-89	1989 Valdez 03/26/89
91-125	1990 Diomedea 11/21/90	89-88	1989 North Slope 03/08/89
91-124	1990 Lowell Creek Tunnel 09/27/90	89-87	1989 Ahkiok 03/02/89
91-123	1990 Teller 10/10/90	89-86	1989 Sand Point 02/27/89
91-122	1990 Nome 10/10/90	89-85	1989 St. George 02/09/89
91-121	1990 Kotzebue 09/04/90	89-84	1989 NWAB 02/01/89
91-120	1990 Lower Kuskokwim 09/04/90	89-83	1989 Statewide Cold 01/28/89
91-119	1990 Hazard Mitigation Cold Weather	89-82	1988 Yukon Flats 11/10/88
91-118	1990 Statewide Fires 07/04/90	89-81	1988 Klawock 10/17/88
91-117	1990 Bethel 06/02/90	89-80	1988 Shishmaref 08/05/88
90-116	1990 Teklanika Fire 05/31/90	89-79	1988 Eagle 07/22/88
90-115	1990 Fire Suppression 05/29/90	89-78	1988 Kaltag 05/26/88
90-114	1990 Kobuk 05/17/90	88-77	1988 Napakiak/Napaskiak 05/24/88
90-113	1990 McGrath 05/16/90	88-76	1988 Crooked Creek 05/12/88
90-112	1990 Snow & Ice Removal 1990 Dec	88-75	1988 Nondalton 04/05/88
90-111	1990 Haz Mit 89 Spring Floods 04/14/90 (FEMA 0832)	88-74	1988 Pitka's Point 03/29/88
90-110	1990 Stebbins 04/09/90	88-73	1988 Chenega Bay 03/25/88
90-109	1990 Manokotak 04/05/90	88-72	1988 Chefornek 03/23/88
90-108	1990 Moose 03/28/90	88-71	1988 Beaver 03/08/88
90-107	1990 Kongiganak 03/02/90	88-70	1988 Haines 02/29/88
90-106	1990 Broadcasting 02/22/90	88-69	1988 Barrow 02/16/88
90-105	1990 Tatitlek 01/31/90	88-68	1987 Klehini 11/09/87
90-104	1990 Kenai Mt. Redoubt 01/11/90	88-67	1987 Togiak 10/87
90-103	1989 Mt. Redoubt 12/20/89	88-66	1987 Angoon 11/06/87
90-102	1989 Search & Rescue 09/13/89	88-65	1987 Wainwright 10/06/87
90-101	1989 Richardson Highway 09/13/89	88-64	1987 Richardson Highway 07/24/87
90-100	1989 Kenai Peninsula 08/30/89	87-63	1987 Buckland 06/16/87
90-99	1989 Anchorage 08/30/89	87-62	1987 Aniak 05/29/87
90-98	1989 Whittier 08/08/89	87-61	1987 Delta Junction 05/28/87
90-97	1989 Mat-Su 08/04/89	87-60	1987 Sleetmute/Red Devil 05/22/87
90-96	1989 FNSB 08/01/89	87-59	1987 Kotzebue 02/05/87
		87-58	1987 Venetie 01/09/87
		87-57	1987 Aniak 10/27/87
		87-56	1986 Southcentral Alaska 10/12/86
		87-55	1986 North Slope 09/25/86
		86-54	1986 Napakiak 05/15/86
		86-53	1986 Crown Point 05/01/86
		86-52	1986 Pelican 03/19/86

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86-51	1986 Venetie 03/03/86	80-8	Kodiak Island
86-50	1986 Thorne Bay 02/03/86	80-7	Willow Creek
86-49	1985 Unalaska 12/13/85	80-6	West Coast Storm
86-48	1985 Metlakatla 12/10/85	79-5	Delta Fire
86-47	1985 Thorne Bay 12/05/85	79-4	Matanuska Susitna Borough
86-46	1985 Manokotak 11/22/85	79-3	Wrangell/Craig
86-45	1985 Cordova 10/31/85	78-2	Campbell Creek Anchorage
86-44	1985 Gambell 08/31/85	78-1	Karluk
86-43	1985 Bethel 07/10/85		
86-42	1985 Pitka's Point 07/09/85		
85-41	1985 Upper Kuskokwim River 06/18/85		
85-40	1985 Pilot Station 06/18/85		
85-39	1985 Emmonak 06/11/85		
85-38	1985 Anvik 06/05/85		
85-37	1985 Kobuk 05/30/85		
85-36	1985 Buckland 05/30/85		
85-35	1985 Gambell 05/17/85		
85-34	1985 Savoonga 02/26/85		
85-33	1985 Haines 01/25/85		
85-32	Southeast Alaska		
85-31	Russian Mission		
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84-29	Emmonak		
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84-26	Kotzebue		
84-25	Elim		
84-24	Mountain Village		
84-23	Unalakleet		
84-22	Chefornak		
84-21	Cordova		
84-20	Ketchikan		
83-19	Aniak		
83-18	Kipnuk		
83-17	Takotna		
83-16	Russian Mission/Aniak/Akiachak		
82-15	Fort Yukon		
82-14	Emmonak		
82-13	Southcentral		
81-12	Angoon		
81-11	Copper Center		
81-10	Bristol Bay		
80-9	Anchorage		

APPENDIX 13.19 2018 AGENCY MITIGATION CAPABILITY SELF-ASSESSMENTS

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Appendix 13-18 2018 Alaska State Hazard Mitigation Plan (SHMP) Update; Mitigation Capability Assessment Questionnaire

The State of Alaska is currently updating the State Hazard Mitigation Plan (SHMP). The State is required to revise and update our plan every three years in order to continue to be eligible for almost all FEMA funding. The purpose of the SHMP is to identify hazards, complete a risk assessment and vulnerability analysis, identify and coordinate needed mitigation efforts with State, Federal, and local partners and fulfill the requirements set forth in the Federal 44 CFR 201.4 DMA 2000 legislation (<http://www.fema.gov/pdf/help/fr02-4321.pdf>).

State and Federal partnerships are one mechanism used to accomplish mitigation tasks. In Alaska there are multiple Federal agencies with programs, projects, data and staff expertise that contribute to decision making concerning hazard mitigation in Alaska. In many cases these partnerships have been identified in the hazard specific sub-sections (earthquake, volcanic eruption, flood, snow avalanche, weather, etc.) of section five of the current, 2007, SHMP (also see table included). However, we are aware that there are additional Federal agency ventures concerning hazard mitigation that are absent from the existing Plan. We would like the 2010 update of the SHMP to reflect, identify and recognize all of your agency's contributions (programs, projects and staff areas of expertise) in providing local data and guidance with a goal of reducing future disaster losses in the State of Alaska.

In order to most appropriately and accurately identify these contributions we are asking you to read and respond to the questions below. We also welcome links, digital documents, and images which illustrate and/or support these programs, projects, and your agencies expertise. Our goal in this process is to compile and present a comprehensive, accurate, and up-to-date narrative that defines the State's capability to manage and fulfill existing SHMP related policies, procedures, and programs.

Please highlight any activities initiated, implemented, integrated into other policies, procedures, or processes during the legacy 2013 SHMP's three-year life cycle.

Please enter your contributions and answers directly into this MS Word document and return back to me by May 21, if possible.

Please feel free to contact me anytime with comments and questions.

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State of Alaska

Hazard Mitigation Plan 2018

Appendix 13 - Capability Assessment Questionnaire

Introduction:

Hazard mitigation is any action taken to reduce or eliminate the long-term risk to human life and property from natural and human-caused hazards. The purpose of the Alaska State Hazard Mitigation Plan is to identify hazards, complete a risk assessment and vulnerability analysis, identify and coordinate needed mitigation efforts with State, Federal, and local partners and fulfill the requirements set forth in the federal 44 CFR 201.4 DMA 2000 legislation.

The 2016 Alaska Emergency Operations Plan describes the Role of the Disaster Policy Cabinet:

Disaster Policy Cabinet

The role of the Disaster Policy Cabinet (DPC) when convened is to provide expeditious, coordinated state agency recommendations to the governor in response to emergencies resulting from major disaster events and homeland security events.

Disaster Policy Cabinet Composition

- *Department of Administration*
- *Department of Commerce, Community and Economic Development*
- *Department of Corrections*
- *Department of Environmental Conservation*
- *Department of Health and Social Services*
- *Department of Law*
- *Department of Military and Veterans Affairs (Chair)*
- *Department of Natural Resources*
- *Department of Public Safety*
- *Department of Transportation and Public Facilities*

Additional federal, state, borough, city, and educational agencies who have historically participated in SHMP development include:

Federal

- *Denali Commission*
- *United States (US) Department of Agriculture (USDA)*
 - *Disaster Resource Center*
 - *Housing and Urban Development (HUD)*
 - *Natural Resource Conservation Service (NRCS)*
 - *Rural Development (RD)*
 - *US Forest Service (USFS)*
- *US Department of Commerce (DOC)*
 - *National Oceanic & Atmospheric Administration (NOAA)*
 - *National Ocean Science*
 - *National Weather Service (NWS)*
 - *National Tsunami Warning Center (NTWC)*
- *US Department of Health and Human Services (DHSS)*
- *US Department of Homeland Security (DHS)*
 - *Federal Emergency Management Agency (FEMA)*
 - *US Coast Guard (USCG)*
- *US Geological Surveys (USGS)*
- *US Environmental Protection Agency (EPA)*
- *US Army Corps of Engineers (USACE)*

State:

- *Office of the Governor*

- *Department of Administration (DOA)*
 - *Risk Management (RM)*
- *Department of Commerce, Community and Economic Development (DCCED)*
 - *Division of Community and Regional Affairs (DCRA)*
 - *Floodplain Management*
 - *Alaska Climate Change Impact Mitigation Program (ACCIMP)*
- *Department of Corrections (DOC)*
- *Alaska Court System*
- *Department of Education and Early Development (DEED)*
- *Department of Environmental Conservation (DEC)*
 - *Division of Spill Prevention and Response (DSPR)*
 - *Village Safe Water (VSW)*
- *Department of Fish and Game (F&G)*
- *Department of Labor and Workforce Development (DLWD)*
- *Department of Military and Veterans Affairs (DMVA)*
 - *Alaska State Defense Force (ADF)*
 - *Alaska National Guard (ANG)*
 - *Division of Homeland Security and Emergency Management (DHS&EM)*
- *Department of Natural Resources (DNR)*
 - *Division of Forestry (DOF)*
 - *Division of Geological and Geophysical Surveys (DGGS)*
 - *Division of Mining, Land, and Water (DMLW)*
 - *Dam Safety and Construction Unit*
 - *Alaska Volcano Observatory (AVO)*
- *Department of Revenue (DOR)*
- *Alaska Railroad Corporation*
- *Alaska Department of Public Safety (DPS)*
- *Alaska Department of Transportation and Public Facilities (DOT/PF)*
- *University of Alaska Anchorage (UAA)*
- *University of Alaska Fairbanks (UAF)*

You or your agency has been identified as an acting or new member of the State Hazard Mitigation Advisory Committee (SHMAC). The SHMAC has been in-place since 2002 to assist with identifying, supporting, and prioritizing statewide hazard mitigation initiatives. Selected SHMAC members make recommendations that fulfill statewide mitigation goals to the Governor's DMVA Disaster Policy Cabinet.

State of Alaska

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Would you please review the questions, confer with your agency policy makers and summarize your agency's initiatives reflect your organization mitigation mission?

1. What programs, projects and/or expertise does your agency have that contributes to long-term mitigation efforts to reduce disaster losses in the State?

ARRC collaborates with many programs and agencies to improve mainline rail bed stability and resiliency, with a look toward secondary benefits within, to, and for railbelt communities. Many of our success projects are Pre-Disaster or Hazard Mitigation Projects supported by FEMA and State of Alaska funding.

- a. Include references to any of your agency's existing State-Federal partnerships that address, long-term hazard mitigation.

ARRC has many partnerships to facilitate long-term hazard mitigation, such as; Federal Emergency Management Agency (FEMA), U.S. Department of Homeland Security (DHS), U.S. Forest Service (USFS), National Weather Service (NWS), National Oceanic & Atmospheric Administration (NOAA), U.S. Army corps of Engineers (USACE), Alaska Department of Fish and Game (ADF&G), U.S. Fish and Wildlife Service (USFWS), Division of Homeland Security and Emergency Management (DHS&EM), U.S. Geological Survey (USGS), Department of Natural Resources (DNR), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), and others as necessary.

- b. Include any of your agency's activities that enhance understanding of hazards and vulnerability in the State (hazard identification, mapping, etc.)

Recent projects include: Willow area flood inundation mapping (Silver Jackets Project, 2017); development of "Skookum Creek Long Term Sediment Management Alternatives; final Hydrologic and Hydraulic Analysis" (November, 2017); Snow River Flood Hydraulics and Geomorphology study (Currently underway in 2018).

- c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop through State-Federal partnerships.

- d. Include specific examples of programs or activities directly related to the following hazards specified in the State Hazard Mitigation Plan (including: detection, retrofit, building codes, hazard maps, gauges, models, forecasts, historic data, and dynamic data).

2. Are there any other ongoing or developing initiatives or ideas that your agency can suggest that would enhance the State's effort to reduce future disaster losses?

Allocate funding for planning studies, hydrology studies, and bed-load accumulation to expand information available for pre-disaster mitigation project identification and facilitate funding, to prevent future disasters.

3. Do you have any suggestions on how the State can more effectively use or deliver the mitigation programs you identified?

4. Do you have a mechanism to assess, design and build your agency's infrastructure to withstand particular natural disasters? If so, how and which hazards? For example are air traffic control towers, piers, docks, office buildings, warehouses built or retrofitted to withstand a significant earthquake event? Please explain.

Infrastructure is and was designed to meet government and industry standards at the date of construction. In some cases, older infrastructure has since been altered to meet more restrictive requirements, based largely on unsatisfactory performance in a natural disaster. In other cases, modifications have been made due to changes in infrastructure use or decay, associated government regulations and industry standards, or ARRC recognized a risk to be mitigated. Hazards include: earthquake, wind, fire and flooding.

5. Please list what mitigation activities your organization has undertaken to reduce future disaster losses throughout the State?

ARRC implements mitigation activities to improve mainline rail bed stability and resiliency by: raising track bed, armoring embankments, installing bridges, improving drainage, and realigning track where possible.

a. Please identify "new" statutory or regulatory authorities that address hazard mitigation.

b. Include any activities that enhance avoiding future hazard impacts and reducing infrastructure and population vulnerabilities (hazard identification, mapping, etc.)

c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop.

- Willow area flood inundation mapping (Silver Jackets Project, 2017).
- "Skookum Creek Long Term Sediment Management Alternatives; final Hydrologic and Hydraulic Analysis" (November 2017).
- Snow River Flood Hydraulics and Geomorphology study (Currently underway in 2018).

d. Include any activities related to public hazard mitigation including regulating development, developing building codes, written standards, public education presentations, and training opportunities, etc.

e. Include specific examples of programs or activities directly related to the following hazards profiled in the State Hazard Mitigation Plan.

A. Natural Hazards

Earthquake: Inspect track and bridge structures for all earthquakes over 5.0 magnitude. Design and construct facilities and structures to meet seismic requirements.

Ground Failure: (includes Avalanche, Landslide, Mudslide, Permafrost & Wind Erosion etc.): Install avalanche/slide detection systems, armoring embankment, track surfacing maintenance, drainage maintenance and improvements, and support remote video monitoring.

Tsunami: (includes Seiche)

Water, (includes Riverine & Coastal flood, erosion, storm surge, ice-jam, ice run-up aufeis [overflow], etc.): Raise track bed, armoring embankment, realign track where possible, maintain proper drainage, etc...

Weather, (includes Drought, Storms, Temperature, & Wind, etc.): Monitor weather systems, support video monitoring, and inspect track infrastructure regularly.

Volcano, (includes Ash, Lahar, etc.): Maintain and implement Ash Plan, when necessary.

Wildland Fire, (includes Tundra, Urban Interface etc.): Work with communities, fire and forestry agencies, and emergency responders to respond to wildfire or man-made fire threats to railbelt communities and to operations and infrastructure within the railroad right-of-way.

B. Other Hazards:

Economic, (includes Urban Conflagration and other large scale income losses due to natural or man induced events):

Infectious Disease, (includes epidemics, biological, consumables contamination, & Nuclear, Biological, Chemical (NBC) exposure):

Invasive Species, (includes Flora & Fauna infestation): Annual herbicide spraying program. Work with University of Alaska Fairbanks, Extension Services to pull invasive and noxious weeds along the ARRC rail line. (Inattention to organic population within the railbed destabilizes the inherent strength of the structure profile and increases the risk to railbed damage from weather hazards.

Hazardous Materials, (HazMat, Oil Spills, etc.): Annual Oil Spill Contingency Plan (C-plan) drills, SPCC and Storm Water Pollution Prevention Plan (SWPPP) training, employee maintained hazardous-waste certification(s), and ensure hazardous material response contracts are in place, if assistance is required.

Terrorism, (includes Civil Disorder/Disturbance, Infrastructure Threats, Active Shooter, & Bombing, Cyber Threats, Nuclear Attack/Materials.): ARRC Police and Security, as

well as additional local and federal military and security agencies, provide direct and joint assistance as needed.

Technological, (includes long duration Utilities & Transportation Disruptions):): ARRC and the State of Alaska work cooperatively to provide communities along the railbelt with redundant communication paths to minimize the risk of long term loss of communication through the area, in the event of a technological outage.

6. Does your organization own or operate property located in any areas subject to the hazards listed in #5e above:

- Would you list those properties?
 - What is their approximate location,
 - Are they State owned or leased) and
 - What specific mitigation measures or actions your organization has taken to protect these properties and operations (please list relevant hazards)?

ARRC property reserves, yards, and mainline and branch track right-of-way area are primarily directly ARRC owned. Additional industry track, next to ARRC ROW is typically privately owned. ARRC implements track infrastructure (#1 above) mitigation activities to provide stability and resiliency along the ROW and in yards. Managing risk to activities occurring within ARRC reserves, on property under lease to private or commercial parties, is the responsibility of the lessee.

7. Please list other Federal, State, Local, non-profit or private agencies your organization works with to reduce disaster losses from the hazards listed in #5e and...:

- Briefly describe the cooperative programs, projects, or mitigation work.
- What challenges (staffing, remote location, data, mapping, etc.) your organization has faced in cooperating with other agencies in hazard mitigation.
- How you have overcome these challenges.

ARRC works with many Federal, state, and local agencies during disaster relief, pre-disaster and hazard mitigation, and risk evaluation efforts. Some of these agencies include FTA, FRA, FEMA, USACE, ADF&G, ADEC, USFWS, DNR, DHS, DHS&EM, USFS, State Troopers, FBI, local police and fire departments, etc... (see 1.a.)

Challenges include lack of data and mapping, high costs to develop and deliver projects in remote areas, fiscal constraints, resourcing/staffing planning as an additive effort, and frequently changing requirements for hazard mitigation grant fund sources. Efforts to overcome these challenges include leveraging the Silver Jackets program to support data collection and more proactive efforts to identify highest risk areas to concentrate our limited resources.

State of Alaska

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Appendix 13 - Capability Assessment Questionnaire

8. How did your agency integrate the 2013 legacy SHMP concepts, priorities and initiatives within new or existing legislation, regulation, programs, policies, or procedures?

- Are there any legacy State statutes, authorities, regulations or programs that were particularly effective in assisting your organization in reducing future disaster losses?
- Are there any new or amended State statutes, authorities, regulations, or programs that would enhance your organization's ability to reduce future disaster losses?
- Were any State statutes, authorities, regulations, or programs rescinded that would now prevent or hinder your organization's ability to reduce future disaster losses?

9. What role does public opinion and opportunities for public involvement play in your organization's effort to reduce future disaster losses?

ARRC has a public website with Project Fact Sheets available but also provides public notices in local newspapers or publications requesting public comments as required per NEPA guidelines. Specific and direct public involvement and outreach occurs on a project specific basis. Because ARRC provides critical access to numerous remote areas, ongoing public involvement and consideration of public opinion is routine.

10. What challenges does your organization face in efforts to reduce future disaster losses.

The majority of the ARRC railbelt is within a rural and/or remote area.

Low population density, extensive and continuing hydrology effect to the ARRC ROW, and limited historical and environmental impact studies, and resource constraints reduces our ability to pursue pre-disaster or hazard mitigation type funding sources.

In addition, a 500+ mile area / distance stretches ARRC equipment, personnel, and material placement and availability resources in responding to developing pre-incident indicators.

- Staffing: Increase track inspections, stage response materials, etc...
- Funding: Limited budget and opportunities for funding assistance.
- Remote community locations: Rural areas only accessible via rail.
- Data: Poor historical data and limited hydrology.
- Mapping: Rely on outside resources.

11. Are there any other State-level initiatives or ideas that your organization can suggest that would enhance the State's effort to reduce future disaster losses?

Allocate funding for planning studies, hydrology studies, bed-load accumulation, and pre-disaster mitigation projects to prevent future disasters.

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 - *Floodplain Management*
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- *University of Alaska Anchorage (UAA)*
- *University of Alaska Fairbanks (UAF)*

You or your agency has been identified as an acting or new member of the State Hazard Mitigation Advisory Committee (SHMAC). The SHMAC has been in-place since 2002 to assist with identifying, supporting, and prioritizing statewide hazard mitigation initiatives. Selected SHMAC members make recommendations that fulfill statewide mitigation goals to the Governor's DMVA Disaster Policy Cabinet.

Would you please review the questions, confer with your agency policy makers and summarize your agency's initiatives reflect your organization mitigation mission?

1. What programs, projects and/or expertise does your agency have that contributes to long-term mitigation efforts to reduce disaster losses in the State?

Broad-based scientific expertise in geohazards affecting Alaska. In many areas, Alaska lacks the fundamental geologic data needed to guide the proper development and implementation of building codes, land-use zoning, right-of-way siting, and contingency planning for natural hazards events. Maps and reports produced by DGGs are the front-line source of information about where damage is likely to be greatest and where mitigation efforts should be concentrated. Contribute agency technical input and comment on a wide variety of permit applications, development plans, land use, local and state Hazard Mitigation Plans, Environmental Impact Statements, Resource Management Plans, FEMA RiskMAP products, and Best Interest Findings.

- Administer and participate in the Alaska Seismic Hazards Safety Commission. <http://www.seismic.alaska.gov/>
- Member organization of the Alaska Volcano Observatory. <https://avo.alaska.edu/about/index.php>
- Member of the Western States Seismic Policy Council. <https://www.wsspc.org/>
- Collaborating partner with Alaska Earthquake Center (<https://earthquake.alaska.edu/>) in the National Tsunami Hazard Mitigation Program. <https://nws.weather.gov/nthmp/index.html>
- Member of the Alaska State Hazard Mitigation Advisory Committee (SHMAC).
- Member of the Alaska Silver Jackets. <https://silverjackets.nfrmp.us/State-Teams/Alaska>
- Partner with the Alaska Climate Adaptation Science Center. <https://casc.alaska.edu/>
- Federal Emergency Management Agency (FEMA) Cooperating Technical Partner. <https://www.fema.gov/cooperating-technical-partners-program>

Hazard research programs include the Climate and Cryosphere Hazards Program (<http://dggs.alaska.gov/sections/engineering/profiles/climatehazards.html>), Coastal Hazard Program (<http://dggs.alaska.gov/sections/engineering/profiles/coastalhazards.html>), Tsunami Inundation Mapping Program (<http://dggs.alaska.gov/pubs/tsunami>), and Volcanology Program (<http://dggs.alaska.gov/sections/volcanology/>), with additional research activities focusing on mapping and understanding hazards associated with earthquakes, flooding, erosion, permafrost, slope instability (including landslides), radon, and arsenic contamination.

- a. Include references to any of your agency's existing State-Federal partnerships that address, long-term hazard mitigation.
See above.
- b. Include any of your agency's activities that enhance understanding of hazards and vulnerability in the State (hazard identification, mapping, etc.)
See above.

- c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop through State-Federal partnerships.

N/A

- d. Include specific examples of programs or activities directly related to the following hazards specified in the State Hazard Mitigation Plan (including: detection, retrofit, building codes, hazard maps, gauges, models, forecasts, historic data, and dynamic data).
See above.

2. **How did your agency integrate the 2013 legacy SHMP concepts**, priorities and initiatives within new or existing legislation, regulation, programs, policies, or procedures?

- Are there any legacy State statutes, authorities, regulations or programs that were particularly effective in assisting your organization in reducing future disaster losses?

N/A

- Are there any new or amended State statutes, authorities, regulations, or programs that would enhance your organization's ability to reduce future disaster losses?

Participation in the National Coastal Management Program

- Were any State statutes, authorities, regulations, or programs rescinded that would now prevent or hinder your organization's ability to reduce future disaster losses?

N/A

3. **Are there any other ongoing or developing initiatives or ideas** that your agency can suggest that would enhance the State's effort to reduce future disaster losses?

N/A

4. **Do you have any suggestions** on how the State can more effectively use or deliver the mitigation programs you identified?

N/A

5. **Do you have mechanisms** to assess, design and build your agency's infrastructure to withstand particular natural disasters? If so, how and which hazards? For example are air traffic control towers, piers, docks, office buildings, warehouses built or retrofitted to withstand a significant earthquake event? Please explain.

Agency offices and facilities have been seismically mitigated by securing furniture and stabilizing shelving racks. Geologic Materials Center warehouse racks are specifically designed and reinforced to withstand seismic shaking.

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6. **Please list what mitigation activities your organization has undertaken** to reduce future disaster losses throughout the State?

Map and assess geohazards throughout Alaska, including:

- Tsunami inundation maps for Skagway, Haines, Juneau, Kodiak, Sand Point, Chignik, Chignik Lagoon, Nikolski, King Cove, Cold Bay, Yakutat, Dutch Harbor, Akutan, Elfin Cove, Gustavus, Hoonah, Chenega Bay, Sawmill Bay, Cordova, Tatitlek, Sitka, Valdez (With UAF-AEC)
- Potential maximum permanent earthquake-related flooding maps of Valdez, Chignik, Chignik Lagoon, Chenega, Unalaska, Akutan (With UAF-AEC)
- Compilation of active faults and seismic hazards in Alaska (With ASHSC)
- Maps of historic volcanic ashfall
- Report on glacial lake outburst flooding at Valdez Glacier
- Flooding elevation maps for flood-vulnerable communities in western Alaska
- Investigation of potentially active tectonic faults along the route of the proposed Alaska Stand Alone Pipeline
- Photogrammetric digital surface models and orthoimagery for 26 coastal communities of western Alaska
- Alaska shoreline change online tool, <http://doi.org/10.14509/shoreline> and <http://doi.org/10.14509/29504>
- Volcano-hazard assessment for Fisher volcano, Unimak Island
- Database of Quaternary volcanic vents in Alaska, <http://doi.org/10.14509/27357>
- Report on shoreline retreat rates at Meshik, Port Heiden
- Inventory and preliminary assessment of geologic hazards in the Passage Canal-Portage Valley area
- Report on Cathedral Rapids and Dot "T" Johnson faults, Interior Alaska
- Geologic and geotechnical evaluation of Yukon River bridge landslide
- Quaternary Faults and Folds online database, <http://doi.org/10.14509/qff> and <http://doi.org/10.14509/24956>
- Evaluation of coastal geomorphology and geohazards on Kigiqtam Iglua, Shishmaref
- Engineering - geologic map of the Alaska Highway corridor, Tetlin Junction to Canada border

- a. Please identify “new” statutory or regulatory authorities that address hazard mitigation.
N/A
- b. Include any activities that enhance avoiding future hazard impacts and reducing infrastructure and population vulnerabilities (hazard identification, mapping, etc.)
See above.
- c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop.

N/A

- d. Include any activities related to public hazard mitigation including regulating development, developing building codes, written standards, public education presentations, and training opportunities, etc.
See above
- e. Include specific examples of programs or activities directly related to the following hazards profiled in the State Hazard Mitigation Plan.

1. Natural Hazards

Earthquake: See item “1” above

Flood, (includes Riverine & Coastal flood, erosion, storm surge, ice-jam, ice run-up aufeis [overflow], etc.): See item “1” above

Ground Failure: (includes Avalanche, Landslide, Mudslide, Permafrost & Wind Erosion etc.): See item “1” above

Tsunami: (includes Seiche) See item “1” above

Volcano, (includes Ash, Lahar, etc.) See item “1” above

Weather, (includes Drought, Storms, Temperature, & Wind, etc.) N/A

Wildland Fire, (includes Tundra, Urban Interface etc.) N/A

2. Other Hazards:

These hazards will no longer be tracked within the SHMP because they are either subsequent disaster impacts, not “action” mitigatable, or other regulatory agency oversight and funding capabilities:

- *Economic: (includes Urban Conflagration and other large scale income losses due to natural or man induced events):*
- *Dam Failure (TBD)*
- *Hazardous Materials: (Included HazMat, EHS, Oil Spills, etc. . Managed by the SERC, regulatory agencies, and LEPCs)*
- *Terrorism: (Included Civil Disorder/Disturbance, Infrastructure Threats, & Bombing, Cyber Threats, Nuclear Attack/Materials, did not include Active Shooter.)*
- *Technological: (Formerly combined with Public Health and Human-Caused. Included epidemics, biological, consumables contamination, & Nuclear, Biological, Chemical (NBC) exposure):*

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7. Does your organization own or operate property located in any areas subject to the hazards listed in #5e above:

- Alaska Geologic Materials Center (GMC), State-owned, 3651 Penland Pkwy, Anchorage, AK 99508
 - Alaska Division of Geological & Geophysical Surveys office (Denali Building), leased, 3354 College Road, Fairbanks, AK 99709
 - Would you list those properties?
 - What is their approximate location,
 - Are they State owned or leased) and
 - What specific mitigation measures or actions your organization has taken to protect these properties and operations (please list relevant hazards)?
- See item “5” above

8. Please list other Federal, State, Local, non-profit or private agencies your organization works with to reduce disaster losses from the hazards listed in #5e and...:

Alaska Institute for Justice, Alaska Ocean Observing Systems (AOOS), NOAA/National Weather Service, U.S. Geological Survey, University of Alaska, Alaska Earthquake Center, Alaska Volcano Observatory, Alaska Seismic Hazards Safety Commission, National Aeronautics and Space Administration (NASA), Sitka Sound Science Center, Alaska Sea Grant, St. Lawrence University, University of Washington, Oregon State University, Bristol Bay Native Association, U.S. Bureau of Indian Affairs, Alaska Division of Mining, Land and Water, Alaska State Pipeline Coordinator, Alaska Division of Homeland Security and Emergency Management, National Park Service, National Forest Service, City of Sitka, City of Valdez, Alaska Department of Transportation and Public Facilities, National Tsunami Warning Center, Alaska Department of Commerce, Community and Economic Development, and many others.

- Briefly describe the cooperative programs, projects, or mitigation work.

All work is in support of mapping, assessing, and understanding geohazards to facilitate mitigation.
- What challenges (staffing, remote location, data, mapping, etc.) your organization has faced in cooperating with other agencies in hazard mitigation.

Baseline data remains sparse; many of our efforts go toward narrowing the data gap, but funding is always an issue.
- How you have overcome these challenges.

Partnering with other organizations; seeking external sources of funding; pooling resources and expertise.

9. What challenges does your organization face in efforts to reduce future disaster losses.

- Staffing: We have technical experts, but lack sufficient support staff to maximize their efforts
 - Funding: Collecting necessary data in Alaska is expensive and time-consuming
 - Remote community locations: We make it work
 - Data: Baseline data remains sparse
 - Mapping: We are actively working on producing this critical information
10. Are there any other State-level initiatives or ideas that your organization can suggest that would enhance the State's effort to reduce future disaster losses?
- Bring back the Alaska Coastal Management Program (ACMP)
 - Support development/collection of baseline data
 - Support hazards research and mapping
 - Enforce building codes
 - Make seismic retrofitting of schools, hospitals, and other public buildings a priority
 - Recognize and push for support and funding for mitigation and relocation of Alaska communities threatened by unique, Alaska-specific catastrophic permafrost hazards that are not currently covered by FEMA and the Stafford Act

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Appendix 13-18 2018 Alaska State Hazard Mitigation Plan (SHMP) Update; Mitigation Capability Assessment Questionnaire

Would you please answer the following questions about your organization's activities and role in reducing future disaster losses in the State and provide any suggestions you may have for improving State-level disaster mitigation. Please highlight any activities initiated, implemented, integrated into other policies, procedures, or processes during the legacy 2013 SHMP's three-year life cycle.

This questionnaire is in MSWord so that you may type your answers directly into the document and return it to:

Scott Simmons	AECOM
Emergency Management Planner	c/o Scott Simmons
Scott.simmons@aecom.com	700 G Street, Suite 500
	Anchorage, AK 99501
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	Toll Free: 800.909.6787
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Introduction:

Hazard mitigation is any action taken to reduce or eliminate the long-term risk to human life and property from natural and human-caused hazards. The purpose of the Alaska State Hazard Mitigation Plan is to identify hazards, complete a risk assessment and vulnerability analysis, identify and coordinate needed mitigation efforts with State, Federal, and local partners and fulfill the requirements set forth in the federal 44 CFR 201.4 DMA 2000 legislation.

The 2016 Alaska Emergency Operations Plan describes the Role of the Disaster Policy Cabinet:

Disaster Policy Cabinet

The role of the Disaster Policy Cabinet (DPC) when convened is to provide expeditious, coordinated state agency recommendations to the governor in response to emergencies resulting from major disaster events and homeland security events.

Disaster Policy Cabinet Composition

- *Department of Administration*
- *Department of Commerce, Community and Economic Development*
- *Department of Corrections*
- *Department of Environmental Conservation*
- *Department of Health and Social Services*
- *Department of Law*
- *Department of Military and Veterans Affairs (Chair)*
- *Department of Natural Resources*
- *Department of Public Safety*
- *Department of Transportation and Public Facilities*

Additional state, borough, city, and educational agencies who have historically participated in SHMP development include:

State of Alaska

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State:

- *Office of the Governor*
- *Department of Administration (DOA)*
- *Department of Commerce, Community and Economic Development (DCCED)*
 - *Division of Community and Regional Affairs (DCRA)*
- *Department of Corrections (DOC)*
- *Alaska Court System*
- *Department of Education and Early Development (DEED)*
- *Department of Fish and Game (F&G)*
- *Department of Labor and Workforce Development (DLWD)*
- *Department of Military and Veterans Affairs (DMVA)*
 - *Alaska State Defense Force (ADF)*
 - *Alaska National Guard (ANG)*
 - *Division of Homeland Security and Emergency Management (DHS&EM)*
- *Department of Natural Resources*
 - *Alaska Volcano Observatory*
- *Department of Revenue*

Federal

- *Denali Commission*
- *University of Alaska Anchorage (UAA)*
- *University of Alaska Fairbanks (UAF)*
- *United States (US) Department of Agriculture (USDA)*
 - *Disaster Resource Center*
 - *Housing and Urban Development (HYD)*
 - *Natural Resource Conservation Service (NRCS)*
 - *Rural Development (RD)*
 - *US Forest Service (USFS)*
- *US Department of Commerce (DOC)*
 - *US Coast Guard (USCG)*
 - *National Oceanic & Atmospheric Administration (NOAA)*
 - *National Tsunami Warning Center (NTWC)*
 - *National Weather Service (NWS)*
- *US Department of Health and Human Services (DHSS)*
- *US Department of Homeland Security (DHS)*
 - *Federal Emergency Management Agency (FEMA)*
- *US Geological Surveys (USGS)*
- *US Environmental Protection Agency (EPA)*
- *US Army Corps of Engineers (USACE)*

You or your agency has been identified as an acting or new member of the State Hazard Mitigation Advisory Committee (SHMAC). The SHMAC has been in-place since 2002 to assist with identifying, supporting, and prioritizing statewide hazard mitigation initiatives. Selected SHMAC members make recommendations that fulfill statewide mitigation goals to the Governor's DMVA Disaster Policy Cabinet.

Would you please review the questions, confer with your agency policy makers and summarize your agency's initiatives reflect your organization mitigation mission?

1. Please list what mitigation activities your organization has undertaken to reduce future disaster losses throughout the State?
 - a. Please identify "new" statutory or regulatory authorities that address hazard mitigation.
 - b. Include any activities that enhance avoiding future hazard impacts and reducing infrastructure and population vulnerabilities (hazard identification, mapping, etc.)
 - c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop.
 - d. Include any activities related to public hazard mitigation including regulating development, developing building codes, written standards, public education presentations, and training opportunities, etc.
 - e. Include specific examples of programs or activities directly related to the following hazards profiled in the State Hazard Mitigation Plan.

A. Natural Hazards

Earthquake:

- A. Reviewed agency facilities in terms of potential earthquake falling hazards.

Flood, (includes Riverine & Coastal Erosion, storm surge, ice run-up etc.):

Ground Failure:(includes Avalanche, Landslide, Mudslide, Permafrost & Wind Erosion etc.):

Tsunami: (includes Seiche)

Weather, (includes Drought, Storms, & Wind, etc.)

Volcano, (includes Ash, Lahar, etc.)

Wildland Fire, (includes Tundra, Urban Interface etc.):

- B. Work with Alaskan citizens to reduce wildland fire risks.
- C. Community Wildland Fire Protection Plans (CWPP)
- D. Public Service Announcements (PSA): Wildland Fire Prevention
- E. Hazardous Fuels Mitigation Treatment projects
- F. Wildland Urban Interface (WUI) homeowner plans
- G. Volunteer Fire Department funding through VFA (Federal funds)
- H. Red Card Training and Refresher training

B. Manmade and Technological Hazards:

Economic, (includes Urban Conflagration and other large scale income losses due to natural or man induced events):

Infectious Disease, (includes epidemics, biological, consumables contamination, & Nuclear, Biological, Chemical (NBC) exposure):

Invasive Species, (includes Flora & Fauna infestation):

1. Policies and Regulations to help prevent the spread of invasive flora and fauna
 - A. Helicopter buckets, Retardant plane tanks – steamed washed prior to being utilized on Alaskan wildland fires.
 - B. Identification of Elodea infested waterways

Hazardous Materials, (HazMat, Oil Spills, etc.):

- A. Hazardous Materials Training for personnel

Terrorism, (includes Civil Disorder/Disturbance, Infrastructure Threats, Active Shooter, & Bombing, Cyber Threats, Nuclear Attack/Materials,,)

Technological, (includes long duration Utilities & Transportation Disruptions):

2. If your organization owns or operates property located in any areas subject to the hazards listed in #1e above:
 - Would you list those properties
 - Their approximate location,
 - Whether state owned or leased) and
 - Why specific mitigation measures or actions your organization has taken to protect these properties and operations from specific hazards?
 - A. Southwest Area Office (McGrath): potential flooding due to river and ice jams
 - B. Facilities include both state owned and Federal agreement.
 - C. Fairbanks and Northern DNR Region Office is located within the flood plains (next to the Chena River)
 - D. All facilities are located within a potential earthquake zone. Ensure furniture i.e. tall bookshelves are bolted to wall.
3. Please list other Federal, State, Local, non-profit or private agencies your organization works with to reduce disaster losses from the hazards listed in #1e and...:
 - Briefly describe the cooperative mitigation work.
 - What challenges your organization has faced in cooperating with other agencies in hazard mitigation.

- How you have overcome or provide suggestions for overcoming these challenges.
 - A. Federal (DOI, USFS, DNR) Master Cooperative Wildland Fire Management and Stafford Act Response Agreement
 - B. Federal Funding: Western States WUI grant funds hazard-fuels treatments, Information and Educational programs such as Firewise, Ready Set Go and Planning such as Community Wildland Fire Protection Programs (CWPP)
 - C. USFS funds for Crew: Type 1 Pioneer Peak; Crew has worked on various hazardous fuels mitigation projects.
 - D. Sharing resources for wildland fire suppression/ Hazard mitigation
 - E. Cooperative Agreement with local governments: Municipality of Anchorage; Fairbanks North Star Borough, Kenai Peninsula Borough
 - F. Cooperative Agreements with Native Corporations: Hazardous Fuels Mitigation: Kenai All Hands All Lands and US Fish and Wildlife Service for Hazard Fuels Reduction. Currently Kenai Kodiak Forestry has an agreement with \$386K funding.
 - G. Fire Departments (both paid and volunteer): Firewise projects, education, training. Fairbanks North Star Borough grant (federal funds) worked with the Fire Departments to conduct local Firewise evaluations on local homes and residences.
 - H. VFA grants funding for fire departments to use for supplies, training
- 4. How did your agency integrate the 2013 legacy SHMP concepts, priorities and initiatives within new or existing legislation, regulation, programs, policies, or procedures?
 - Are there any legacy State statutes, authorities, or regulations that were particularly effective in assisting your organization in reducing future disaster losses?
 - Are there any new or amended State statutes, authorities, or regulations that would enhance your organization's ability to reduce future disaster losses?
 - Were any State statutes, authorities, or regulations that were rescinded that now prevent or your organization's ability to reduce future disaster losses?
 - A. Alaska Wildland Fire protection Statutes and Regulations were updated February 2015
 - B. Sec 41.15.050 Fire Season April 1 to August 31.
 - C. 2018 House Bill 155 update and reorganize Division of Forestry fire prevention laws and penalties to improve compliance and permit enforcement.
- 5. What role does public opinion and opportunities for public involvement play in your organization's effort to reduce future disaster losses?
 - A. Host local community meeting inviting nearby residences prior to conducting hazardous fuels reduction projects.
 - B. Host Firewise events at local home shows
- 6. What challenges does your organization face in efforts to reduce future disaster losses.

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- A. Staffing: crews and personnel are needed for fire suppression activities during the summer months. Most of the staff is seasonally employed.
 - B. Funding: rely on Federal funds
 - C. Remote community locations: Some of the remote communities do not have an organized government
 - D. Data:
 - E. Mapping: it costs monies to obtain the latest satellite imagery. Funding is needed to support the GIS personnel
7. Are there any other State-level initiatives or ideas that your organization can suggest that would enhance the State's effort to reduce future disaster losses?
- A. A: Ensuring that public citizens take ownership/ responsibility in reducing their wildland fire risk through Firewise.

2013 Alaska State Hazard Mitigation Plan Update Federal Agency Mitigation Questionnaire

The State of Alaska is currently updating the State Hazard Mitigation Plan (SHMP). The State is required to revise and update our plan every three years in order to continue to be eligible for almost all FEMA funding. The purpose of the SHMP is to identify hazards, complete a risk assessment and vulnerability analysis, identify and coordinate needed mitigation efforts with State, Federal, and local partners and fulfill the requirements set forth in the Federal 44 CFR 201.4 DMA 2000 legislation (<http://www.fema.gov/pdf/help/fr02-4321.pdf>).

State and Federal partnerships are one mechanism used to accomplish mitigation tasks. In Alaska there are multiple Federal agencies with programs, projects, data and staff expertise that contribute to decision making concerning hazard mitigation in Alaska. In many cases these partnerships have been identified in the hazard specific sub-sections (earthquake, volcanic eruption, flood, snow avalanche, weather, etc.) of section five of the current, 2007, SHMP (also see table included). However, we are aware that there are additional Federal agency ventures concerning hazard mitigation that are absent from the existing Plan. We would like the 2010 update of the SHMP to reflect, identify and recognize all of your agency's contributions (programs, projects and staff areas of expertise) in providing local data and guidance with a goal of reducing future disaster losses in the State of Alaska.

In order to most appropriately and accurately identify these contributions we are asking you to read and respond to the questions below. We also welcome links, digital documents and images which illustrate and/or support these programs, projects and areas of expertise. Our goal in this process is to simply compile and present a comprehensive, accurate and up-to-date representation of these existing programs in the SHMP.

Please return your contributions and answers to the provided questions back to me by May 21, if possible. Please feel free to contact me anytime with comments and questions.

R. Scott Simmons, CFM, CPM

Senior Emergency Management Planner

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Personal Cell: 907.841.1832

The legacy 2013 SHMP Plan is available as a PDF (17.6 MB) at:

<http://ready.alaska.gov/plans/documents/Alaskas%20HMP%202016.pdf>

**State of Alaska Department of Homeland Security and Emergency Management
2018 Update State Hazard Mitigation Plan
Federal Agency Mitigation Questionnaire**

1. What programs, projects and/or expertise does your agency have that contributes to long-term mitigation efforts to reduce disaster losses in the State?
 - A. Hazardous Fuels Reduction projects
 - B. Prevention and Firewise Education activities
 - C. Burn Permit Program
- f. Include references to any of your agency's existing State-Federal partnerships that address, long-term hazard mitigation.
 - A. Kenai All Lands All Hands see below for success story.
 - B. Partnership with the State of Alaska and USDA Forest Service: State and Private Forestry Cooperative Programs provide technical, educational and financial assistance to landowners, resource managers and communities with a primary goal of maintaining and improving the health, sustainability and productivity of Alaska's urban and rural forests and related economies.
- g. Include any of your agency's activities that enhance understanding of hazards and vulnerability in the State (hazard identification, mapping, etc.)
 - A. Division of Forestry Geographic Information Systems:
http://forestrymaps.alaska.gov/AK_DOF_Fire_App/ Hazardous Fuels mitigation projects completed are depicted on the GIS map. The mapping program also links to nearby borough/municipality property database to assist in identifying potential values at risk.
 - B. Alaska Fire Service Interagency Know Sites Data Base: password protected site that identifies values. The site is being updated to the National program.
- h. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop through State-Federal partnerships.
 - A. Kennicott/ McCarthy Community Wildfire Protection Plan (CWPP) was developed through the coordination of Federal, State and local agencies.
 - B. Master Cooperative Wildland Fire Management and Stafford Act Response Agreement – DOI agencies (BLM, BIA, FWS, NPS), Department of Agriculture (USFS) and State of Alaska Division of Forestry. The purpose is to document the commitment to improve efficiency by facilitating the coordination and exchange of personnel, equipment, supplies, services and funds in sustaining wildland fire management such as prevention, preparedness, communication and education, fuels

treatment and

hazard mitigation, fire planning, response strategies, tactics, suppression and post fire rehabilitation and restoration.

- i. Include specific examples of programs or activities directly related to the following hazards specified in the State Hazard Mitigation Plan (including: detection, retrofit, building codes, hazard maps, gauges, models, forecasts, historic data, and dynamic data).
 - Flood
 - Wildland Fire
 - A. Wildland Fire season – updated Statutes Regulations
 - April 1st to recognized that there is an increase human caused early season fires
 - Current Legislation HB155
 - Education/ Training:
 - Advance Wildland Fire Academy scheduled 2018 in McGrath; leadership training
 - Fire Modules 2017 on the job training for three modules (VCRA, Southwest and Mat Su Areas). Individuals had on the job training in operating fire engines, fire-fighting, and helicopter experience.
 - B. Hazard Maps: identify high risk areas due to flammable vegetation, terrain and infrastructure/ population. In cooperation with local governments and through grant funding obtain imagery to help identify values and fire risks. Identifying hazardous fuel treatments on maps aids in wildland fire suppression activities.
 - C. Alaska Interagency Coordination Center (Alaska Fire Service AICC) current and historical fire map website.
 - D. Mesowest/ National Weather Service website on AICC webpage. Tracks and displays fire weather indices.
 - E. Integrated Fire Management (Dispatch Computer Aided program) and Mobile IFM. The program was developed by Selkirk Systems Inc. The Dispatch program allows dispatchers to track suppression resources i.e. air tankers, plot fire locations and identify nearby values at risk. The mobile IFM allows fire protection and jurisdictional managers to identify weather (fire danger) and fires within their areas.
 - Earthquake
 - Volcanoes
 - Snow Avalanche

State of Alaska

Hazard Mitigation Plan 2018

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- Tsunami
 - Severe Weather
 - Ground Failure
 - Erosion
 - Oil Spill and Hazardous Materials
 - Terrorism
 - Technological, Human caused
 - Health (pandemic flu, Bird flu, Swine flu, H1N1...)
2. Please list other Federal, State, local, non-profit and/or private organizations your agency works with to reduce disaster losses from the hazards in the bulleted list above and briefly describe the cooperative program or project. Please include any challenges, success stories and protocols that may have come from each program or project.
- A. Kenai All Lands All Hands initially started with the need to mitigate the impacts of spruce beetle. The Action plan for FY 2005-2009 was developed for fire protection and prevention, and hazardous fuels reduction from back porch out (concept for homeowners to take steps 3) insect and disease suppression and 4) forest health restoration and rehabilitation and 5) Community assistance.
- B. The work had four goals and three guiding principles of the National Fire Plan 10 year Comprehensive Strategy. Priority was to work collaboratively with communities within the WUI and the need for the communities to complete a community wildfire protection plan. The Kenai Forest, Wildfire Protection and Fuels Management Coordinating Committee was formed in 2003. Representatives of the Forest Service, Kenai Peninsula Borough, State of Alaska Division of Forestry, Chugachmuit Inc., USFWS Kenai National Wildlife Refuge, Bureau of Land Management, The Bureau of Indian Affairs, the Kenai Fjords National Park and other cooperators.
- C. In 2011 a Community Wildfire Protection Plan was completed for the Kennicott/McCarthy area. The plan was in collaboration with the local fire department, National Park Service and Division of forestry. In 2012 the Division of Forestry received a competitive Western WUI grant to reduce the hazardous fuels in and around the community through a landowner cost share grant program, the construction of shaded fuel break and a Firewise educational outreach campaign. National Firewise Communities /USA recognition was achieved on August 14, 2014.
3. What role does public opinion and opportunities for public involvement play in your organization's effort to reduce future disaster losses?
- A. Public opinion and public participation is critical. If the public expect that the Division of Forestry will always be there to protect their remote cabin nestled in black

spruce, there will be a time when it is not safe, or there is not enough resources. Ensuring that everyone plays a role in protecting their community and property is paramount in the success. Firewise is a cooperative effort among local, state, federal and private agencies to promote fire safety.

4. What challenges (staffing, remote location, data, mapping, etc.) does your organization face in efforts to reduce future disaster losses?
 - A. Most if not all of the programs are federally funded. Even the Borough/Municipality are federally funded through federal grants. As the federal dollars lessen, there is more competition for these funds. Currently the federal funds do not cover maintenance thus hazardous fuel projects may lose their effectiveness.
 - B. In some places, the easy hazardous fuel treatments sites have been completed. The next priority sites may have complications i.e. multiple land ownership.
 - C. Changing values and risks. Changing landownership; limited resources: As residences move into the wildland urban setting and recreate in remote areas- the threat from wildland fires can increase. However, if these sites are not identified, if suppression forces are few there may not be a “fire engine” at every driveway. For the remote cabins, it may not be safe to place firefighters onsite to protect the cabin.
5. Are there any other ongoing or developing initiatives or ideas that your agency can suggest that would enhance the State’s effort to reduce future disaster losses?
 - A. Incorporate Firewise principles for State owned and or leased facilities. A program that teaches people how to adapt to live with wildfire. This will assist in getting the firewise message to homeowners and businesses.
 - B. Ensure structures are built with flame resistant material i.e. metal roof; clear off dead and dry vegetation from rooflines, gutters, porches. Screen and seal openings that could allow embers, trim back shrubs and tree that are closer than 5 feet, Store away flammable items. Rake out any landscaping mulch at least 5 feet away. Remove anything flammable such as woodpiles, vehicles within 30 feet that could act as a large fuel source. Incorporate outside sprinklers around the facilities to reduce the chance of embers igniting.
6. Do you have any suggestions on how the State can more effectively use or deliver the mitigation programs you identified?
 - A. Practice what we teach (educate). Identify (signage) hazardous fuels treatment areas; use scannable signs that if the person has a smart phone links to a Firewise page with more information. Signs with phone numbers that play a taped PSA about the benefits of hazardous fuels reduction projects and Firewise.
7. Do you have a mechanism to assess, design and build your agency’s infrastructure to withstand particular natural disasters? If so, how and which hazards? For example are air traffic control towers, piers, docks, office buildings, warehouses built or retrofitted to withstand a significant earthquake event? Please explain.

State of Alaska

Hazard Mitigation Plan 2013

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- A. Wildland fire – Ensure Firewise principles are followed around the facilities including reduce flammable vegetation.

Appendix 13-18 2018 Alaska State Hazard Mitigation Plan (SHMP) Update; Mitigation Capability Assessment Questionnaire

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Please highlight any activities initiated, implemented, integrated into other policies, procedures, or processes during the legacy 2013 SHMP's three-year life cycle.

Please enter your contributions and answers directly into this MS Word document and return back to me by May 21, if possible.

Please feel free to contact me anytime with comments and questions.

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Emergency Management Planner	c/o Scott Simmons
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State of Alaska

Hazard Mitigation Plan 2018

Appendix 13 - Capability Assessment Questionnaire

Introduction:

Hazard mitigation is any action taken to reduce or eliminate the long-term risk to human life and property from natural and human-caused hazards. The purpose of the Alaska State Hazard Mitigation Plan is to identify hazards, complete a risk assessment and vulnerability analysis, identify and coordinate needed mitigation efforts with State, Federal, and local partners and fulfill the requirements set forth in the federal 44 CFR 201.4 DMA 2000 legislation.

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Disaster Policy Cabinet

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- *Department of Corrections*
- *Department of Environmental Conservation*
- *Department of Health and Social Services*
- *Department of Law*
- *Department of Military and Veterans Affairs (Chair)*
- *Department of Natural Resources*
- *Department of Public Safety*
- *Department of Transportation and Public Facilities*

Additional federal, state, borough, city, and educational agencies who have historically participated in SHMP development include:

Federal

- *Denali Commission*
- *United States (US) Department of Agriculture (USDA)*
 - *Disaster Resource Center*
 - *Housing and Urban Development (HUD)*
 - *Natural Resource Conservation Service (NRCS)*
 - *Rural Development (RD)*
 - *US Forest Service (USFS)*
- *US Department of Commerce (DOC)*
 - *National Oceanic & Atmospheric Administration (NOAA)*
 - *National Ocean Science*
 - *National Weather Service (NWS)*
 - *National Tsunami Warning Center (NTWC)*
- *US Department of Health and Human Services (DHSS)*
- *US Department of Homeland Security (DHS)*
 - *Federal Emergency Management Agency (FEMA)*
 - *US Coast Guard (USCG)*
- *US Geological Surveys (USGS)*
- *US Environmental Protection Agency (EPA)*
- *US Army Corps of Engineers (USACE)*

State:

- *Office of the Governor*

- *Department of Administration (DOA)*
 - *Risk Management (RM)*
- *Department of Commerce, Community and Economic Development (DCCED)*
 - *Division of Community and Regional Affairs (DCRA)*
 - *Floodplain Management*
 - *Alaska Climate Change Impact Mitigation Program (ACCIMP)*
- *Department of Corrections (DOC)*
- *Alaska Court System*
- *Department of Education and Early Development (DEED)*
- *Department of Environmental Conservation (DEC)*
 - *Division of Spill Prevention and Response (DSPR)*
 - *Village Safe Water (VSW)*
- *Department of Fish and Game (F&G)*
- *Department of Labor and Workforce Development (DLWD)*
- *Department of Military and Veterans Affairs (DMVA)*
 - *Alaska State Defense Force (ADF)*
 - *Alaska National Guard (ANG)*
 - *Division of Homeland Security and Emergency Management (DHS&EM)*
- *Department of Natural Resources (DNR)*
 - *Division of Forestry (DOF)*
 - *Division of Geological and Geophysical Surveys (DGGS)*
 - *Division of Mining, Land, and Water (DMLW)*
 - *Dam Safety and Construction Unit*
 - *Alaska Volcano Observatory (AVO)*
- *Department of Revenue (DOR)*
- *Alaska Department of Public Safety (DPS)*
- *Alaska Department of Transportation and Public Facilities (DOT/PF)*
- *University of Alaska Anchorage (UAA)*
- *University of Alaska Fairbanks (UAF)*

You or your agency has been identified as an acting or new member of the State Hazard Mitigation Advisory Committee (SHMAC). The SHMAC has been in-place since 2002 to assist with identifying, supporting, and prioritizing statewide hazard mitigation initiatives. Selected SHMAC members make recommendations that fulfill statewide mitigation goals to the Governor's DMVA Disaster Policy Cabinet.

State of Alaska

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Appendix 13 - Capability Assessment Questionnaire

Would you please review the questions, confer with your agency policy makers and summarize your agency's initiatives reflect your organization mitigation mission?

Please refer to the Department of Military and Veterans Affairs as they handle all State of Alaska disaster mitigation and response.

1. What programs, projects and/or expertise does your agency have that contributes to long-term mitigation efforts to reduce disaster losses in the State?
 - a. Include references to any of your agency's existing State-Federal partnerships that address, long-term hazard mitigation.
 - b. Include any of your agency's activities that enhance understanding of hazards and vulnerability in the State (hazard identification, mapping, etc.)
 - c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop through State-Federal partnerships.
 - d. Include specific examples of programs or activities directly related to the following hazards specified in the State Hazard Mitigation Plan (including: detection, retrofit, building codes, hazard maps, gauges, models, forecasts, historic data, and dynamic data).
2. Are there any other ongoing or developing initiatives or ideas that your agency can suggest that would enhance the State's effort to reduce future disaster losses?
3. Do you have any suggestions on how the State can more effectively use or deliver the mitigation programs you identified?
4. Do you have a mechanism to assess, design and build your agency's infrastructure to withstand particular natural disasters? If so, how and which hazards? For example are air traffic control towers, piers, docks, office buildings, warehouses built or retrofitted to withstand a significant earthquake event? Please explain.
5. Please list what mitigation activities your organization has undertaken to reduce future disaster losses throughout the State?
 - a. Please identify "new" statutory or regulatory authorities that address hazard mitigation.
 - b. Include any activities that enhance avoiding future hazard impacts and reducing infrastructure and population vulnerabilities (hazard identification, mapping, etc.)
 - c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop.

- d. Include any activities related to public hazard mitigation including regulating development, developing building codes, written standards, public education presentations, and training opportunities, etc.
- e. Include specific examples of programs or activities directly related to the following hazards profiled in the State Hazard Mitigation Plan.

A. Natural Hazards

Earthquake:

Ground Failure: (includes Avalanche, Landslide, Mudslide, Permafrost & Wind Erosion etc.):

Tsunami: (includes Seiche)

Water, (includes Riverine & Coastal flood, erosion, storm surge, ice-jam, ice run-up aufeis [overflow], etc.):

Weather, (includes Drought, Storms, Temperature, & Wind, etc.)

Volcano, (includes Ash, Lahar, etc.)

Wildland Fire, (includes Tundra, Urban Interface etc.)

B. Other Hazards:

Economic, (includes Urban Conflagration and other large scale income losses due to natural or man induced events):

Infectious Disease, (includes epidemics, biological, consumables contamination, & Nuclear, Biological, Chemical (NBC) exposure):

Invasive Species, (includes Flora & Fauna infestation):

Hazardous Materials, (HazMat, Oil Spills, etc.):

Terrorism, (includes Civil Disorder/Disturbance, Infrastructure Threats, Active Shooter, & Bombing, Cyber Threats, Nuclear Attack/Materials,.)

Technological, (includes long duration Utilities & Transportation Disruptions):

- 6. Does your organization own or operate property located in any areas subject to the hazards listed in #5e above:
 - Would you list those properties?

Attached separately is a master list of insured state-owned properties. The Division of Risk Management maintains this list and administers the self-insurance program for each state agency, covering all sudden and accidental property and casualty claims. This is not a complete list of state-owned properties. You can contact General Services to request a list of all state-owned and leased properties.

- What is their approximate location,
 - Are they State owned or leased) and
 - What specific mitigation measures or actions your organization has taken to protect these properties and operations (please list relevant hazards)?
7. Please list other Federal, State, Local, non-profit or private agencies your organization works with to reduce disaster losses from the hazards listed in #5e and...:
- Briefly describe the cooperative programs, projects, or mitigation work.
 - What challenges (staffing, remote location, data, mapping, etc.) your organization has faced in cooperating with other agencies in hazard mitigation.
 - How you have overcome these challenges.
8. How did your agency integrate the 2013 legacy SHMP concepts, priorities and initiatives within new or existing legislation, regulation, programs, policies, or procedures?
- Are there any legacy State statutes, authorities, regulations or programs that were particularly effective in assisting your organization in reducing future disaster losses?
 - Are there any new or amended State statutes, authorities, regulations, or programs that would enhance your organization's ability to reduce future disaster losses?
 - Were any State statutes, authorities, regulations, or programs rescinded that would now prevent or hinder your organization's ability to reduce future disaster losses?
9. What role does public opinion and opportunities for public involvement play in your organization's effort to reduce future disaster losses?
10. What challenges does your organization face in efforts to reduce future disaster losses.
- Staffing:
 - Funding: **Insure State Assets**
 - Remote community locations:
 - Data:
 - Mapping: **Will include GIS insured property mapping in future RMIS RFP.**

11. Are there any other State-level initiatives or ideas that your organization can suggest that would enhance the State's effort to reduce future disaster losses?

Please place an "x" in the following table that reflects the agency and/or programs your agency partners with.

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Appendix 13-18 2018 Alaska State Hazard Mitigation Plan (SHMP) Update; Mitigation Capability Assessment Questionnaire

The State of Alaska is currently updating the State Hazard Mitigation Plan (SHMP). The State is required to revise and update our plan every three years in order to continue to be eligible for almost all FEMA funding. The purpose of the SHMP is to identify hazards, complete a risk assessment and vulnerability analysis, identify and coordinate needed mitigation efforts with State, Federal, and local partners and fulfill the requirements set forth in the Federal 44 CFR 201.4 DMA 2000 legislation (<http://www.fema.gov/pdf/help/fr02-4321.pdf>).

State and Federal partnerships are one mechanism used to accomplish mitigation tasks. In Alaska there are multiple Federal agencies with programs, projects, data and staff expertise that contribute to decision making concerning hazard mitigation in Alaska. In many cases these partnerships have been identified in the hazard specific sub-sections (earthquake, volcanic eruption, flood, snow avalanche, weather, etc.) of section five of the current, 2007, SHMP (also see table included). However, we are aware that there are additional Federal agency ventures concerning hazard mitigation that are absent from the existing Plan. We would like the 2010 update of the SHMP to reflect, identify and recognize all of your agency's contributions (programs, projects and staff areas of expertise) in providing local data and guidance with a goal of reducing future disaster losses in the State of Alaska.

In order to most appropriately and accurately identify these contributions we are asking you to read and respond to the questions below. We also welcome links, digital documents, and images which illustrate and/or support these programs, projects, and your agencies expertise. Our goal in this process is to compile and present a comprehensive, accurate, and up-to-date narrative that defines the State's capability to manage and fulfill existing SHMP related policies, procedures, and programs.

Please highlight any activities initiated, implemented, integrated into other policies, procedures, or processes during the legacy 2013 SHMP's three-year life cycle.

Please enter your contributions and answers directly into this MS Word document and return back to me by May 21, if possible.

Please feel free to contact me anytime with comments and questions.

Scott Simmons	AECOM
Emergency Management Planner	c/o Scott Simmons
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	Anchorage, AK 99501
	Phone: 907.261.9706
	Toll Free: 800.909.6787
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State of Alaska

Hazard Mitigation Plan 2018

Appendix 13 - Capability Assessment Questionnaire

Introduction:

Hazard mitigation is any action taken to reduce or eliminate the long-term risk to human life and property from natural and human-caused hazards. The purpose of the Alaska State Hazard Mitigation Plan is to identify hazards, complete a risk assessment and vulnerability analysis, identify and coordinate needed mitigation efforts with State, Federal, and local partners and fulfill the requirements set forth in the federal 44 CFR 201.4 DMA 2000 legislation.

The 2016 Alaska Emergency Operations Plan describes the Role of the Disaster Policy Cabinet:

Disaster Policy Cabinet

The role of the Disaster Policy Cabinet (DPC) when convened is to provide expeditious, coordinated state agency recommendations to the governor in response to emergencies resulting from major disaster events and homeland security events.

Disaster Policy Cabinet Composition

- *Department of Administration*
- *Department of Commerce, Community and Economic Development*
- *Department of Corrections*
- *Department of Environmental Conservation*
- *Department of Health and Social Services*
- *Department of Law*
- *Department of Military and Veterans Affairs (Chair)*
- *Department of Natural Resources*
- *Department of Public Safety*
- *Department of Transportation and Public Facilities*

Additional federal, state, borough, city, and educational agencies who have historically participated in SHMP development include:

Federal

- *Denali Commission*
- *United States (US) Department of Agriculture (USDA)*
 - *Disaster Resource Center*
 - *Housing and Urban Development (HUD)*
 - *Natural Resource Conservation Service (NRCS)*
 - *Rural Development (RD)*
 - *US Forest Service (USFS)*
- *US Department of Commerce (DOC)*
 - *National Oceanic & Atmospheric Administration (NOAA)*
 - *National Ocean Science*
 - *National Weather Service (NWS)*
 - *National Tsunami Warning Center (NTWC)*
- *US Department of Health and Human Services (DHSS)*
- *US Department of Homeland Security (DHS)*
 - *Federal Emergency Management Agency (FEMA)*
 - *US Coast Guard (USCG)*
- *US Geological Surveys (USGS)*
- *US Environmental Protection Agency (EPA)*
- *US Army Corps of Engineers (USACE)*

State:

- *Office of the Governor*

- *Department of Administration (DOA)*
 - *Risk Management (RM)*
- *Department of Commerce, Community and Economic Development (DCCED)*
 - *Division of Community and Regional Affairs (DCRA)*
 - *Floodplain Management*
 - *Alaska Climate Change Impact Mitigation Program (ACCIMP)*
- *Department of Corrections (DOC)*
- *Alaska Court System*
- *Department of Education and Early Development (DEED)*
- *Department of Environmental Conservation (DEC)*
 - *Division of Spill Prevention and Response (DSPR)*
 - *Village Safe Water (VSW)*
- *Department of Fish and Game (F&G)*
- *Department of Labor and Workforce Development (DLWD)*
- *Department of Military and Veterans Affairs (DMVA)*
 - *Alaska State Defense Force (ADF)*
 - *Alaska National Guard (ANG)*
 - *Division of Homeland Security and Emergency Management (DHS&EM)*
- *Department of Natural Resources (DNR)*
 - *Division of Forestry (DOF)*
 - *Division of Geological and Geophysical Surveys (DGGS)*
 - *Division of Mining, Land, and Water (DMLW)*
 - *Dam Safety and Construction Unit*
 - *Alaska Volcano Observatory (AVO)*
- *Department of Revenue (DOR)*
- *Alaska Department of Public Safety (DPS)*
- *Alaska Department of Transportation and Public Facilities (DOT/PF)*
- *University of Alaska Anchorage (UAA)*
- *University of Alaska Fairbanks (UAF)*

You or your agency has been identified as an acting or new member of the State Hazard Mitigation Advisory Committee (SHMAC). The SHMAC has been in-place since 2002 to assist with identifying, supporting, and prioritizing statewide hazard mitigation initiatives. Selected SHMAC members make recommendations that fulfill statewide mitigation goals to the Governor's DMVA Disaster Policy Cabinet.

State of Alaska

Hazard Mitigation Plan 2018

Appendix 13 - Capability Assessment Questionnaire

Would you please review the questions, confer with your agency policy makers and summarize your agency's initiatives reflect your organization mitigation mission?

1. What programs, projects and/or expertise does your agency have that contributes to long-term mitigation efforts to reduce disaster losses in the State?
 - Emergency Watershed Protection Program
 - Watershed Mitigation
 - Private land conservation planning
 - Engineer
- a. Include references to any of your agency's existing State-Federal partnerships that address, long-term hazard mitigation.
- b. Include any of your agency's activities that enhance understanding of hazards and vulnerability in the State (hazard identification, mapping, etc.)
- c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop through State-Federal partnerships.
- d. Include specific examples of programs or activities directly related to the following hazards specified in the State Hazard Mitigation Plan (including: detection, retrofit, building codes, hazard maps, gauges, models, forecasts, historic data, and dynamic data).
2. Are there any other ongoing or developing initiatives or ideas that your agency can suggest that would enhance the State's effort to reduce future disaster losses?
3. Do you have any suggestions on how the State can more effectively use or deliver the mitigation programs you identified?
4. Do you have a mechanism to assess, design and build your agency's infrastructure to withstand particular natural disasters? If so, how and which hazards? For example are air traffic control towers, piers, docks, office buildings, warehouses built or retrofitted to withstand a significant earthquake event? Please explain.
5. Please list what mitigation activities your organization has undertaken to reduce future disaster losses throughout the State?
 - a. Please identify "new" statutory or regulatory authorities that address hazard mitigation.
No new regs, but the next Farm Bill could bring changes.
 - b. Include any activities that enhance avoiding future hazard impacts and reducing infrastructure and population vulnerabilities (hazard identification, mapping, etc.)

NRCS (Emergency Watershed Protection program (EWP) Projects since 2013:

- McGrath – armored river bank to protect city from erosion
- Village of Tetlin – removed woody debris from river following wildfire
- City of Seward – mitigation of glacial outflow damage to protect critical infrastructure
- Village of Huslia – moved homes and business away from eroding river
- City of Galena – armored riverbank to protect the runway
- City of Valdez – armored riverbank to protect communications tower from erosion
- City of Mekoryuk – schedule project, armoring of barge landing area to allow docking, and protect the fuel header from erosion

- c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop.

NA

- d. Include any activities related to public hazard mitigation including regulating development, developing building codes, written standards, public education presentations, and training opportunities, etc.

NA

- e. Include specific examples of programs or activities directly related to the following hazards profiled in the State Hazard Mitigation Plan.

The EWP program protects watershed function, so pretty much all of the below listed natural hazards may be eligible if they impact watersheds or waterways. Maybe not drought, but, it could happen.

A. Natural Hazards

Earthquake:

Ground Failure: (includes Avalanche, Landslide, Mudslide, Permafrost & Wind Erosion etc.):

Tsunami: (includes Seiche)

Water, (includes Riverine & Coastal flood, erosion, storm surge, ice-jam, ice run-up aufeis [overflow], etc.):

Weather, (includes Drought, Storms, Temperature, & Wind, etc.)

Volcano, (includes Ash, Lahar, etc.)

Wildland Fire, (includes Tundra, Urban Interface etc.)

B. Other Hazards:

NRCS has a Disaster Mitigation Plan, and a COOP plan with considerations for man-made hazards, but they are mostly for continuing our operations. Our plans are attached to the email.

Economic, (includes Urban Conflagration and other large scale income losses due to natural or man induced events):

Infectious Disease, (includes epidemics, biological, consumables contamination, & Nuclear, Biological, Chemical (NBC) exposure):

Invasive Species, (includes Flora & Fauna infestation):

Hazardous Materials, (HazMat, Oil Spills, etc.):

Terrorism, (includes Civil Disorder/Disturbance, Infrastructure Threats, Active Shooter, & Bombing, Cyber Threats, Nuclear Attack/Materials,,)

Technological, (includes long duration Utilities & Transportation Disruptions):

6. Does your organization own or operate property located in any areas subject to the hazards listed in #5e above:

- Would you list those properties?
 - What is their approximate location,
 - Are they State owned or leased) and
 - What specific mitigation measures or actions your organization has taken to protect these properties and operations (please list relevant hazards)?

GSA owns the buildings we use.

7. Please list other Federal, State, Local, non-profit or private agencies your organization works with to reduce disaster losses from the hazards listed in #5e and...:

- Briefly describe the cooperative programs, projects, or mitigation work.
- What challenges (staffing, remote location, data, mapping, etc.) your organization has faced in cooperating with other agencies in hazard mitigation.
- How you have overcome these challenges.

The EWP requires a project sponsor, which is usually a municipality, but could be any entity.

8. How did your agency integrate the 2013 legacy SHMP concepts, priorities and initiatives within new or existing legislation, regulation, programs, policies, or procedures?

- Are there any legacy State statutes, authorities, regulations or programs that were particularly effective in assisting your organization in reducing future disaster losses?
- Are there any new or amended State statutes, authorities, regulations, or programs that would enhance your organization's ability to reduce future disaster losses?

- Were any State statutes, authorities, regulations, or programs rescinded that would now prevent or hinder your organization's ability to reduce future disaster losses?

The USDA and its subdivision NRCS have historically participated in SHMP meetings. However, as a federal agency, we operate independently. We offer our technical assistance as requested due to our extensive watershed disaster mitigation expertise.

9. What role does public opinion and opportunities for public involvement play in your organization's effort to reduce future disaster losses?

EWP does not require public participation for individual projects; however, NRCS often holds public notices if the project will impact a community. Juneau is an example. The municipality of Juneau approached NRCS for assistance on the Mendenhall River, but the project would impact several private lots. NRCS held a public meeting to inform the residents about the proposed mitigation work.

10. What challenges does your organization face in efforts to reduce future disaster losses.

- Staffing: NRCS is severely short staffed on our conservation planning staff, but not our engineering staff.
- Funding: EWP is not a line item in the appropriations budget. Congress approves funding sporadically, usually following a disaster. Alaska usually received funding only after a major disaster when there are excess funds available.
- Remote community locations: EWP projects are usually in remote locations. This is nothing new for NRCS.
- Data: NA
- Mapping: NA

11. Are there any other State-level initiatives or ideas that your organization can suggest that would enhance the State's effort to reduce future disaster losses?

A revolving fund that all municipalities pay into?

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**Appendix 13-18 2018 Alaska State Hazard Mitigation Plan (SHMP) Update;
Mitigation Capability Assessment Questionnaire**

Would you please answer the following questions about your organization's activities and role in reducing future disaster losses in the State and provide any suggestions you may have for improving State-level disaster mitigation. Please highlight any activities initiated, implemented, integrated into other policies, procedures, or processes during the legacy 2013 SHMP's three-year life cycle.

This questionnaire is in MSWord so that you may type your answers directly into the document and return it to:

Scott Simmons	AECOM
Emergency Management Planner	c/o Scott Simmons
Scott.simmons@aecom.com	700 G Street, Suite 500
	Anchorage, AK 99501
	Phone: 907.261.9706
	Toll Free: 800.909.6787
	Fax: 907.562.1297

Introduction:

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- *Department of Natural Resources*
- *Department of Public Safety*
- *Department of Transportation and Public Facilities*

State of Alaska

Hazard Mitigation Plan 2018

Appendix 13 - Capability Assessment Questionnaire

Additional state, borough, city, and educational agencies who have historically participated in SHMP development include:

State:

- *Office of the Governor*
- *Department of Administration (DOA)*
- *Department of Commerce, Community and Economic Development (DCCED)*
 - *Division of Community and Regional Affairs (DCRA)*
- *Department of Corrections (DOC)*
- *Alaska Court System*
- *Department of Education and Early Development (DEED)*
- *Department of Fish and Game (F&G)*
- *Department of Labor and Workforce Development (DLWD)*
- *Department of Military and Veterans Affairs (DMVA)*
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- *Department of Revenue*

Federal

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- *University of Alaska Anchorage (UAA)*
- *University of Alaska Fairbanks (UAF)*
- *United States (US) Department of Agriculture (USDA)*
 - *Disaster Resource Center*
 - *Housing and Urban Development (HYD)*
 - *Natural Resource Conservation Service (NRCS)*
 - *Rural Development (RD)*
 - *US Forest Service (USFS)*
- *US Department of Commerce (DOC)*
 - *US Coast Guard (USCG)*
 - *National Oceanic & Atmospheric Administration (NOAA)*
 - *National Tsunami Warning Center (NTWC)*
 - *National Weather Service (NWS)*
- *US Department of Health and Human Services (DHSS)*
- *US Department of Homeland Security (DHS)*
 - *Federal Emergency Management Agency (FEMA)*
- *US Geological Surveys (USGS)*
- *US Environmental Protection Agency (EPA)*
- *US Army Corps of Engineers (USACE)*

You or your agency has been identified as an acting or new member of the State Hazard Mitigation Advisory Committee (SHMAC). The SHMAC has been in-place since 2002 to assist with identifying, supporting, and prioritizing statewide hazard mitigation initiatives. Selected SHMAC members make recommendations that fulfill statewide mitigation goals to the Governor's DMVA Disaster Policy Cabinet.

Appendix 13 - Capability Assessment Questionnaire

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No new regs, but the next Farm Bill could bring changes.
 - b. Include any activities that enhance avoiding future hazard impacts and reducing infrastructure and population vulnerabilities (hazard identification, mapping, etc.)
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 - McGrath – armored river bank to protect city from erosion
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 - City of Galena – armored riverbank to protect the runway
 - City of Valdez – armored riverbank to protect communications tower from erosion
 - City of Mekoryuk – schedule project, armoring of barge landing area to allow docking, and protect the fuel header from erosion
 - c. Include references to any established (written) mitigation policies or procedures that your organization uses to reduce disaster losses or that your organization intends to develop.
NA
 - d. Include any activities related to public hazard mitigation including regulating development, developing building codes, written standards, public education presentations, and training opportunities, etc.
NA
 - e. Include specific examples of programs or activities directly related to the following hazards profiled in the State Hazard Mitigation Plan.

The Emergency Watershed Protection program protects watershed function, so pretty much all of the below listed natural hazards may be eligible if they impact watersheds or waterways. Maybe not drought, but, it could happen.

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Flood, (includes Riverine & Coastal Erosion, storm surge, ice run-up etc.):

Ground Failure:(includes Avalanche, Landslide, Mudslide, Permafrost & Wind Erosion etc.):

Tsunami: (includes Seiche)

State of Alaska

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Appendix 13 - Capability Assessment Questionnaire

Weather, (includes Drought, Storms, & Wind, etc.)

Volcano, (includes Ash, Lahar, etc.)

Wildland Fire, (includes Tundra, Urban Interface etc.)

B. Manmade and Technological Hazards:

NRCS has a Disaster Mitigation Plan, and a COOP plan with considerations for man-made hazards, but they are mostly for continuing our operations. Our plans are attached to the email.

Economic, (includes Urban Conflagration and other large scale income losses due to natural or man induced events):

Infectious Disease, (includes epidemics, biological, consumables contamination, & Nuclear, Biological, Chemical (NBC) exposure):

Invasive Species, (includes Flora & Fauna infestation):

Hazardous Materials, (HazMat, Oil Spills, etc.):

Terrorism, (includes Civil Disorder/Disturbance, Infrastructure Threats, Active Shooter, & Bombing, Cyber Threats, Nuclear Attack/Materials,.)

Technological, (includes long duration Utilities & Transportation Disruptions):

2. If your organization owns or operates property located in any areas subject to the hazards listed in #1e above:

- Would you list those properties
 - Their approximate location,
 - Whether state owned or leased) and
 - Why specific mitigation measures or actions your organization has taken to protect these properties and operations from specific hazards?

A: **GSA owns the buildings we use.**

3. Please list other Federal, State, Local, non-profit or private agencies your organization works with to reduce disaster losses from the hazards listed in #1e and...:

- Briefly describe the cooperative mitigation work.
- What challenges your organization has faced in cooperating with other agencies in hazard mitigation.
- How you have overcome or suggestions for overcoming these challenges.

A: **the EWP requires a project sponsor, which is usually a municipality, but could be any entity.**

Appendix 13 - Capability Assessment Questionnaire

4. How did your agency integrate the 2013 legacy SHMP concepts, priorities and initiatives within new or existing legislation, regulation, programs, policies, or procedures?

- Are there any legacy State statutes, authorities, or regulations that were particularly effective in assisting your organization in reducing future disaster losses?
- Are there any new or amended State statutes, authorities, or regulations that would enhance your organization's ability to reduce future disaster losses?
- Were any State statutes, authorities, or regulations that were rescinded that now prevent or your organization's ability to reduce future disaster losses?

A: NRCS keeps up with SHMP meetings, but we operate independently. We offer our technical assistance if requested. We have expertise in disaster mitigation within watersheds.

5. What role does public opinion and opportunities for public involvement play in your organization's effort to reduce future disaster losses?

A: EWP does not require public participation for individual projects; however, NRCS often holds public notices if the project will impact a community. Juneau is an example. The municipality of Juneau approached NRCS for assistance on the Mendenhall River, but the project would impact several private lots. NRCS held a public meeting to inform the residents about the proposed mitigation work.

6. What challenges does your organization face in efforts to reduce future disaster losses.

- Staffing: NRCS is severely short staffed on our conservation planning staff, but not our engineering staff.
- Funding: EWP is not a line item in the appropriate budget. Congress approves funding sporadically, usually following a disaster. Alaska usually received funding only after a major disaster when there are excess funds available.
- Remote community locations: EWP projects are usually in remote locations. This is nothing new for NRCS.
- Data: NA
- Mapping: NA

7. Are there any other State-level initiatives or ideas that your organization can suggest that would enhance the State's effort to reduce future disaster losses?

A: A revolving fund that all municipalities pay into?

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APPENDIX 13.20 SHMP PERTINENT STATE AND FEDERAL AGENCIES

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Appendix 13.20 State and Federal Agencies and Additional Organizations

Within Alaska there are an abundance of state and federal agencies responsible for issuing disaster warnings, collecting and distributing data and information, preparing for or responding to disaster s, and providing technical and monetary grant assistance to communities and individuals.

State of Alaska

Department of Administration

The Mission of the Department of Administration (DOA) is to provide consistent and efficient support services to State agencies so that they may better serve Alaskans.

<http://doa.alaska.gov/home.html>

Division of Risk Management

The Objective of the Division of Risk Management is to protect the financial assets and operations of the State of Alaska from accidental loss through a comprehensive self-insurance program for normal and expected property and casualty claims of high frequency and low severity combined with high limit broad form excess insurance protection for catastrophic loss exposures. <http://doa.alaska.gov/drm/>

Department of Commerce, Community and Economic Development

The Mission Statement of the Department of Commerce, Community and Economic Development (DCCED) is to promote a healthy economy, strong communities, and protect consumers in Alaska. <http://www.commerce.state.ak.U.S./>

Division of Community and Regional Affairs

The mission of the Division of Community and Regional Affairs (DCRA) is to promote strong communities and healthy economies. DCRA is the Local Government Agency named in the Constitution of the State of Alaska (AK. Constitution, Article 10, §14) charged with advising and assisting Alaska's local governments on a broad range of issues.

<https://www.commerce.alaska.gov/web/dcra/>

Among the Division's authorities, DCRA fulfills DCCED's charge as:

- The designated state coordinating agency for floodplain management, the National Flood Insurance Program, and the State of Alaska Erosion Management Policy (Alaska Administrative Order (AAO) 175).
<https://gov.alaska.gov/admin-orders/175.html> and <https://gov.alaska.gov/admin-orders/175extra.html>
- The designated state agency directed to coordinate with other state and federal agencies to propose long-term solutions to the ongoing erosion issues in affected coastal communities in Alaska (AAO 231 and 239). <https://gov.alaska.gov/admin-orders/231.html> and <https://gov.alaska.gov/admin-orders/239.html>
- The designated state agency authorized to provide planning assistance to Alaska's local governments (AS 44.33.782-788).
<http://www.akleg.gov/basis/statutes.asp#44.33.782>

Risk Mapping, Assessment and Planning (Risk MAP) Program

DCRA provides outreach, coordination and technical assistance to Alaskan communities involved with the Risk Map Program, a FEMA program that provides high quality flood maps, hazard data, and risk assessment tools to help communities understand their natural hazard risk and take action to reduce risk. The Risk MAP process is intended to inform local planning and development activities to increase resilience to natural hazards and disasters.

<https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/RiskMAP.aspx>

As part of implementing the Risk Map Program in Alaska:

- The Division maintains and updates the *Alaska Mapping Business Plan* which sets priorities for new Risk MAP studies in Alaska. A new focus of Risk MAP is on imminently- threatened Alaska Native villages.

<https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/RiskMAP/AlaskaMappingBusinessPlan.aspx>

- DCRA updated the handbook, *Understanding and Evaluating Erosion Problems*, which is intended to assist Alaskan property owners and communities in understanding and evaluating erosion problems and alternative solutions.

<https://www.commerce.alaska.gov/web/portals/4/pub/Understanding&EvaluatingErosionPub.pdf>

Floodplain Management and the National Flood Insurance Program (NFIP)

DCRA provides training and technical assistance to Alaska local governments that participate in the NFIP, a FEMA program that aims to reduce the impact of flooding on private and public structures. It does so by providing affordable insurance to property owners and by encouraging communities to adopt and enforce floodplain management regulations.

<https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/FloodplainManagement.aspx>

Community Resilience and Climate Adaptation Programs

DCRA's Community Resilience and Climate Adaptation Programs provide Alaskan communities with technical assistance, tools, training and funding to become healthier, stronger and more resilient to natural hazards and to adapt to the impacts of climate change.

<https://www.commerce.alaska.gov/web/dcra/CommunityResilienceandClimateAdaptationPrograms.aspx>

- *Alaska Community Coastal Protection Project*: DCRA helped the communities of Newtok, Kivalina, Shaktoolik and Shishmaref develop comprehensive Strategic Management Plans to increase resilience to environmental threats.

<https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/alaskacommunitycoastalprotectionproject.aspx>

- *Alaska Climate Change Impact Mitigation Program (ACCIMP)*: Through the ACCIMP, DCRA has provided technical assistance and funding to communities imminently threatened by climate-related natural hazards. The program helps impacted communities develop a planned approach to shoreline protection,

building relocation and/or eventual relocation of the village.

<https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/ACCIMP.aspx>

- *Inter-Agency Coordination on Flooding, Erosion and other Hazard Issues*
 - DCRA has coordinated inter-agency working groups focused on assisting imminently-threatened communities for more than a decade:
 - The Newtok Planning Group was formed by DCRA in 2006 to assist the village of Newtok with its relocation effort.
<https://www.commerce.alaska.gov/web/dcra/planninglandmanagement/newtokplanninggroup.aspx>
 - DCRA has coordinated Inter-agency Planning Committees for the villages of Kivalina, Shaktoolik and Shishmaref to assist these communities.
 - <https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/KivalinaInter-AgencyPlanningWorkGroup.aspx>
 - <https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/ShaktoolikInter-AgencyPlanningWorkGroup.aspx>
 - <https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/ShishmarefInter-AgencyPlanningWorkGroup.aspx>

Community Profile Maps

DCRA provides accurate, high-quality digital community profile maps for Alaskan communities with less than 1,500 population, and which are not located in a borough with mapping capability. Each profile includes maps at two scales. One map focuses on the developed area of a community and the other map focuses on the area surrounding the community. Information presented on the profiles includes topography, land use, land ownership, and areas subject to flooding and erosion.

<http://dced.maps.arcgis.com/apps/webappviewer/index.html?id=18fdb060875740fdad22099ca779d637>

Alaska Community Database Online

DCRA maintains the Alaska Community Database Online (CDO), which provides comprehensive information on each community in Alaska. The CDO has detailed information on the location, history, culture, economy, facilities, transportation, climate and demographic characteristics of Alaska communities. During times of disaster, the CDO can provide vital information on community and regional contacts, population, critical infrastructure and more. <https://www.commerce.alaska.gov/dcra/DCRAExternal>

Community Climate Change Portal

Because the Division is on the forefront of serving Alaskan communities, DCRA staff have seen first-hand evidence of the effects of climate change. The Community Climate Change Portal compiles information on many of these observed changes.

<https://www.commerce.alaska.gov/web/dcra/ClimateChange.aspx>

Community Development Block Grant Program

The Division administers the Community Development Block Grant (CDBG) program funds, enhancement grants to address coastal hazards, mini-grants and administers various flood mitigation planning and project grants, including the acquisition of flood-prone homes and businesses, throughout the State.

<https://www.commerce.alaska.gov/web/dcra/GrantsSection/CommunityDevelopmentBlockGrants.aspx>

Local Government Assistance

In addition to the Anchorage and Juneau offices, DCRA maintains offices in the regional hubs of Bethel, Dillingham, Kotzebue and Nome serving the remote villages in each region. Every community in Alaska has a DCRA Local Government Specialist (LGS) assigned to it. DCRA's LGS staff travel frequently to Alaska's rural and remote communities, providing onsite governmental and technical assistance for cities, boroughs, tribal governments, and non-profit community associations. Assistance can be provided or arranged on just about any aspect of local government. LGS staff often see first-hand the effects of natural hazards in Alaska's remote communities and bring these issues to the attention of those who can help. The deep knowledge LGS staff have of Alaska's communities can provide emergency managers and first responders with critical information during times of disaster.

<https://www.commerce.alaska.gov/web/dcra/LocalGovernmentAssistance.aspx>

Division of Insurance

AS 21.06.080 gives the Director of the Division of Insurance (DOI) has the authority to take action deemed necessary to assurance that contracts of insurance already issued will be honored during a catastrophe. Actions can include emergency orders permitting the immediate licensing of adjusters to facilitate handling of claims, permitting a licensee to move or remove a record as required by the existence of the catastrophe, or permit the issuance by the insurance company of checks or drafts on out-of-state banks to pay a claim.

<http://www.commerce.state.ak.U.S./insurance/>

Department of Education and Early Development

The Department of Education and Early Development (EED) is responsible for developing life-long learners. The State Board EED is the executive board of the department. The board develops educational policy, promulgates regulations governing education, appoints the Commissioner of EED with the Governor's approval, and is the channel of communication between state government and the public for educational matters. Education policies are determined by the board and administrated by the Commissioner through department divisions. Programs administered include: public school funding, early childcare, teacher certification, school construction and major maintenance grant program, debt reimbursement program for school facilities and student assessment. The only State operated school is Mt. Edgecumbe High School in Sitka.

The EED also administers the state libraries, archives, records and museum services, provides grants to the arts community. However, the EED does not have statutory responsibility in overseeing planning or education around crisis response plans or emergency drills. AS 14.33.100 (crisis response plans) and AS 14.03.140 (emergency drills) both assign all of these

responsibility to individual school districts. <http://www.mehs.educ.state.ak.U.S./> and <http://www.eed.state.ak.U.S./>

Department of Environmental Conservation

It is the policy of the State Department of Environmental Conservation (DEC) to conserve, improve, and protect its natural resources and environment and control water, land, and air pollution, in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well being. <http://www.dec.state.ak.U.S./>

Division of Spill Prevention and Response

The DEC's Division of Spill Prevention and Response (SPAR) is responsible for protecting Alaska's land, waters, and air from oil and hazardous substance spills. Alaskans have made a concerted effort to prevent and clean up spills. Significant progress has been made in the safe handling, storage and transportation of oil and chemicals and the cleanup of historic contamination. We will never totally eliminate the risk of spills, but we are constantly learning how to better manage that risk. <http://www.dec.state.ak.U.S./spar/>

Division of Environmental Health

The Division of Environmental Health (EH) deals with the basics: safe drinking water, food and sanitary practices. Our goal is to provide businesses with clear standards so that they can protect our environment and provide safe food and drinking water to Alaskans.

<http://www.dec.state.ak.U.S./eh/>

Drinking Water Program

The Drinking Water Program requires public water systems to be in compliance with state and federal regulations, for drinking water, for the public health protection of the residents and visitors to the State of Alaska. <http://www.dec.state.ak.U.S./eh/dw/>

Division of Air Monitoring & Quality Assurance

The Division of Air Quality, Air Monitoring & Quality Assurance Program operates and oversees air quality monitoring networks throughout Alaska. Our primary services include:

- Operating ambient air quality monitoring networks to assess compliance with the National Ambient Air Quality Standards (NAAQS) for carbon monoxide, particulates, nitrogen dioxide, sulfur oxide, and lead.
- Assessing ambient air quality for ambient air toxics level.
- Providing technical assistance in developing monitoring plans for air monitoring projects.

Issuing Air Advisories to inform the public of hazardous air conditions.

<http://www.dec.state.ak.U.S./air/am/index.htm>

Department of Health & Social Services

<http://www.hss.state.ak.U.S./>

Division of State Health Planning and Systems Development

Health Planning and Systems Development (HPSD) runs programs that strengthen health care access with a focus on rural areas and underserved populations. We also conduct

statewide health planning to help sustain organized and efficient health care delivery in Alaska. HPSD Programs focus on:

- Health Care Delivery
- Workforce Development
- Health Care Financing and Reimbursement Strategies
- Facility Planning

<http://www.hss.state.ak.U.S./dhcs/healthplanning/>

Community Health and Emergency Medical Services

The Community Health and Emergency Medical Services (CHEMS) is a section within Division of Public Health within the DHSS. One of CHEMS' responsibilities is developing, implementing, and maintaining a statewide comprehensive emergency medical services system. The department's statutory mandate (AS 18.08.010) requires it to:

1. Coordinate public and private agencies engaged in the planning and delivery of emergency medical services, including trauma care, to plan an emergency medical services system;
2. Assist public and private agencies to deliver emergency medical services, including trauma care, through the award of grants in aid;
3. Conduct, encourage, and approve programs of education and training designed to upgrade the knowledge and skills of health personnel involved in emergency medical services, including trauma care
4. Establish and maintain a process under which hospitals and clinics can represent themselves to be trauma centers because they voluntarily meet criteria adopted by the department which are based on an applicable national evaluation system.

In addition to these responsibilities, the section is heavily involved in planning and responding to bioterrorist events. <http://www.chems.alaska.gov/>

Department of Law

<http://www.law.state.ak.U.S./>

Office of the Attorney General

Provides legal advice to the governor and other state officers and has the duties and powers listed in AS 44.23.020. Apart from advising other state agencies, the Department of Law is not engaged in activities and programs to decrease vulnerability to hazards identified in the State Hazard Mitigation Plan.

Department of Military & Veterans Affairs

<http://www.dmva.alaska.gov/>

Division of Homeland Security & Emergency Management

Has responsibility for disaster preparedness including preparation of a comprehensive state emergency plan, assisting local governments in designing emergency response plans, distribution of food and supplies during disasters, and establishing public information education programs. DHS&EM is responsible for recommending land-U.S. e and building regulations to communities to reduce the impacts and cost of disasters. DHS&EM

coordinates with Tsunami Warning Center, Alaska State Troopers, State Emergency Response Commission, and local communities. Included in DHS&EM duties are the preparation and maintenance of a state emergency plan which shall include recommendations for zoning, building and other land use controls; safety measures for securing mobile homes and other nonpermanent or semi-permanent structures; and other preventive and preparedness measures designed to eliminate or reduce disasters or their impact.

<http://www.ready.alaska.gov/>

Department of Natural Resources

The Department of Natural Resources (DNR) Mission is to develop, conserve and enhance natural resources for present and future Alaskans. <http://dnr.alaska.gov/>

Division of Geological & Geophysical Surveys

The Division of Geological & Geophysical Surveys (DGGS) collects, evaluates, and distributes geologic data and information on earthquakes, volcanoes, and engineering geology. DGGS conducts geological and geophysical studies to determine potential geological hazards to buildings, roads, bridges and other installations and structures. Publishes maps and reports on the geology of Alaska, including location and severity of geologic hazards. <http://www.dggs.alaska.gov/>

Division of Forestry

The Division Forestry (referred to as Forestry) protects water quality, fish and wildlife habitat, and other forest values through appropriate forest practices and administration of the Forest Resources and Practices Act. In cooperation with federal agencies, Forestry manages a wildland fire program on 150 million acres of land. Forestry is responsible to oversee and control the fire protection obligation on all state, private, and municipal lands in the State of Alaska on behalf of the Department.

Alaska is the only state with an interagency fire plan. This plan divides the state into fire protection levels based on major natural firebreaks and the objectives of land managers. Firefighting resources can be allocated to the highest priority areas--those areas where communities and valuable resources are located. It also gives options for lower cost strategies in remote and unpopulated areas.

Urban interface areas are growing as the population increases. This will present increased potential for losses from wildland fire. Increased fire prevention activities continue to educate the public on its responsibility to be prepared for fire.

Authority for managing wildland fire is derived from AS 41.15.10. - 41.15.170.

<http://forestry.alaska.gov/>

Department of Public Safety

AS 18.76.010 Statutory responsibility for Alaska Avalanche Warning System, part of the Alaska Avalanche and Fire Weather Forecast System. Located within Alaska Department of Public Safety, in cooperation with a municipality or federal agency, shall participate in the development and implementation of a statewide avalanche warning system. The statewide system shall:

- Establish & maintain a service center and primary and supplementary field stations to gather information and data concerning ground water conditions, snow pack and avalanche activity

- Forecast snow avalanche conditions statewide
- Coordinate a public awareness program
- Catalog a comprehensive atlas of avalanche paths and slide occurrences; and assist local governments and state agencies in identifying hazardous zones and in developing snow avalanche zoning regulations

The Department of Public Safety provides legal counsel to DHS&EM for mitigation and other emergency management related issues, as needed. <http://www.dps.state.ak.U.S./>

Division of Alaska State Troopers

The Division of Alaska State Troopers (AST) is charged with statewide law enforcement, prevention of crime, pursuit and apprehension of offenders, service of civil and criminal process, prisoner transportation, central communications, and search and rescue.

<http://www.dps.alaska.gov/AST/>

Division of Fire and Life Safety

The mission of the Division of Fire and Life Safety is to prevent the loss of life and property from fire and explosion. We are composed of three Bureau's: Life Safety Inspection; Plan Review; and Training and Education. AS 18.70 states that:

- (a) The Department of Public Safety shall adopt regulations for the purpose of protecting life and property from fire and explosion by establishing minimum standards for:
- Fire detection and suppression equipment;
 - Fire and life safety criteria in commercial, industrial, business, institutional, or other public buildings, and buildings used for residential purposes containing four or more dwelling units;
 - Any activity in which combustible or explosive materials are stored or handled in commercial quantities;
 - Conditions or activities carried on outside a building described in (2) or (3) of this subsection likely to cause injury to persons or property.
- (b) The commissioner of public safety may establish by regulation and the department may charge reasonable fees for fire and life safety plan checks made to determine compliance with regulations adopted under (a)(2) of this section. <http://www.dps.state.ak.U.S./fire/default.aspx>

Fish and Wildlife Safeguard

Fish and Wildlife Safeguard is a non-profit volunteer citizen's organization that works in cooperation with the Alaska Wildlife Troopers. By providing a toll-free hotline phone number which citizens may call to report a resource law violation, the organization gives the public an opportunity to become involved in protecting Alaska's natural resources.

<http://www.dps.state.ak.U.S./AWT/Safeguard.aspx>

Department of Transportation & Public Facilities

The Alaska Department of Transportation and Public Facilities (DOT&PF) is typically the first response agency for disasters that affect Alaska's transportation system, working as a partner with DHS&EM. In addition, DOT&PF collaborates and coordinates with State and Federal

Agencies in transportation infrastructure planning, design, construction, maintenance, and operations to build resiliency into the transportation system.

DOT&PF's mission is to "Keep Alaska moving through service and infrastructure. DOT&PF uses division resources to identify hazards, plan, and initiate mitigation activities to address Alaska's transportation needs using its core services to modernize, preserve, and operate. DOT&PF, in partnership with DHS&EM, budgets for temporary repairs to highway, marine and aviation infrastructure necessary to keep the multi-modal transportation system operational following a natural disaster. <http://www.dot.state.ak/>

Alaska Railroad Corporation

The Alaska Railroad Corporation (ARRC) is a full-service railroad serving ports and communities from the Gulf of Alaska to Fairbanks. Owned by the State of Alaska since 1985, the Railroad is governed by a seven-member Board of Directors appointed by the Governor of Alaska.

The Alaska Railroad is a self-sustaining corporation that operates without state subsidy, and provides year-round passenger, freight and real estate services. The Alaska Railroad carries nearly 500,000 passengers annually. The ARRC rail line covers over 500 miles of Alaska through very diverse environments. To assist in freight and passenger response planning; the rail line is broken into thirteen geographical sections based on local environment factors (topography and geography). This facilitates emergency planning specific to the characteristics for each section (i.e. wildlife issues, local public safety response contacts, logistical resources and requirements, environmental and seasonal conditions, passenger emergency response strategies).

<http://www.alaskarailroad.com> and

<http://www.alaskarailroad.com/corporate/Corporate/FreightServices/RoutesMap/tabid/392/Default.aspx>

Other State Entities

There are a number of Boards and Commissions which can assist in refining hazard mitigation strategies for communities including the Alaska Coastal Policy Council, State Emergency Response Commission, Safety Advisory Council, Alaska Science and Technology Council, and Alaska Water Resources Board.

University of Alaska Fairbanks, Geophysical Institute

At the Geophysical Institute (GI; also known as the University of Alaska Fairbanks Geophysical Institute [UAF/GI]) the diversity of research focus is reflected in their disciplinary-based, functional groupings of faculty and research staff. These divisions are:

- Space physics
- Remote Sensing
- Atmospheric sciences
- Snow, ice, and permafrost
- Seismology
- Volcanology
- Tectonics and Sedimentation

<http://www.gi.alaska.edu/>

Alaska Satellite Facility

The largest facility at the UAF/GI is a satellite ground station and associated processing and archiving center called the Alaska Satellite Facility (ASF) which is funded by various federal, local, and private entities. Radar images produced there enable the all-weather study of sea ice, earthquakes, volcanoes, and regularly provide hazard-management products for agencies such as the National Oceanic and Atmospheric Administration (NOAA) and the National Ice Center. Through the International Observatory of the North, optical images of the Arctic from NASA and NOAA satellites are received and processed to support remote sensing research and data services to the state. <http://www.asf.alaska.edu/home>

Alaska Earthquake Center

The Alaska Earthquake Center (AEC) operates a regional network of over 300 seismometers and reports more than 50 earthquakes a day occurring within the state. In addition, the AEC conducts research on tsunami dynamics and tsunami hazard analysis (<http://earthquake.alaska.edu/tsunamis>) in cooperation with the DGGS.

The AEC is a cooperative project with USGS and the UAFGI. <http://earthquake.alaska.edu/>

Federal

Federal Emergency Management Agency Region X

Headquartered in Bothell, Washington, Federal Emergency management Agency (FEMA) Region X (Ten) works with the emergency management agencies in Alaska, Idaho, Oregon and Washington. FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

The states served by FEMA Region X experience a variety of hazards including earthquakes, wild fires, volcanic eruptions, landslides and tornados as well as weather emergencies like snow, ice, wind and heavy rain.

To help accomplish FEMA's mission Region X maintains strong partnerships through its Regional Advisory Council and Regional Interagency Steering Committee.

<http://www.fema.gov/about/regions/regionx/>

U.S. Department of the Interior

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities. <http://www.doi.gov/>

U. S. Geological Survey

Alaska Science Center

The mission of the Alaska Science Center (ASC) is to provide objective and timely data, information, and research findings about the earth and its flora and fauna to Federal, State,

and local resource managers and the public to support sound decisions regarding natural resources, natural hazards, and ecosystems in Alaska and circumpolar regions.

The U.S. Geological Survey (USGS), the Nation's largest water, earth, and biological science and civilian mapping agency, has studied the natural features of Alaska since its earliest geologic expeditions in the 1800s. The complexity of Alaska's unique landscapes and ecosystems requires USGS expertise from many science disciplines to conduct thorough, integrated research.

In Alaska each year, natural hazards may cause deaths and can cost millions of dollars due to the disruption of commerce, and the destruction of critical infrastructure. The USGS works extensively with local, state and federal agencies to reduce the loss from natural hazards. Collaborative processes have included stream and precipitation gauges on the Kenai Peninsula, volcano hazard monitoring, and improved seismic sensors. The USGS ASC science helps forecast and mitigate disasters and build resilient communities through cutting edge science, research, and monitoring tools and techniques pioneered here for Alaska's diverse and challenging landscape. Monitoring programs that address natural and emerging hazards include:

- Operating a streamflow monitoring network for flood warning and mitigation.
- Tracking emerging wildlife diseases, such as Avian Influenza (Highly Pathogenic H5N1) in migratory birds.

<http://alaska.USGS.gov/> and <http://pubs.USGS.gov/fs/2007/3019/>

USGS Water Resources of Alaska

The USGS ASC Water Resources Office continuously monitors surface water, ground water, and water quality parameters across the state. Monitoring sites are operated in cooperation with various local, State, or Federal agencies. There are five programs within the Water Resources discipline which related to hazards. They include:

- Streambed Scour
The USGS ASC is researching streambed scour at bridges through scour monitoring, hydrodynamic modeling, and data collection during high flows.
- Surface Water
Alaska provides real-time water-stage, streamflow and precipitation data at 152 sites across the state.
- Ground Water
Fourteen ground-water wells are monitored by the USGS in Alaska. These wells record data on hourly intervals.
- Flood Watch
The "Flood and high flow" map shows the location of stream gages where the water level is currently at or above flood stage.
- Water Quality

Water-quality conditions are continuously monitored by the USGS at 42 sites across the state of Alaska

The USGS Water Resources website provides current ("real-time") stream stage and streamflow, water-quality, and ground-water levels for over 200 sites in Alaska.

<http://alaska.USGS.gov/science/water/index.php>

Volcano Hazard Program

The overall objectives of the Volcano Hazards Program (VHP) are to advance the scientific understanding of volcanic processes and to lessen the harmful impacts of volcanic activity. The VHP monitors active and potentially active volcanoes, assesses their hazards, responds to volcanic crises, and conducts research on how volcanoes work to fulfill a Congressional mandate (P.L. 93-288) that the USGS issue "timely warnings" of potential volcanic hazards to responsible emergency-management authorities and to the populace affected. Thus, in addition to obtaining the best possible scientific information, the program works to effectively communicate its scientific findings to authorities and the public in an appropriate and understandable form.

Monitoring and research at the five volcano observatories in conjunction with the Menlo Science Center in Menlo Park helps advance VHP's understanding of active volcanism and allows the Program to provide warnings of impending eruptions in the United States. Through these observatories, the VHP monitor earthquake activity, ground deformation, gas chemistry, and other geophysical and hydrologic conditions before, during, and after eruptions. Observations are used to detect activity leading to an eruption, provide real-time emergency information about future and ongoing eruptions, identify hazardous areas around active and potentially active volcanoes, and improve our understanding of how volcanoes erupt and change our environment. The Volcano Disaster Assistance Program (VDAP) also assists other nations prepare for and respond to volcano emergencies.

<http://volcanoes.USGS.gov/>

Alaska Volcano Observatory

The Alaska Volcano Observatory is a joint program of USGS, the University of Alaska Fairbanks Geophysical Institute (UAFGI), and Alaska Division of Geological and Geophysical Surveys (DGGs). AVO monitors and studies Alaska's volcanoes to predict and record eruptive activity and informs and advises on volcanoes. Three primary objectives: conduct monitoring and other scientific investigations to assess the nature, timing, and likelihood of activity; assess volcanic hazards associated with anticipated activity, including kinds of events, effects and areas of risk; and provide timely and accurate information on volcanic hazards and warnings of impending activity. <http://www.avo.alaska.edu/>

U.S. Fish and Wildlife Service Alaska Region

The U.S. Fish and Wildlife Service (USFWS) Alaska Region manages 16 national wildlife refuges in Alaska, totaling 76,774,229 acres. Management goals include conservation, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the State for the benefit of present and future generations of American. The USFWS Conservation Planning & Policy team in Alaska works cooperatively with state agencies, members of the public, and other stakeholders to provide refuge management at all levels. In doing this, they give the public a meaningful voice in the future of each refuge and make sure that the rights of traditional users and the State of Alaska are respected and reflected in daily refuge administration. <http://alaska.fws.gov/>

Bureau of Land Management

In Alaska, the Bureau of Land Management (BLM) administers approximately 80 million surface acres of federal public land. The focuses of the BLM in Alaska includes:

<https://afs.ak.blm.gov/>.

Land Transfer

Alaska is a young state and land ownership is still being settled. The BLM is tasked with conveying federal land to the State of Alaska, Alaska Native corporations and individual Alaska Natives. Once final land status is determined, the BLM will manage about 70 million acres of federal public lands and 220 million acres of subsurface mineral estate in Alaska.

Energy Development

The BLM is committed to sound land use planning for the 23-million-acre National Petroleum Reserve-Alaska (NPR-A). Many resource management issues transcend the boundaries of NPR-A and are applicable to the entire North Slope of Alaska. The BLM partners with other federal and state agencies form the North Slope Science Initiative, a newly developed organization that encourages sharing knowledge to make science-based decisions about development activities on the North Slope. <http://www.northslope.org/> and http://www.blm.gov/ak/st/en/prog/energy/oil_gas/npra.html

Trans-Alaska Pipeline System

The BLM partners with other federal and state agencies at the Joint Pipeline Office to work proactively with Alaska's oil and gas industry to safely operate the Trans-Alaska Pipeline System. <http://www.jpo.doi.gov/>

Fire Management

The BLM provides wildland fire suppression services for all Department of the Interior and Alaska Native corporation lands in Alaska through the Alaska Interagency Coordination Center (AICC) and Alaska Fire Service (AFS).
<http://fire.ak.blm.gov/aicc.php> and <https://afs.ak.blm.gov/>

National Park Service Alaska Region

Alaska hosts 15 national parks, preserves, monuments and national historical parks. The National Park Service (NPS) also plays varying roles in the administration of 13 national wild rivers, two affiliated areas and a national heritage area. Alaska is also home to 49 National Historic Landmarks and 16 National Natural Landmarks.

<http://www.nps.gov/akso/index.html>

Bureau of Indian Affairs Alaska Region

The Alaska Region encompasses a dynamic and diverse mix of Tribes, Tribal organizations and natural features. With the exception of the Annette Island Reserve, which falls under the Northwest Region, the entire state of Alaska falls under the jurisdiction of the Alaska Region. Within that area the Alaska Regional Office (ARO) Headquarters is located in Juneau, Alaska with Trust, Transportation and Environmental offices located in Anchorage as is the West Central Alaska Agency. The other agency in ARO can be found in Fairbanks, Alaska.

This agency provides services to the villages within the Interior and the North Slope of Alaska.

The nearly 80,000 Tribal members that make up the 229 Tribes under the Alaska Region jurisdiction stretch from Ketchikan in the Southeast Panhandle to Barrow on the Arctic Ocean and from Eagle on the Yukon Territory border to Atka in the Aleutian Chain. Alaska Region Tribes Served are listed here:

<http://www.bia.gov/WhoWeAre/RegionalOffices/Alaska/WeAre/Tribes/index.htm>

<http://www.bia.gov/WhoWeAre/RegionalOffices/Alaska/index.htm>

U.S. Army Corps of Engineers Alaska District

The U.S. Army Corps of Engineers (USACE) Alaska District provides a full spectrum of quality engineering, technical, and construction support services in support of peacetime and contingency operations in Alaska and throughout the Pacific Region. Their major programs focus on military construction, civil works and environmental cleanup. Their civil works program operates and maintains 52 river and navigation projects along the coast of Alaska. Of these projects, 36 are small boat harbors, 10 are channels, four are breakwaters and two are river projects. Their formerly-used defense sites (FUDS) program has identified 312 environmental cleanup and restoration projects within the state. They are committed to supporting the overseas contingency operations by constructing quality facilities for service members and their families in Alaska.

The Corps of Engineers is also one of the primary Federal agencies assisting state and local governments in protecting the public from natural and manmade emergencies.

For floods, the Corps is the lead Federal response agency. Flood response activities are authorized under Public Law 84-99, and we can provide either technical assistance or direct assistance. There is no provision for financial assistance under PL 84-99. <http://www.poa.U.S.ace.army.mil/hm/default.htm> and <http://www.poa.U.S.ace.army.mil/EM/EM.html>

Economic Development Administration

The Economic Development Administration (EDA) was established under the Public Works and Economic Development Act of 1965 (42 U.S.C. § 3121), as amended, to generate jobs, help retain existing jobs, and stimulate industrial and commercial growth in economically distressed areas of the United States. EDA assistance is available to rural and urban areas of the Nation experiencing high unemployment, low income, or other severe economic distress. In fulfilling its mission, EDA is guided by the basic principle that distressed communities must be empowered to develop and implement their own economic development and revitalization strategies. Based on these locally- and regionally-developed priorities, EDA works in partnership with state and local governments, regional economic development districts, public and private nonprofit organizations, and Indian tribes. EDA helps distressed communities address problems associated with long-term economic distress, as well as sudden and severe economic dislocations including recovering from the economic impacts of natural disasters, the closure of military installations and other Federal facilities, changing trade patterns, and the depletion of natural resources.

<http://www.eda.gov/>

Environmental Protection Agency Region 10 Alaska

The mission of The Environmental Protection Agency (EPA) is to protect human health and to safeguard the natural environment -- air, water and land -- upon which life depends. Alaska is in

the Pacific Northwest Regional Office (Region 10) of the EPA. Region 10 focuses on EPA's work and mission in the region which is comprised of the states of Alaska, Idaho, Oregon, Washington and Pacific Northwest Indian Country.

<http://yosemite.epa.gov/r10/homepage.nsf/webpage/Alaska%27s+Environment?OpenDocument> and <http://www.epa.gov/region10/>

U.S. Forest Service

The mission of the Alaska Region of the U.S. Forest Service (USFS) is to manage the Chugach and Tongass National Forests to meet society's needs for a variety of goods, services, and amenities while enhancing the Forests' health and productivity, and to foster similar outcomes for State and private forestland across Alaska.

The USFS in Alaska also participates in wildfire management through the Alaska Interagency Coordination Center and Alaska Fire Service. <http://www.fs.fed.U.S./r10/>

U.S. Department of Agriculture

<http://www.U.S.da.gov/wps/portal/U.S.da/U.S.dahome>

Farm Service Agency

The Farm Service Agency (FSA) lends money and provides credit counseling and supervision to eligible applicants who operate family-size farms. A family-size farm is considered to be one that a family can operate and manage itself. FSA makes and guarantees a variety of loans for youth, new and experienced farmers, and producers undergoing emergency situations. FSA also provides credit counseling and supervision to farmers and ranchers who are temporarily unable to obtain private, commercial credit. FSA also provides assistance for natural disaster losses, resulting from drought, flood, fire, freeze, tornadoes, pest infestation, and other calamities. <http://www.fsa.U.S.da.gov/FSA/stateoffapp?mystate=ak&area=home&subject=prog&topic=landing> and <http://www.fsa.U.S.da.gov/FSA/webapp?area=home&subject=diap&topic=landing>

Rural Development

Rural Development is committed to helping improve the economy and quality of life in all of rural America. Through our programs, they touch the rural residents of our state every day.

Their guarantee, loan and grant programs support such essential public facilities and services as water and sewer systems, housing, health clinics, emergency service facilities and electric and telephone service. They promote economic development by guaranteeing loans to businesses through qualified lenders. They promote renewable energy and energy efficiency projects including wind, geothermal, hydro and biodiesel initiatives. They offer technical assistance and information to help cooperatives get started and through our Rural Economic Development Loan and Grant program we supply funds to cooperatives to promote small business development.

In Alaska, Rural Development achieves its mission by helping families, communities and businesses from Barrow to Metlakatla and from Nome to Northway obtain the financial and technical assistance needed to address their needs. Rural Development works to make sure that rural citizens can participate fully in the global economy by supporting projects to stabilize the cost of electricity and extend broadband service to rural villages.

<http://www.rurdev.U.S.da.gov/ak/Director.htm>

Natural Resources Conservation Service

The Natural Resources Conservation Service (NRCS) provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment. NRCS puts nearly 70 years of experience to work in assisting owners of America's private land with conserving their soil, water, and other natural resources. Local, state and federal agencies and policymakers also rely on our expertise. They deliver technical assistance based on sound science and suited to a customer's specific needs. Cost shares and financial incentives are available in some cases. Most work is done with local partners. Their partnership with local conservation districts serves almost every county in the nation, and the Caribbean and Pacific Basin. Participation in our programs is voluntary. Alaska NRCS Programs include:

- Conservation Innovation Grants (CIG)
- Conservation Technical Assistance (CTA)
- Conservation Stewardship Program (CSP new)
- Conservation Security Program (CSP old)
- Emergency Watershed Protection Program (EWP)
- Environmental Quality Incentive Program (EQIP)
- Farm and Ranch Land Protection Program FRPP)
- Grassland Reserve Program (GRP)
- Resource, Conservation & Development Program (RC&D)
- Snow Survey
- Soil Survey
- Watershed Planning
- Wildlife Habitat Incentives Program (WHIP)

<http://www.ak.nrcs.U.S. da.gov/>

U.S. Department of Transportation Federal Highway Administration

Alaska Division

The Federal Highway Administration (FHWA) Mission is to improve mobility on our Nation's highways through national leadership, innovation, and program delivery. Programs include:

- Bridge / Structures
- Environment
- Marine
- Highways
- Safety
- Civil Rights
- Finance
- Planning

- Security & Emergency Preparedness
- Engineering
- ITS
- Right-of-Way

<http://www.fhwa.dot.gov/akdiv/>

U.S. Department of Housing and Urban Development

Housing and Urban Development's (HUD) mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes; utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business.

<http://portal.hud.gov/portal/page/portal/HUD/states/alaska>

National Oceanic and Atmospheric Administration

The National Oceanic and Atmospheric Administration (NOAA) is a federal agency focused on the condition of the oceans and the atmosphere. <http://www.noaa.gov/>

National Weather Service

The National Weather Service (NWS) is the official U.S. weather, marine, fire and aviation forecasts, warnings, meteorological products, climate forecasts and information about meteorology. <http://www.arh.noaa.gov/>

West Coast and Alaska Tsunami Warning Center

NOAA's tsunami mission is to provide reliable tsunami detection, forecasts and warnings, and to promote community resilience.

The primary operational warning system objectives for carrying out this mission are to rapidly locate, size, and otherwise characterize major earthquakes, determine their tsunamigenic potential, predict tsunami arrival times, predict coastal runup when possible, and disseminate appropriate warning and informational products based on this information.

NOAA operates two tsunami warning centers in the United States: the West Coast/Alaska Tsunami Warning Center and the Richard H. Hagemeyer Pacific Tsunami Warning Center. The West Coast/Alaska Tsunami Warning Center area-of-responsibility (AOR) consists of Canadian coastal regions, Puerto Rico, the Virgin Islands, and the ocean coasts of all U.S. States except Hawaii. The Pacific Tsunami Warning Center AOR consists of Hawaii, other U.S. interests in the Pacific Basin, countries participating in the Tsunami Warning System in the Pacific, and Indian Ocean and Caribbean Sea countries.

<http://wcatwc.arh.noaa.gov/>

National Marine Fisheries Service

The Alaska Region of NOAA National Marine Fisheries Service (NMFS) oversees sustainable fisheries that produce about half the fish caught in U.S. waters, with responsibilities covering 842,000 square nautical miles off Alaska. The Alaska Region also works to ensure the viability of protected species—principally marine mammals—and to protect and enhance Alaska's marine habitat. <http://www.fakr.noaa.gov/>

Denali Commission

Introduced by Congress in 1998, the Denali Commission (Commission) is an independent federal agency designed to provide critical utilities, infrastructure, and economic support throughout Alaska. With the creation of the Denali Commission, Congress acknowledged the need for increased inter-agency cooperation and focus on Alaska's remote communities. Since its first meeting in April 1999, the Commission is credited with providing numerous cost-shared infrastructure projects across the State that exemplifies effective and efficient partnership between federal and state agencies, and the private sector. The Denali Commission's programs include:

- Community Planning
- Conference Sponsorships
- Economic Development
- Energy
- Government Coordination
- Health Facilities
- Solid Waste
- Teacher Housing
- Training
- Transportation

Grants Management Electronic Processing and Reporting Systems

The Denali Commission has two electronic web-based systems for Grants Management; GrantSolutions for processing proposed awards and post award amendments and the Commission Project Database for reporting progress on funded awards.

GrantSolutions - Electronic Grants Management Processing System

The Commission utilizes GrantSolutions to manage the electronic processing of every award from start to finish. The award starts with the posting of announcements of funding opportunities, receipt and review of applications, issuance of funded awards, the generation of post award amendments, to the close out of each award.

The GrantSolutions system provides access to award information based on verified identification of the individual, their job function or role within their organization, and their organization's business relationship with the Commission through their official awards or proposed awards. Individual users and the public do not have access to the GrantSolutions database itself but do have access to awards funded by the Commission in the Commission's Project Database System (see also Commission's Project Database - Electronic Grants Management Reporting System). <https://www.grantsolutions.gov/cf/display/mkt/home> and http://www.denali.gov/index.php?option=com_content&view=frontpage&Itemid=2

Small Business Administration

The U.S. Small Business Administration (SBA) was created in 1953 as an independent agency of the federal government to aid, counsel, assist and protect the interests of small business concerns, to preserve free competitive enterprise and to maintain and strengthen the overall economy of

our nation. We recognize that small business is critical to our economic recovery and strength, to building America's future, and to helping the United States compete in today's global marketplace. Although SBA has grown and evolved in the years since it was established in 1953, the bottom line mission remains the same. The SBA helps Americans start, build and grow businesses.

SBA provides low interest disaster loans to homeowners, renters, businesses of all sizes and private, non-profit organizations to repair or replace real estate, personal property, machinery & equipment, inventory and business assets that have been damaged or destroyed in a declared disaster. <http://www.sba.gov/localresources/district/ak/index.html>

Additional Organizations

American Red Cross Alaska

The American Red Cross has been the nation's premier emergency response organization. As part of a worldwide movement that offers neutral humanitarian care to the victims of war, the American Red Cross distinguishes itself by also aiding victims of devastating natural disasters. Over the years, the organization has expanded its services, always with the aim of preventing and relieving

Today, in addition to domestic disaster relief, the American Red Cross offers compassionate services in five other areas: community services that help the needy; support and comfort for military members and their families; the collection, processing and distribution of lifesaving blood and blood products; educational programs that promote health and safety; and international relief and development programs.

The American Red Cross also has Disaster Services and Emergency Assistance. Each year, the American Red Cross of Alaska responds immediately to more than 300 disasters, including house or apartment fires (the majority of disaster responses), earthquakes, floods, mudslides, avalanches, hazardous materials spills, and other natural and man-made disasters throughout the state. Trained Red Cross volunteers and staff are ready 24-hours-a-day, year-round to meet the disaster-caused needs of people in our community.

All disaster assistance from the Red Cross is based upon verified, disaster-caused need and is provided at no charge to the disaster client. While you are ultimately responsible for your own recovery, Red Cross is here to guide you through the process.

http://alaska.redcross.org/Home_Page.php and http://alaska.redcross.org/Disaster_Services.php

Alaska Conference of Mayors

The purpose of the Alaska Conference of Mayors (ACoM) is to offer an opportunity for the mayors to discuss common concern issues, work together for the betterment of their municipalities, and improve understanding Alaska municipalities.

Alaska Municipal League

The ACoM is the parent organization of the Alaska Municipal League (AML). ACoM and AML work together to form a municipal consensus on statewide and federal issues facing Alaskan local governments. AML is a voluntary, nonprofit, nonpartisan, statewide organization of 140 cities, boroughs, and unified municipalities, representing over 97% of Alaska's residents. AML's mission is to:

State of Alaska

Hazard Mitigation Plan 2018

Appendix 13.19 State and Federal Agencies & Organizations

1. Represent the unified voice of Alaska's local governments to successfully influence state and federal decision making.
2. Build consensus and partnerships to address Alaska's Challenges, and
3. Provide training and joint services to strengthen Alaska's local governments.

<http://www.akml.org/>

Interagency Hydrology Committee for Alaska

The Interagency Hydrology Committee for Alaska (IHCA) is an organization of technical specialists working for Federal, State, borough, and local governments and federally recognized tribes, who coordinate the collection and interpretation of data related to water resources and climate throughout the State of Alaska. The IHCA meets twice per year to coordinate multi-agency issues and exchange information. The work of the Committee is to a large extent based on coordination and prior knowledge of related activities of other agencies. Thus, to be effective, the continuity of the membership is considered necessary. The IHCA meets once in the spring and fall each year to coordinate multi-agency issues and exchange of information. Meetings rotate between Juneau, Anchorage, and Fairbanks to encourage participation by the greatest number. <http://ak.water.usgs.gov/ihca/>

APPENDIX 13.21 HAZARD MITIGATION SUCCESS STORIES

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The State of Alaska, Division of Homeland Security and Emergency Management would like to express our thanks to Alice Reardon and Alvin Jimmie Sr. for their assistance in the translation of this brochure. Quyana!



For other Emergency Preparedness information, please go to our website at:
www.ak-prepared.com
Or contact

**Division of Homeland Security &
Emergency Management**
P.O. Box 5750
Building 49000, Suite B-210
Ft. Richardson, Alaska
99505-5750

Phone: 907-428-7000
1-800-478-2337
Fax: 907-428-7009

Upingauten-qaa? Are You Prepared?



Your Basic Emergency Kit

Arenqiallugtem Nalliini Cat Upingaarkaten

Basic Emergency Kit

Arenqiallugtem Nalliini Cat Upinganarqellriit

You may have some of these basic emergency kit items already, such as a flashlight, battery operated radio, food, water and blankets. The key is to make sure they are organized, easy to find and easy to carry (in a suitcase with wheels or in a backpack) in case you need to evacuate your home. Whatever you do, don't wait for a disaster to happen.

Ak'a makunek ilaitnek aturyugarkanek avalingqerciqngatuci arenqiallugtem nalliini. Kenurqutaq, aturcetaat kenerkai-llu, neget, meq, uliit-llu paivngaarkaугut, enek'egci-maluteng, tegugainauluteng, missuugmun eksunaqluteng ang'aqsunaqluteng-llu pitsagevkenaci alqunaq enec'i unit-narqekan. Upingakici, watqapiar-llu arenqiallugaar-tellerkarpecenek utaqayaqunaci.

Easy to carry – think of ways that you can pack your emergency kit so that you and those on your emergency plan can easily take the items with you, if necessary.

Ang'aqsunaqluteng- umyuangcangnaqkici qaillun makut aturyugar-kat upingaurallerkaatnek, qaillun-llu elpet wall'u allam yuum qacigmek ayauskuniki ang'aqlerkaatnek.

☐ **Water** – two liters of water per person per day (Include small bottles that can be carried easily in case of an evacuation order)

Meq- mermek two liters amlertalriamek yuum ataucim aturarkaanek erenrem iluani (mikellrianek-llu assigtaumalrianek mernek ang'aqsunargellrianek avalingqerkici cali, pit-saqaartevkenaci nunaci unitesqekatgu)

☐ **Food** – that won't spoil, such as canned food, energy bars and dried foods (remember to replace the food and water once a year)

Neqkat- assiirutarkaunrilnguut, kinerneret, can-aumalriit neqkat, energy bar-at (Cimillekaat neqkat mer'et-llu allra-kuaqan umyuaqekiciu)

☐ **Manual can opener**

Ikircissuun

☐ **Flashlight and batteries**

Kenurqutaq kenerkai-llu

☐ **Candles and matches or lighter**

Cuucekaat cali-llu kenret wall'u spic'kat

☐ **Battery-powered or wind-up radio (and extra batteries)**

Aturcetaat kenermek atutulit wall'u qipqerluteng caliyugngalriit (kenernek-llu cali allanek)

☐ **First aid kit**

Kilinercuutnek iinrunek-llu imalget

☐ **Special needs items** – prescription medications, infant formula or equipment for people with disabilities

Aturyugarkat- Iinrut, aamarkat, wall'u yuut tememegteggun piscii-galnguut aturarkait

☐ **Extra keys** – for your car and house

Kelucairissuutet-enevet nuna-kuarcuutevet-llu kelucairissuutai

☐ **Cash** – include smaller bills, such as \$10 bills (traveler's checks are also useful) and change for payphones

Akit- Akicuarnek-llu cali avalingqengnaqkici, qulnek tuaten (traveler's check-at-llu cali as-sirtut kangirat-llu akiliryananun qanercuutnun, wall'u allat itumtat akit)

☐ **Emergency Plan** – include a copy of it and ensure it contains in-town and out-of-town contact information

Pillerkiurun kalikamun igausngalria pitsagevkenani arengqiallugaareskuni aturarkag- kalikaanek taum avalingqerqina nani-llu uitallerkan igausngakiu nunavni wall'u-q allani nunani

Additional Emergency Supplies

Allat Arenqiallugtem Nalliini Cat Upinganarqellriit

The basic emergency kit will help you get through the first 72 hours of an emergency. In addition to this kit, we recommend you also have the following additional emergency supplies. Then you will be well equipped for even the worst emergency situations.

Augkut upingaarkat arenqiallugtem nalliini ikayuutnguciqut pingayuni ernerni arenqiallugtem kinguani. Makunek-llu cali allanek canek avalingqesqumayaaqluci arenqiallugtem kinguani atuugarkanek. Upinga-ciquci pitsagaartevkenaci arenqiallugareskuvci makunek avalingqerquvci.

Change of clothing and footwear – for each household member

Ac'inqigtarkaitnek sap'akirkaitnek-llu-qaqilluki enem yui

☐ **Sleeping bag or warm blanket** – for each household member

Inarrvik wall'u maqalria ulik- qaqilluki enem yui

☐ **A whistle** – in case you need to attract attention

Kukumyararcuun- pitsagaartevkenak ikayungcallerkan pitekluku

☐ **Garbage bags** – for personal sanitation

Ciqiciviim missuugi- ugrutat caqukaitnek

☐ **Toilet paper**

Ugrutarkat

☐ **Safety gloves**

Aliimatek uqlaryailkutak wall'u akngircailkutak

Basic tools – hammer, pliers, wrench, screwdrivers, fasteners, work gloves

Calissuutet- mulutuuk, kegg-suutek, angicissuun, qipsalget, calissuutek aliimatek

☐ **Small fuel-driven stove and fuel** – follow manufacturer's directions and store properly

Kenircuun uqumek atutuli uqurkaq-llu- Maligtaquluki alerquutai piliaqestiin pikici, gemagtengqecarluku-llu pikiciu enem yui

Two additional liters of water per person per day – for cooking and cleaning

Mermek two liters amllertalria-mek yuum ataucim aturyugarkanek ernermi ataucimi- kenircuute-kamek erurcuutekamek-llu.

☐ **Other personal care supplies**

Allat yuum aturyugarkai kenugcessuutet wall'u erurcuutet

☐ **Copies of personal documents**—such as passport and birth certificate

Yuum kalikautai- yuurtellmini yuum kalikautai wall'u calissuutet kalikat



Basic Emergency Kit

Arenqiallugtem Nalliini Cat Upinganarqellriit

**FEMA**

Best practices

Disaster Mitigation Working in Alaska

Students Contribute to Mitigation Planning



Hazard Mitigation Best Practices stories are written to shine a bright light on actions that effectively reduce or eliminate future damage to people, property, and the environment from natural or man-made disasters. This story is about creating and sustaining the ultimate mitigation program -- enhancing the potential of young Alaskans, through "place-based" education, to allow them to build strong, safe and self-reliant communities



Photo By Christopher Smith FEMA

Steve Kenrick—Dean of students in the Village of Akiachak

AKIACHAK, AK — Steve Kenrick moved to Alaska when he was 55 years old to pursue a new career in education after leaving his previous career in the wood products industry. After receiving his teaching certificate, he began working in rural Native villages and has followed that path for the past 10 years. In that period, Kenrick has worked in a number of the villages in the Yukon-Kuskokwim Delta area, with much of his time spent in the small community of Sheldon's Point, or Nunam Iqua, roughly translated as Land's End in the language of the Yupik Natives.

It was in Nunam Iqua that Kenrick first became interested in the idea of mitigation, and the role students could play in helping make their villages

stronger, safer and more self-reliant. Nunam Iqua sits at the mouth of the Yukon River, on the shore of the Bering Sea. Following a particularly turbulent Fall storm in 2004, the village was inundated by several feet of water. While the majority of homes in the village were elevated enough to stay dry, everything on the ground was swept away by the rushing water. This included the village's primary means of access.

"There are no roads in Nunam Iqua," said Kenrick. "The village is connected by boardwalks, and they all floated away. We had to use boats to get everywhere, and people flying in to the airport would tell us the village looked like ships out to sea; lights shining in the middle of all that water."

Prior to the 2004 flood, Kenrick had involved his students (grades nine to twelve) in an erosion study of the village's decaying riverbanks. The data collected by the students helped secure a grant for an erosion prevention project, awarded by the State of Alaska. Following the 2004 flood, Nunam's City Manager sought to apply for grant assistance from the Federal Emergency Management Agency (FEMA). To receive grant monies from FEMA, a community is required to have a mitigation plan in place. The City Manager requested that Kenrick once again work with his students to provide data necessary for the creation of the plan. The students, under Kenrick's supervision, identified and mapped every structure in the village, and then compiled the data for the City Manager to use.

Following the success of their data collection efforts, Kenrick proposed a new challenge to his students. The village council was in the process of writing a comprehensive 20-year plan for projects to be completed during that period. Kenrick encouraged his students to conceive and design several projects to be added to the village's 20-year plan. Their suggestions included creation of a hybrid wind/diesel energy system; construction of alternative, affordable and durable, disaster resistant homes; and a design for a boat harbor to keep local fishing craft safe during periods of high water. All the projects were accepted and approved by the village council and added to the 20-year plan.

Kenrick realized that his students had great potential to make further contributions to research and implementation of projects, and to create a brighter future for their communities. State and federally funded studies and projects conducted in isolated villages typically require that people travel by boat or plane to reach these locations. They either travel back and forth or remain in the villages for weeks or months at a time to capture the information they need. Kenrick argues that a large portion of the data collection and work could be accomplished by residents of the villages themselves, with enormous cost savings.

"That's one of the things I'm pushing out here," said Kenrick. "Why pay someone to come out to the villages to do these studies? These are remote locations, with minimal provisions for guests. Why can't the students do this kind of work? They live in these places year round. Who better to collect data on an area than the people who actually live there? All they would need is training on how to collect the data."

The State of Alaska has gone to great expense to develop the schools in the Native villages. Almost all of them have been built with modern computer labs, science labs and fully equipped technical shops. In Kenrick's opinion, these schools provide the perfect environment for forging links between youth, education and building strong communities.

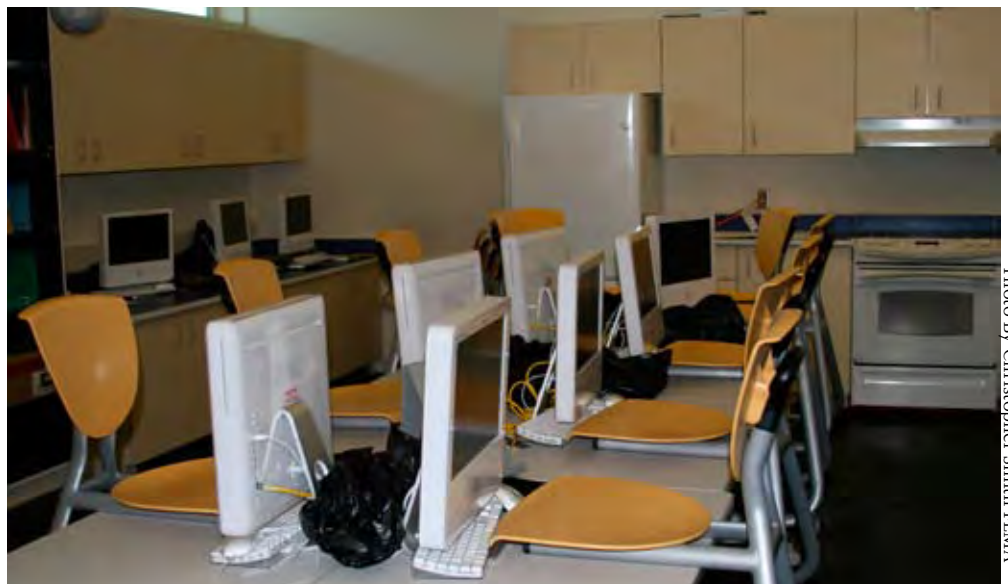
"I think that these schools provide everything we need to do this," said Kenrick. "We've got the computers, we've got the software, and we've got the technical people to help the students. I believe we could write reports and perform studies as good or better than a lot of the professional level work being done out there right now. And it would be relevant to the kids. They could see what they're doing and that their work actually means something."

Over the years, Kenrick has involved his students in a number of research projects, from conducting moose count reports to running a weather station

and broadcasting their daily forecasts over VHF band radio to surrounding communities. Data collected by Kenrick's students has proved useful not only for their own villages, but has also been utilized by such agencies as the State of Alaska Department of Fish and Game and the Federal Aviation Administration (FAA).

Kenrick has recently taken a position as the Dean of Students in the village of Akiachak, and he intends to bring his program to his new post. He also hopes to expand it, first to the Yupiit school district, of which Akiachak is a part, and then, eventually to the entire State of Alaska. The goal is to incorporate what Kenrick refers to as a "place-based" education in the village schools, not only to provide this relatively undiscovered source of data collection and research to state, private and federal organizations, but to involve his students in something he feels will have a long-term impact on their communities, but more importantly, on themselves.

"Why are a lot of these kids dropping out of school?" asked Kenrick. "Because they're bored. They're not involved with anything relevant to them or where they live. A lot of these students are never going to leave their villages. They want to stay there. Some of the kids I've worked with in the past are now getting involved in their communities that probably wouldn't have before. They've found that connection."



Modern facilities in Akiachak classroom

Photo By Christopher Smith FEMA

**FEMA**

Best practices

Disaster Mitigation Working in Alaska



Elevated Homes in Alakanuk Stay Dry – So Far



Alakanuk home elevated 6 feet on post and pile foundation in 2005.

What is Retrofitting?

to an existing building to protect it as high winds and earthquakes.

What is Elevation?

Raising your house so that the low-

Alakanuk, Alaska - Using a boat to move around town for a few days each spring is not unusual for the residents of Alakanuk, a southwest Alaska community of about 600 people on the lower Yukon River. Flooding is common in the region at this time of year as the Yukon breaks up, and water and river ice dammed by the still shore-fast ice on the Bering Sea overflow the banks of the river at Alakanuk (and at its upstream neighbor Emmonak). Many of the homes in the riverside communities of the lower Yukon are elevated on pilings about 6 feet above the tundra.

Alakanuk is not on a major bend of the Yukon, but stretches along a 3-mile reach on the north bank of the channel. About 25 homes along the bank are threatened by erosion, a continual process that is exacerbated by the almost annual ice-jam floods of varying severity and damage potential.

In 2005, eight homes and the City of Alakanuk office building were relocated, and all but one of the homes were elevated, most of them to a height of 6 feet above the natural ground surface,



Process of elevation

In May 2006, snowmelt and ice-jam flooding on the lower Yukon caused inundation of Alakanuk with ice-laden water to depths up to 6 feet. At least one home, which had been within 30 feet of the river before it was relocated and elevated, would surely have been destroyed by the water and ice blocks the size of cars at its original site. This home and the six others that had been relocated and elevated escaped damage to the main structure. In the home that had been moved but not yet elevated when the floodwaters struck Alakanuk in 2006, the floor and some insulation was damaged by 4 to 5 feet of water.

which is the recommended building elevation designated by the Corps of Engineers. The relocation and elevation project was funded with a \$265,000 grant from FEMA's Hazard Mitigation Grant Program (HMGP); the grant application was processed and the funds administered by the Alaska Division of Homeland Security and Emergency Management (DHS & EM).

The severity of and damage caused by ice-jam floods along the lower reaches of the Yukon and other western Alaska rivers varies from year to year. The relatively severe flooding in May 2006 tested the effectiveness of the relocation and elevation project in Alakanuk; except for the single home that had not been elevated, the project "passed." Spring flooding in each of the subsequent years, most recently in late May 2009, was less severe, and the community was only minimally affected.

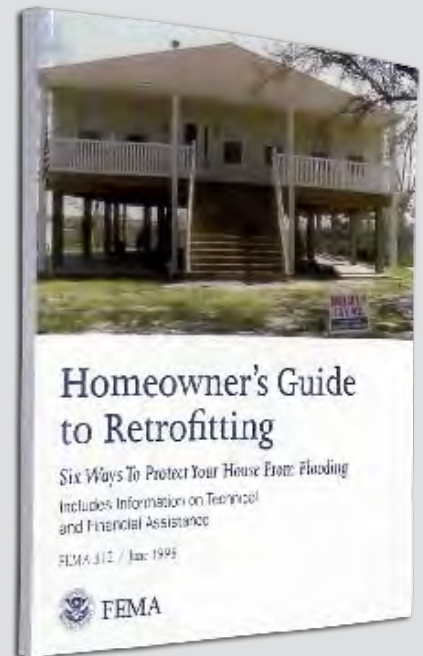


This Alakanuk home had been moved but not yet elevated when the 2005 floods struck. The owner's son is pointing at the level reached by the flood.

More Information

FEMA publication 312,
Homeowner's Guide to
Six Ways To Protect
Your House From Flooding,
provides information that will help
you decide whether your house is

www.fema.gov/library



**FEMA**

Mitigation measures

Protect Your World From Natural Disasters

Staying Warm and Safe

Alaska



**Alaskans
plan ahead
for winter!**



Alaska's winter can bring extreme cold, high wind, falling trees, heavy snow, avalanches and more. An added challenge may be the failure of electrical power and heating systems. Alaskans need safe and reliable alternative ways to stay warm.

Typical winter problems and possible solutions include:

- **Many types of furnaces require electrical power for the fan and thermostat controls.** During a power outage a small portable generator may be able to power the furnace system, but plan ahead to have an electrician install the equipment to safely switch the furnace to the generator power source.
- **Oil stoves usually work without a source of electricity.** But when the temperature falls to about twenty degrees Fahrenheit, #2 diesel oil starts to congeal, while #1 grade oil will flow until the temperature approaches minus sixty degrees. Options: Use #1 or mix the two types of oil; Use a diesel fuel additive that lowers the congealing point of oil (to be effective, the additive must be added while the tank is being filled).
- **Water in diesel fuel can cause ice blockage in the fuel line.** Install an oil filter at the start of the fuel line and occasionally drain water that accumulates at the bottom of filter canister.

- **Protect the tank, oil filter and fuel line from extreme cold.** Options: If you have electrical power, install a small light bulb inside an enclosure that surrounds the fuel tank and pipe. Trap the heat of the sun by draping a clear plastic tarp over a frame that covers the tank and fuel line. Pile a layer of insulating snow over the tank and fuel line.
- **Oil stove exhaust pipes and air-intake vents may become blocked by ice or snow.** Insulated or double-wall stove pipe will prevent some types of icing blockage. A ladder may be needed to provide access to the top of the chimney or stovepipe for ice and snow removal.
- **Propane heaters and other gas-fired appliances stop working when temperatures drop below minus forty-four degrees Fahrenheit.** Best option: shelter and insulate the tank and line.
- **Wood and coal stoves are usually reliable for primary or backup heating but require some maintenance.** Clear bricks, mortar, ash, snow, ice or bird nests from the stovepipe or chimney. Avoid creosote buildup in the stove pipe or chimney by burning only dry firewood and occasionally cleaning the pipe with a proper sized brush.
- **During the coldest weather people often build very hot fires that pose extra danger.** Remove or protect nearby combustibles (furniture, clothing, walls and so on). Look for hidden fire sources such as incorrectly installed or rusted and cracked stove pipe. (Inspect where the pipe passes through the ceiling and roof by pulling back the circular flange and peering into the ceiling cavity with a flashlight. Charred ceiling joists, rafters or roof deck mean serious fire danger!)
- **Backup heating systems may not provide adequate heat to protect water pipes.** Some water piping may be far from the heat source or may be poorly insulated. Options: It sometimes helps to allow faucets to drip, but catch drips in a large bowl or pan, rather than risk causing the drain to become ice-clogged. If electricity is available, wrap heat tape around vulnerable pipes. Protect the water supply pipes from extreme cold by draining the entire system before the water freezes (this is difficult unless the piping was designed to slope toward a low spot and drain valve).
- **Unvented gas or kerosene heaters are too risky to use in a home, but are fine for temporary use in a large barn or drafty work shed.** When doors and windows are closed, especially in small, tight Alaskan homes, the buildup of odorless and colorless carbon monoxide gas from unvented heaters can be fatal. Also, it's never safe to operate a gasoline or propane powered electrical generator in a house or attached garage, due to the deadly exhaust gas.

If all of the safe options for heating your home fail, the best alternative may be to put on many layers of warm clothing and, if possible, evacuate to a safe and warm location.

Carbon Monoxide Facts:

More deaths from carbon monoxide poisoning occur in Alaska than in any other state. A study of five villages found elevated CO levels in nearly 10% of the homes, most commonly because of improperly vented tankless ("on demand") propane water heaters, stove pipe leaks, and gas cooking stoves that had been left on for several hours. The symptoms of CO poisoning are: headaches, fatigue, dizziness, weakness, confusion and nausea. Many of these symptoms are similar to those of the flu, food poisoning, or other illnesses. If you experience symptoms that you think could be from CO poisoning: Get fresh air immediately. Open the doors and windows, turn off combustion appliances and leave the house. Then call 911 for further instructions. Carbon monoxide alarms, when properly installed, can save lives.

Information and Resources:

Alaska Division of Homeland Security & Emergency Management
www.ready.alaska.gov

University of Alaska Fairbanks - Cooperative Extension Service
www.uaf.edu/ces

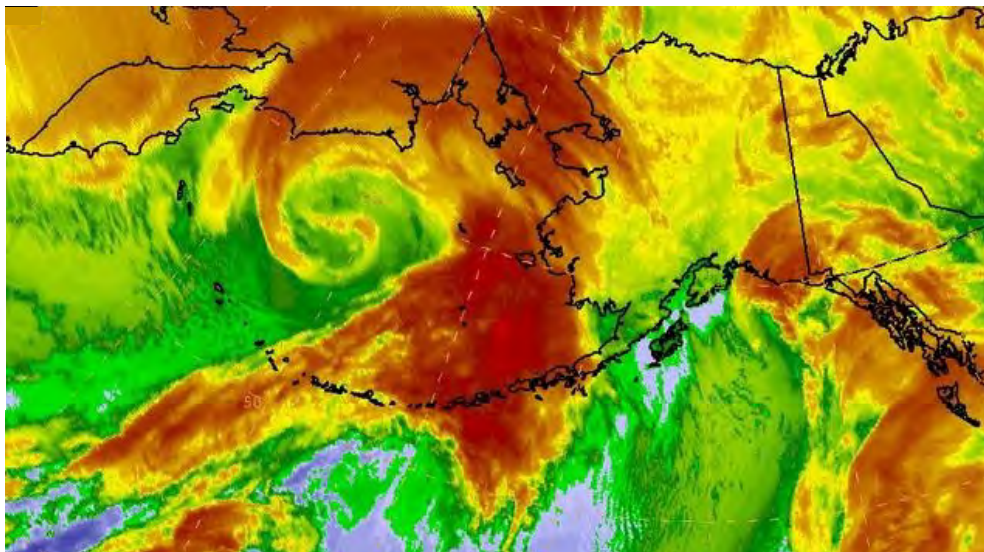
Cold Climate Housing Research Center
www.cchrc.org

**FEMA**

Mitigation measures

Protect Your World From Natural Disasters

Alaska Winter Storms

Alaska

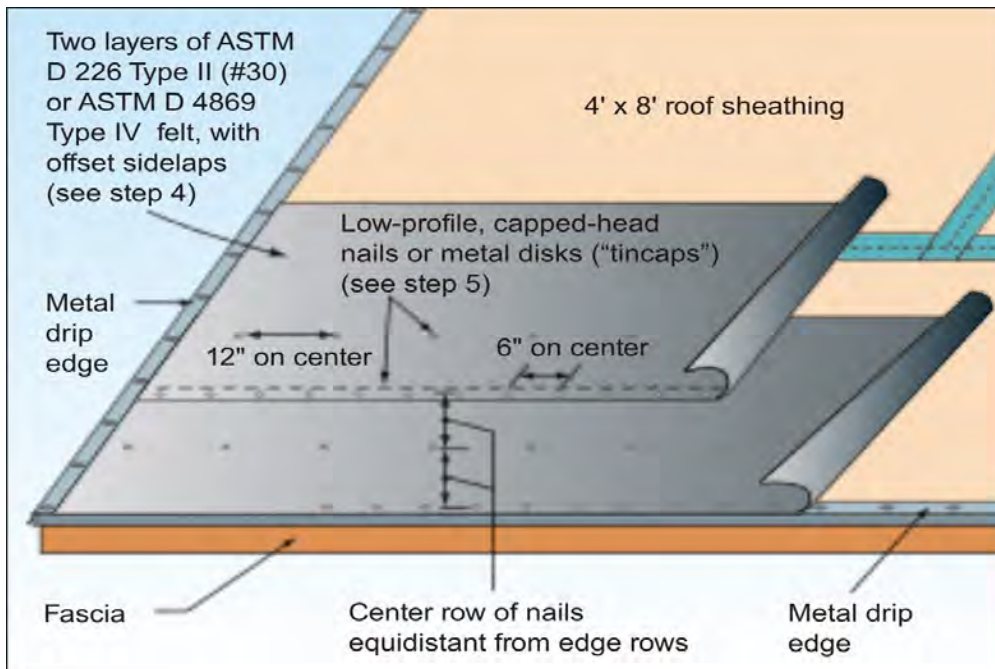
Strong materials and good connections between all of the parts of a house will provide a reliable “load path” to transfer wind and snow loads (or earthquake forces) from the roof, walls and floors down to the foundation.

Many Alaskan homes suffer damage from winter windstorms and heavy snow. Disaster resistant design, construction and retrofitting can reduce or eliminate many problems and keep your home safe, warm and dry.

During new construction or a re-roofing project you have opportunities to avoid water intrusion and consequent damage from missing shingles, flying debris, failure of the roof to wall connection or overloaded roof rafters:

- Metal connectors (hurricane clips) add tremendous strength where the rafters connect to the walls. You may want to add connectors during a re-roofing project by temporarily removing perimeter roof sheathing (to gain access). If the roof is already damaged, or is inadequate for possible future snow loading, consult a design professional to find the best way to add additional support.
- Plywood roof sheathing needs to be securely nailed, especially around the perimeter of each panel (see resources links on page 2 of this publication).
- During new construction or re-roofing consider sealing all plywood sheathing joints and roof deck penetrations (around vent pipe holes, etc.) with self-adhering modified bitumen tape (sometimes called “window flashing tape”). Taping the plywood joints is now a code requirement in certain high wind zones. This upgrade can keep water out of the house even after a wind borne tree branch or other flying object has swept away some of the roof materials.

- Fasten two layers of underlayment (felt) with low-profile, capped-head nails or metal (or plastic) disks, rather than the small staple (hammer-tacker) installation method.
- Apply roof cement under the “leading edges” of shingles around the roof perimeter and ridge. Loose shingles can start a domino-like failure. Roof cement is available in tubes for caulking gun application (and works best in warm weather).



Example of roof sheathing and underlayment design detail from *Home Builder's Guide to Coastal Construction* (FEMA Publication P-499)

Window protection may be needed during the most severe winter storms:

- Plywood panels, cut to fit the dimensions of each window, are an effective and economical solution. They can be secured with screws for easy installation and removal.
- Removable storm windows are another option that can protect the primary glazing and reduce heating costs, while still allowing light to enter the house. Wood frame storm windows with tough acrylic plastic sheeting are affordable and practical as a do-it-yourself project. Thicker polycarbonate plastic panels are another extremely sturdy option. They are far more expensive than plywood, however, and must usually be ordered from a specialty plastics dealer.

Weather stripping, caulking and insulation are a final barrier to Alaska winters:

- Find air gaps that allow wind and snow to enter and heat to be wasted;
- Carefully select the best products for each type of crack or gap: Acrylic caulking for small cracks; Foam rope helps with larger gaps; Use expanding foam products where appropriate; Install metal, felt, or vinyl weather strips around doors and windows.
- Add insulation to recommended levels (see UAF Cooperative Extension and Cold Climate Housing Research Center publications).

More Information and Resources:

Wind resistant construction details are available for download through the Federal Emergency Management Agency website:

www.fema.gov/library

Home Builder's Guide to Coastal Construction (FEMA Publication P-499)

Wind Retrofit Guide for Residential Buildings (FEMA Publication P-804)

Information about special considerations for building and maintaining a home in Alaska:

Cooperative Extension Service—University of Alaska, Fairbanks
www.uaf.edu/ces

Cold Climate Housing Research Center
www.cchrc.org

Alaska Building Science Network
www.absn.com

Important information on disaster preparedness:

Alaska Division of Homeland Security & Emergency Management
www.ready.alaska.gov



FEMA

Best practices

Disaster Mitigation Working in Alaska

Flood Mitigation in Nome, Alaska



The 1949 drainage culverts had rusted and collapsed

Damage prevention investments in 1949 and 1993 helped to protect the city, but high winds and water levels still managed to top the seawall and damage buildings along Front Street.

A new drainage system, completed in 2008, provided 30 inch culverts with sufficient capacity to remove the water from the streets and return it to the sea.

2004 flooding on Front Street

Nome, Alaska — A powerful and extremely dangerous storm of near record magnitude impacted the west coast of Alaska during November, 2011. The storm surge and blizzard conditions impacted forty-three communities. This was to be a major test for a recent investment in Nome's critical infrastructure.

Nome had experienced severe storms several times in its history, starting with an event in 1900 that left 1,000 homeless and destroyed the business district. More terrible storms followed and, in 1949, the U.S. Congress allocated \$1 million to build a seawall and drainage system. Strong storms continued to top the rip-rap structure and eventually the old 12 inch drainage pipes serving the downtown began to rust and collapse.

A solution began to come together in 2005 with a proposal by the Alaska Department of Transportation and Public Facilities Northern Region (DOT&PF). The project would replace and upgrade the old, failed culverts to a system of five new 30 inch diameter, one-half inch thick galvanized steel pipes.

The collaboration of effort included the City of Nome, DOT&PF, the Hazard Mitigation Grant Program administered by the Alaska Division of Homeland Security and Emergency Management (DHS&EM), and funds provided by the Federal Emergency Management Agency (FEMA) and State of Alaska.

The work was not easy. Heavy equipment was needed to excavate through



Large diameter culverts being installed through the seawall

the rip-rap seawall; equipment that's not usually available in a remote Alaskan community. Thick-wall galvanized steel pipe was ordered from a fabricator in Puyallup, Washington. The load was transferred to a barge in Seattle, then towed all the way to Nome. Amazingly, one pipe per day installation was accomplished with the final pipe installed on September 13, 2008.

According to John Handeland, Head of the Nome Joint Utilities System, in the recent severe storms, the project worked quite well. Front Street had little storm water and it flowed out more quickly.

Unlike past disasters, this time there were no traffic diversions, standing water or property damage. "Protecting buildings and infrastructure makes sense. The sea wall improvements in Nome prevented damages that could have easily been greater than the cost of the original mitigation project," said John Madden, Director Division of Homeland Security and Emergency Management. "Winters in Alaska can be brutal and repairs must often wait until spring. Small Alaskan communities cannot thrive without timely restoration of critical infrastructure. With proper mitigation we reduce the impact of future disasters."

For more project information contact: State of Alaska, HMGP Program Manager Brent A. Nichols:
Brent.nichols@alaska.gov
(907) 428-7085

To see more Hazard Mitigation Best Practices visit:
www.fema.gov/plan/prevent/bestpractices

For Flood Insurance information visit:
www.FloodSmart.gov



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Best practices

Disaster Mitigation Working in Alaska

Power line protection brings hope to Hope

Alaska



The 18 mile long Hope Feeder Power Line provides primary power to the communities of Sunrise and Hope.

There will still be storm related outages on this section of the line but the actions made possible by using the Hazard Mitigation Grant Program should decrease the frequency and cost of repairs.



Spruce bark beetles kill trees and disrupt power

Hope, Alaska —Electrical power outages are a fairly frequent occurrence in parts of the Kenai Peninsula, along with many other parts of Alaska. High winds, falling trees, heavy snow, ice and avalanches all contribute to causing power system damage. Winter storms and loss of electrical power in some remote communities can also bring loss of water, sewer, local telephone, cell-sites, emergency services systems and even access to groceries and

fuel. Blizzards, extreme low temperatures, steep terrain, avalanches and other dangers conspire to delay the necessary repair work.

The small communities of Hope and Sunrise have experienced more than their fair share of such problems. According to a five year study completed by Chugach Electric Association (CEA), the non-profit association that owns and operates the electrical system, Hope residents and



Right of way improvements

businesses have been affected by an average of 81 powerless hours per year, compared to 2.3 hours per year for the remainder of customers served by CEA.

In January, 2000, the Hope Feeder Line, running through the Chugach National Forest and across Department of Natural Resource (DNR) Land, was down in several places, with access blocked by avalanches. An emergency generator was brought in by helicopter to Hope. Again, in December, 2006, the same 18 mile line was so severely damaged that Hope and Sunrise needed large generators to be installed and maintained for some 7 weeks, as snow accumulated to depths of 8 to 12 feet.

The problem has been growing in recent years, largely due to that scourge of the northern forests, the Spruce Bark Beetle (*Dendroctonus rufipennis*). An enormous infestation of the beetles has killed most

of the large spruce trees in the Kenai Peninsula. Much less wind force is needed to topple a dead tree, and remaining healthy trees are left more exposed to the wind. They've been falling across power lines with alarming frequency.

A partial solution has been found through Federal, State and Local government partnerships utilizing Local Hazard Mitigation Plans to identify the hazard, risks and vulnerabilities. Support for the first stages of work was approved by the Alaska Division of Homeland Security and Emergency Management's (DHS&EM) Hazard Mitigation Grant Program, with funds provided by the Federal Emergency Management Agency (FEMA) and the State of Alaska. Money for additional stages of the plan is well along in the approval process. The eventual savings are calculated to be more than four times the amount of the improvement investments.

The work, designed to be done in stages and already well underway, involves clearing the right of way and removing "hazard trees" that tower nearby. Relocating or undergrounding sections of the line to avoid avalanche chutes and steep gorges will also make a big difference to the reliability of the system. These projects will reduce the danger to repair crews and drastically reduce emergency response costs to homeowners, CEA, the State of Alaska and FEMA.

Another benefit of this effort is

enhanced wildfire mitigation in conjunction with Forest Service work in the area. Clearing excess fire fuel and in some sections widening the right of way, will provide a more effective wildfire break. If the improvements work as expected they will bring a new day for Sunrise and less despair in Hope.

For more project information contact:

State of Alaska,
HMGP Program Manager
Brent A. Nichols
Brent.nichols@alaska.gov
(907) 428-7085

What can be done about Spruce Bark Beetles? The Kenai Peninsula Borough Spruce Bark Beetle Mitigation Program includes comprehensive programs designed to enhance:

- Fire prevention and public safety;
- Timber management and reforestation;
- Fuel modeling and risk/hazard/fire assessment;
- Public education and communications;
- Public assistance;
- Science and research;
- Long term planning;
- Continuity of efforts through All Lands/All Hands Action.

For more information:
www2.borough.kenai.ak.us/SBB/default.htm

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Disaster Mitigation Working in Alaska



A Moving Story



House reassembled at its new location above the floodplain of the Tanana River.

The ultimate solution to eliminating the risk of being flooded is moving out of the flood-prone area. Although many factors will influence your decision, you could either move to a new home or take your existing home with you. This story tells of one family who chose the latter option.

Salcha, Alaska - If you think the house on the property of Robert and Maria Baker along Old Valdez Trail in Salcha used to sit a lot closer to the Tanana River, you'd be right. If you think the house floated to its present position on the floodwaters of the Tanana, guess again. The house was moved to the site in February 2008 through the ingenuity and hard work of the Baker's, their family, and their friends.

To back up a bit, the home of the Olaf Allison family was built at the north end

of the gravel airstrip along Sewell Drive in Salcha, Alaska. The Allison home and several other homes and buildings along Sewell Drive, as well as the roadway and the airstrip, had been inundated to depths as great as 7 feet by floodwaters of the Tanana River several times since development of the subdivision began in the early 1980s. Official records as well as the accounts of the residents indicate that floods in the Sewell Subdivision have increased in frequency and severity in the past decade. Although floods



House section being towed to the new location in February 2008.

have resulted from summer and early fall rainstorms, the most severe and damaging floods were those caused by the backup of water behind ice jams during Fall freeze-up and Spring break-up on the Tanana, which add moving blocks of ice to the debris-laden, fast-rising waters.

During the particularly damaging flood in November 2004, rapidly rising waters left roads, driveways, homes, woodpiles, vehicles, and other personal property encased in a thick layer of ice, and some residents were unable to return to their homes for as long as 10 days. That experience prompted property owners to contact the Fairbanks North Star Borough (FNSB) about obtaining some permanent relief from what was becoming an almost annual event. Within the next few months, the FNSB filed an application (with the Alaska Division of Homeland Security & Emergency Management) to obtain funding through FEMA's Hazard Mitigation

Grant Program (HMGP) to acquire/purchase the affected properties and relocate the residents.

When the buildings on the acquired properties were made available for sale in 2007, the Bakers purchased the Allison home. Now the real challenge began – the house had to be moved out of the flood-prone area. Robert designed and built a “sled” from 8 inch diameter pipes under the house, which had first been separated into two sections. Each of the sections was braced and secured to the sled and then towed about a mile over and ice- and snow-covered route to the new location, which is considered to be well above the reach of any future floods on the Tanana. While the overall moving project took about a month to complete, towing the house from the original site to the Baker's property took just several hours.

What is Retrofitting?

to an existing building to protect it as high winds and earthquakes.



What is Relocation?

Relocation means moving your house to higher ground where the exposure to

More Information

FEMA publication 312, Homeowner's Six Ways To Protect Your House From Flooding, provides information that will help you decide whether your house is a

www.fema.gov/library





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Best practices

Disaster Mitigation Working in Alaska

Property buyouts prevent further flood losses in Salcha



“This project was a success in several respects. With the removal of buildings and other property, the Tanana River will be allowed to meander freely through the area, so that ultimately the natural wetlands and the fish and wildlife habitat will be restored. Most importantly, the families, their homes, and their property were moved out of harm’s way.”

-Karrie Shaw



Slush ice forming on Tanana River near Salcha, AK, October 13, 2008 (12 miles downstream of Sewell project area)

Salcha, Alaska - The Fairbanks North Star Borough’s (FNSB) offer to purchase several properties and remove existing buildings along Sewell Drive in Salcha, Alaska in 2005 turned out to be a wise one. Although most of the homes in the area along the Tanana River southeast of Fairbanks had been inundated and damaged by several previous floods, their removal after the Borough’s acquisition of the properties has prevented still further losses in subsequent floods, in Spring 2008, again in late Summer 2008, and

most recently in late April and early May 2009.

“The Sewell Drive acquisition is a real success story,” said Karrie Shaw, Land Management Specialist with the FSNB. “Any buildings left on that property would surely have been affected by this year’s floods,” she added.

Floods are common events at Salcha, and official records as well as the memories of local residents suggest that flooding

has increased dramatically in severity and frequency in recent years. And although floods can result from the runoff off late summer and early autumn rainfall – long-time residents remember well the “Great 1967 Fairbanks Flood” – the much more frequent, almost yearly ice-jam floods during fall freeze-up and spring break-up add the hazards of moving ice to the debris-laden, fast-rising waters.

An unusually wet summer of 2008 in Interior Alaska culminated in at least two new single-day rainfall records at Fairbanks in late July and heavy rainfall to the east and southeast of the city. Runoff of the late July rains resulted in a rise in the level of the Tanana River at Fairbanks to its highest levels since 1967, and on July 30th, the Salcha River near Salcha crested at 3 feet above flood stage where it crosses the Richardson Highway about 40 miles southeast of Fairbanks. More than 100 homes in the Salcha areas were affected by the floodwaters, and most of the Sewell subdivision was inundated.

The homes and other buildings and properties along Sewell Drive, as well as



One of the houses being towed to new location.

the roadway and private gravel airstrip, had been inundated to depths as great as 7 feet by floodwaters of the Tanana River several times since development of the subdivision began in the early 1980s. During the particularly damaging flood in November 2004, rapidly rising waters forced residents from their homes and left roads, driveways, homes, woodpiles, vehicles, and other personal property encased in a thick layer of ice, and some residents were unable to return to their homes for as long as 10 days. That experience prompted property owners to contact the Fairbanks North Star Borough to seek

permanent relief from what was becoming an almost annual event, and Borough officials worked with the residents over the next several months to address the issue.

In early 2005, the Borough filed an application with the Alaska Division of Homeland Security and Emergency Management (AK DHS&EM) to obtain funding through the Federal Emergency Management Agency’s (FEMA) Hazard Mitigation Grant Program (HMGP) to acquire the affected properties and relocate the residents.

Participation in the program was voluntary, and 10 of the 15 properties in the subdivision were purchased – 4 homes were occupied, 3 were unoccupied, and 3 of the purchased properties were vacant. As a condition of the acquisition, all personal property had to be removed at the owner’s expense. Following the acquisition and removal of existing structures, no permanent structures can be erected on a property, and it must remain vacant land in perpetuity.

Four of the structures were sold and have been moved out of the flood zone, and two either have been or will be refurbished or restored to living condition. Usable building materials were salvaged and donated to local non-profit organizations and groups and were then either sold or auctioned.

“This project was a success in several respects,” said Shaw. “Most importantly, the families, their homes, and their property were moved out of harm’s way. Our emergency personnel will no longer have to endanger their own lives to rescue residents of the Sewell subdivision who used to get stranded by the fast-rising waters. And with the removal of buildings and other property, the Tanana River will be allowed to meander freely through the area, so that ultimately the natural wetlands and the fish and wildlife habitat will be restored.”



Lot 2, Block B, Sewell S/D – Former site of Maria Sewell mobile home



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Best practices

Disaster Mitigation Working in Alaska

Living Simply: Facing Challenges in Rural Alaska



The native village of Stevens is located on the north bank of the Yukon River, 90 miles north of Fairbanks. Isolated by the lack of roads, the village can be reached easily only by plane or boat. The population consists mostly of Athabascan Natives, along with a small number of non-natives that have chosen to embrace the subsistence-based life the villagers pursue.



Photo By Christopher Smith FEMA

Andy Brattrud stands in front of the raft he constructed to save his vehicles and dogs from the floodwaters.

STEVENS VILLAGE, ALASKA - Andy Brattrud, a Minnesota native, has lived on the Yukon River for the past nine years. Three of those years have been spent in Stevens Village, and one year ago, he moved into the home he currently occupies with his wife, Barbara. The traditional log cabin originally sat very close to the bank of the river, but being familiar with the hazards posed by the Yukon, especially during the turbulent period of Spring ice thaw and break-up, Brattrud elected to move the house.

"We were seeing about four feet of bank erosion every year," said Brattrud. "We didn't know if it was going to be this year or the next, but it was definitely going to go in (to the river). We pulled it back

one cabin length the first year, and then another cabin length this past Spring."

The decision to move the cabin a second time proved a wise one. During the last week of April, 2009, the ice on the Yukon River began to break-up and the river started flowing. Unusually heavy snowfall in the previous winter, higher-than-normal temperatures as Spring approached, and ice-jams at several bends in the river combined to cause disastrous flooding.

The City of Eagle and Eagle Village, approximately 386 miles upriver from Stevens Village, were the communities first and hardest hit by flood waters as well as by huge chunks of ice that were forced out of the river. The water and ice

devastated the Eagle communities. As the river ice continued to break and the flow increased, the flood levels moved downriver.

After several upstream communities had been impacted by the high water and ice, the Stevens Village council met to discuss the situation. The Council informed the villagers to expect hazardous conditions, and a general evacuation was declared. Many of the families departed the village for the safety of Fairbanks. The Brattruds and a number of other residents decided to stay behind to do what they could to prepare.

“They put all the vehicles up on the airstrip, because that was the highest point in the village,” said Brattrud. “I could have gotten my four-wheeler up there, but not my snowmobile, so instead I decided to build a raft in my back yard.”

The Brattrud’s cabin lies downriver from the village, and can only be conveniently reached by boat during the Summer and by dog-sled or snowmobile during the

Winter. It also happens to sit at a lower elevation than other homes in the area.

Over the next ten hours, Brattrud constructed a raft out of materials gathered from around his home. Calling on his logging background, he began by felling two trees in his back yard to use as the base for the raft. In addition, the roller logs once used to move the cabin were utilized for additional bracing. He then dismantled one of his storage huts, or caches, to provide logs for the raft’s structure. To tie it all together, Brattrud used an old fire hose he had saved from years before and also fastened the raft with several 12-inch nails he found, hammering them in at crucial points. Finally, several 20-foot long boards were nailed down to provide a deck. The only money spent on the raft was for some rope for additional strength and several boxes of nails. The completed raft was 14-feet wide and 20-feet long. To secure it in place, he tied it off to several surrounding trees.

By now, running out of time, Brattrud loaded his four-wheeler and snowmobile onto the raft, followed by his entire team of 11 dogs, as well as a litter of pups. Though Brattrud does not race his dogs, they are all from champion-team stock, and vital for the Brattrud’s existence in Stevens Village.

The Brattrud’s final chore was making sure their home was safe. “They were saying we were going to get hit pretty hard,” said Brattrud. “I didn’t want to take any chances of losing the cabin, so I tied it off not once, but in four places, one on each corner. And it worked. It’s still sitting there.”

Brattrud used two high-test nylon straps and two lengths of chain to tie off the cabin corners to four large trees that surround the house. Even as the Brattruds completed the last of their preparations, the water and ice had begun to top the river banks. They were left with no choice but to get aboard their supply-laden canoe and paddle out through treacherous waters.

“Out here, you have to make do with what you’ve got,” said Brattrud. “If you don’t have something you need, you make it out of something else. You have to do it all with little or nothing.”

After remaining in the village center overnight, the Brattruds returned to their home the next day to check on their property and to feed the dogs. The cabin had taken on water, but securing it had been the right thing to do, as there were indications that the structure had been lifted by the floodwater. Once the waters had receded, Brattrud discovered that a 50-gallon barrel had become wedged under the cabin. In total, Brattrud estimated that the water depth reached eight feet in his yard.

By taking these emergency precautions, Brattrud not only likely saved his home from destruction, but also avoided the loss of his vehicles and dogs. And all for an investment of a day’s labor and less than \$50 in supplies.

Are you and your community ready for the next flood?

Do you have a plan to protect people, valuable property, and the environment?

Do you know what to do before, during, and after a disaster?

Make a copy of the very useful “2009 Spring Flood Breakup Guide”, available on this website: www.ak.prepared.com (Alaska Division of Homeland Security and Emergency Management)

Another link to learn about getting ready: www.fema.gov (Federal Emergency Management Agency)



Photo By Christopher Smith FEMA

Floodwater reached heights of 8 feet on the Brattrud’s Property

**APPENDIX 13.22 ALASKA EMERGENCY MANAGEMENT FOCUSED
ADMINISTRATIVE ORDERS**

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Emergency Management Focused Administrative Orders

This Appendix lists Alaska's Emergency Management focused Administrative orders. The list contains direct links to each Administrative Order:

[AK Administrative Orders](#)

[1971 Admin Order 15 Nat'l Disaster Defined](#)

[1976 Admin Order 36 Disaster-Prepare-Response](#)

[1978 Admin Order 46-NFIP](#)

[1997 Admin Order 170 Emergency Management Sys-ICS](#)

[1998 Admin Order 175 Siting-Construct State Owned](#)

[Infrastructure](#)

[2000 Admin Order 186 Tribal Sovereignty](#)

[2001 Admin Order 190 Northern Inter-Jurisdictional Disaster Planning & Service Area](#)

[2002 Admin Order 199 Rural Construction-Public Facilities](#)

[2003 Admin Order 203 DHSEM -SVA-Staffing](#)

[2004 Admin Order 217 DHSEM Created](#)

[2005 Admin Order 224 Agency Collaboration-Coordination-Sustainability](#)

[2005 Admin Order 225 Retiree-Rehire](#)

[2006 Admin Order 228 Influenza Pandemic Preparedness](#)

[2007 Admin Order 238 Established AK Climate Change Sub-Cabinet](#)

[2016 Admin Order 281 Streamline AK Economic Development Focus](#)

[2017 Admin Order 289 AK Climate Change Strategy and Climate Action for Alaska Leadership Team](#)

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**APPENDIX 13.23 2017 AK DISTRESSED COMMUNITIES REPORT - DENALI
COMMISSION**

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2017 Distressed Communities Report

June 2017

This 2017 annual update of the distressed community list was prepared by the Alaska Department of Labor and Workforce Development (DOL&WD), Research and Analysis Section. DOL&WD used the most current population, employment and earnings data available to identify those Alaska communities and Census Designated Places (CDP's) considered "distressed". The distressed status is determined by comparing average income of a community or CDP to full-time minimum wage earnings, the percentage of the population earning greater than full-time minimum wage earnings and a measure of the percentage of the population engaged in year-round wage and salary employment.

This report uses enhanced physical place of residence information to better identify the community/CDP of residence for Permanent Fund Dividend applicants age 16 and over. Communities and CDP's included in this report are closely aligned with those used in the annual population place estimates prepared by DOL&WD.

This document includes a list of all Alaska communities and CDP's, and indicates whether they are considered distressed or non-distressed. The list also includes employment and earnings information used to determine the status of each location for 2017. Maps by economic region that show locations of communities and CDP's that meet the distressed criteria are also included.

Data Sources and Methodology

Three sources of data were used for the 2017 update:

- 2016 Permanent Fund Dividend applications (PFD). This information includes the applicant's age, social security number (SSN), and physical place of residence. The 2016 recent year PFD applications correspond with 2016 wage records, the most recent available.
- Alaska unemployment insurance wage records for calendar year 2016. This information includes wage and salary worker earnings from all private, state and local government employers. Federal government, military, and self-employed earnings are not available and not included in the earnings estimate.
- Calendar year 2015 Commercial Fisheries Entry Commissions (CFEC) total fish value data by community, the most recent data available.

To approximate the community/CDP income, DOL&WD combined the most recent fishery income and wage records. All 2016 PFD applicants age 16 and over in 2016 were assigned to an Alaska borough/census area and community by place of residence. PFD applicants age 16 and over were matched with wage and employment information by SSN. CFEC 2015 total fish values were added to wage and salary earnings to compute community average market income.

The minimum wage was \$9.75 in 2016. For a forty-hour work week, or 2,080 hours annually, the average market income threshold is \$20,280.

Surrogate Standard

In 2000, the Denali Commission adopted a “surrogate standard” method for determining if a location is considered distressed. A location that meets two of the following three criteria is considered distressed.

Criteria 1 - Average Market Income

$$\text{Average market income} = \frac{\text{Community Wage \& Salary Earnings} + \text{Community CFEC Earnings}}{\text{Number Residents 16 and Over}}$$

Any location with an average market income of less than \$20,280 in 2016 meets this criterion.

Criteria 2 - Percent of Residents Earning Less Than \$20,280

$$\text{Percent Residents w/Earnings < than \$20,280} = 100 \times \frac{\text{Number Residents w/Earnings < than \$20,280}}{\text{Number Residents 16 and Over}}$$

Any location with 70% (or more) of its residents earning less than \$20,280 in 2016 meets this criterion.

Criteria 3 – Percent of Residents Working All Four Quarters

$$\text{Percent Residents Employed All 4 Quarters} = 100 \times \frac{\text{Number Residents Employed All 4 Quarters}}{\text{Number Residents 16 and Over}}$$

Any location with 30% (or less) of its residents employed in all four quarters of 2016 meets this criterion.

Distressed Locations

The following is a list of communities and CDP's that meet the surrogate standard.

Akiachak	Harding-Birch Lakes	Old Harbor
Akiak	Holy Cross	Ouzinkie
Alakanuk	Hoonah	Pelican
Alcan Border	Hooper Bay	Perryville
Aleknagik	Hope	Pilot Point
Aleneva	Hughes	Pilot Station
Alexander Creek	Huslia	Pitkas Point
Allakaket	Hydaburg	Platinum
Ambler	Hyder	Point Baker
Anaktuvuk Pass	Ivanof Bay	Point Hope
Anchor Point	Kachemak	Point MacKenzie
Angoon	Kake	Pope-Vannoy Landing
Anvik	Kaltag	Port Alexander
Arctic	Karluk	Port Alsworth
Atmautluak	Kasigluk	Port Graham
Beaver	Kenny Lake	Port Lions
Beluga	Kiana	Port Protection
Big Delta	Kipnuk	Portage Creek
Birch Creek	Kivalina	Quinhagak
Brevig Mission	Klukwan	Rampart
Buckland	Kobuk	Red Devil
Cantwell	Kodiak Station	Ruby
Central	Kokhanok	Russian Mission
Chalkyitsik	Koliganek	Salamatof
Chase	Kongiganak	Salcha
Chefornak	Kotlik	Savoonga
Chenega	Koyuk	Scammon Bay
Chevak	Koyukuk	Selawik
Chickaloon	Kupreanof	Seldovia
Chicken	Kwethluk	Seldovia Village
Chignik Lake	Kwigillingok	Shageluk
Chisana	Lake Louise	Shaktoolik
Chistochina	Lake Minchumina	Shishmaref
Chitina	Larsen Bay	Shungnak
Chuathbaluk	Levelock	Skwentna
Circle	Lime	Slana
Clark's Point	Livengood	Sleetmute
Coffman Cove	Loring	South Naknek
Cohoe	Lower Kalskag	St. Mary's
Cooper Landing	Lutak	St. Michael
Copper Center	Manley Hot Springs	Stebbins

Crooked Creek	Manokotak	Stevens Village
Crown Point	Marshall	Stony River
Deltana	McCarthy	Susitna North
Dot Lake	McKinley Park	Takotna
Dot Lake Village	Mekoryuk	Talkeetna
Dry Creek	Mendeltna	Tanacross
Eagle	Mentasta Lake	Tanana
Eagle Village	Metlakatla	Tatitlek
Edna Bay	Moose Pass	Teller
Eek	Mosquito Lake	Tenakee Springs
Eielson AFB	Mountain Village	Tetlin
Ekwok	Mud Bay	Thorne Bay
Elfin Cove	Nabensa	Togiak
Elim	Nanwalek	Toksook Bay
Emmonak	Napakiak	Tonsina
Eureka Roadhouse	Napaskiak	Trapper Creek
Excursion Inlet	Naukati Bay	Tuluksak
Ferry	Nelson Lagoon	Tuntutuliak
Fort Greely	New Stuyahok	Tununak
Fort Yukon	Newtok	Twin Hills
Fox River	Nightmute	Tyonek
Fritz Creek	Nikolai	Ugashik
Funny River	Ninilchik	Upper Kalskag
Gambell	Noatak	Venetie
Game Creek	Nondalton	Wales
Glacier View	Noorvik	Whale Pass
Goodnews Bay	Northway	White Mountain
Grayling	Northway Junction	Whitestone
Gulkana	Northway Village	Willow
Gustavus	Nulato	Willow Creek
Halibut Cove	Nunam Iqua	Wiseman
Happy Valley	Nunapitchuk	

Non-Distressed Locations

The following is a list of communities and CDP's that do not meet the surrogate standard.

Adak	Gateway	Nuiqsut
Akhiok	Glennallen	Oscarville
Akutan	Goldstream	Palmer
Alatna	Golovin	Paxson
Anchorage	Healy	Pedro Bay
Anderson	Healy Lake	Petersville
Atka	Hobart Bay	Pleasant Valley

Atkasuk	Hollis	Point Lay
Badger	Igiugig	Port Heiden
Bear Creek	Iliamna	Prudhoe Bay
Bethel	Juneau	Ridgeway
Bettles	Kaktovik	Sand Point
Buffalo Soapstone	Kalifornsky	Seward
Butte	Kasaan	Sitka
Chena Ridge	Kasilof	Skagway
Chignik	Kenai	Soldotna
Chignik Lagoon	Ketchikan	South Van Horn
Cold Bay	King Cove	St. George
Coldfoot	King Salmon	St. Paul
College	Klawock	Steele Creek
Cordova	Knik River	Sterling
Craig City	Knik-Fairview	Sunrise
Deering	Kodiak	Tanaina
Dillingham	Kotzebue	Tazlina
Egegik	Lakes	Tolsona
Ester	Lazy Mountain	Two Rivers
Evansville	Lowell Point	Unalakleet
Fairbanks	McGrath	Unalaska
False Pass	Meadow Lakes	Utqiagvik
Farm Loop	Minto	Valdez
Farmers Loop	Naknek	Wainwright
Fishhook	Newhalen	Wasilla
Four Mile Road	Nikiski	Womens Bay
Fox	Nome	Yakutat
Galena	North Pole	

Expanded Standard

DOL&WD also evaluated communities and CDP's against an expanded set of surrogate standard criteria. Under the expanded standard, the criteria are increased/decreased by 3% as appropriate, which results in more locations being classified as distressed. Again, a location must meet two of the following three criteria in order to be considered distressed.

Criteria 1 - Average earnings less than \$20,888* in 2016

* $\$20,280 \times 1.03$

Criteria 2 - 67%* (or more) residents earned less than \$20,280 in 2016

* 70% - 3%

Criteria 3 – 33%* of residents (or less) employed in all four quarters of 2016

* 30% + 3%

Additional Locations Considered Distressed Based on the Expanded Standard

Aniak	Haines	Petersburg
Big Lake	Homer	Primrose
Chiniak	Houston	Saxman
Clam Gulch	Moose Creek	Silver Springs
Covenant Life	Nelchina	Sutton-Alpine
Delta Junction	Nenana	Tok
Diamond Ridge	Nikolaevsk	Whittier
Diomedes	Nikolski	Wrangell
Gakona		

Appeals

The Denali Commission recognizes that in some cases the data collection and application methodologies described above do not accurately reflect the appropriate classification for some communities. Therefore, any community that believes a “non-distressed” classification was determined in error may submit an appeal to the Commission. Appeal determinations will be made based on new information (relevant economic data and facts) submitted by the Community that demonstrate the data used by DOL&WD in their original analysis was erroneous, invalid, or outdated. New information must come from a verifiable source, and be robust and representative of the entire community and/or population.

In addition to demonstrating the data compiled by DOL&WD was erroneous, invalid, or outdated, the new information must demonstrate that a community meets at least two of the three Surrogate Standard criteria, or two of the three Expanded criteria defined above. Appeals with supporting data and facts must be sent in writing to:

*Denali Commission
Attention: Director of Programs
510 L Street, Suite 410
Anchorage, AK 99501*

The Denali Commission will make an appeal determination in collaboration with DOL&WD based on the new verifiable information presented. Communities filing an appeal will be notified of the decision on their appeal in writing, within 30 days.

The following is a list of communities that have filed a successful appeal since 2001. This list is presented for historical purposes only. Communities that are classified as Non-Distressed by DOL&WD in any particular year, must file a new appeal for that year if they feel their status is in error.

Diomedes (2015)
Wales (2013)
Haines (2008)
Glennallen (2007)
Chenega (2006)
Nanwalek (2006)
Atmautluak (2005)
Georgetown (2005)
Kongiganak (2005)
McGrath (2005)
Napaskiak (2005)
Newtok (2005)
Oscarville (2005)
Shaktoolik (2005)
Brevig Mission (2005)
Port Graham (2004)
Newhalen (2001)

Master Community Lists

The following tables summarize the status of individual communities and CDP's based on DOL&WD analyses in 2016 and 2017. The first table is organized by Borough/Census Area. In the second table, all communities and CDP's are listed alphabetically.

Distressed Community Status							
Communities and CDP's by Borough/Census Area							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Aleutians East Borough							
Akutan	Non-Distressed		Non-Distressed		34,372	20.1	77.7
Cold Bay	Non-Distressed		Non-Distressed		29,485	62.9	40.0
False Pass	Non-Distressed		Non-Distressed		60,102	71.4	42.9
King Cove	Non-Distressed		Non-Distressed		43,109	66.8	38.3
Nelson Lagoon	Distressed	Surrogate Std.	Non-Distressed		36,974	82.1	20.5
Sand Point	Non-Distressed		Non-Distressed		57,785	63.9	37.0
Aleutians West Census Area							
Adak	Non-Distressed		Non-Distressed		31,520	54.7	47.2
Atka	Non-Distressed		Non-Distressed		29,147	63.6	54.5
Nikolski	Distressed	Expanded Std.	Non-Distressed		18,672	69.2	61.5
St. George	Non-Distressed		Non-Distressed		22,754	61.5	40.4
St. Paul	Non-Distressed		Non-Distressed		29,828	60.1	47.7
Unalaska	Non-Distressed		Non-Distressed		48,382	38.2	62.9
Anchorage Municipality							
Anchorage	Non-Distressed		Non-Distressed		29,238	56.7	44.9
Bethel Census Area							
Akiachak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,624	81.0	31.0
Akiak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,340	87.1	34.6
Aniak	Distressed	Expanded Std.	Non-Distressed		19,195	67.3	41.8
Atmautluak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,046	88.9	18.3
Bethel	Non-Distressed		Non-Distressed		32,299	50.5	48.5
Chefornak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,710	83.7	36.7
Chuathbaluk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,679	77.1	35.7
Crooked Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	7,512	89.2	18.9
Eek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,392	75.1	32.3
Goodnews Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,262	81.5	30.9
Kasigluk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,100	83.2	30.0
Kipnuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,014	83.5	25.7
Kongiganak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,236	77.5	39.2
Kwethluk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,556	81.9	27.4
Kwigillingok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,690	80.9	36.4
Lime	Distressed	Surrogate Std.	Distressed	Surrogate Std.	1,749	100.0	5.3
Lower Kalskag	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,869	88.4	32.6
Mekoryuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,867	77.3	42.9
Napakiaik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,849	84.8	32.0
Napaskiak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,227	76.7	34.7
Newtok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,031	84.5	35.0
Nightmute	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,534	82.8	28.0
Nunapitchuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,195	84.7	39.1
Oscarville	Non-Distressed		Non-Distressed		16,920	64.0	44.0
Platinum	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,104	69.7	27.3
Quinhagak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,402	82.1	27.8
Red Devil	Distressed	Surrogate Std.	Distressed	Surrogate Std.	1,982	100.0	17.6
Sleetmute	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,326	91.8	17.8
Stony River	Distressed	Surrogate Std.	Distressed	Surrogate Std.	7,639	91.7	37.5
Toksook Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,106	80.1	39.1
Tuluksak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,888	88.9	31.6
Tuntutuliak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,556	81.1	34.1

Distressed Community Status							
Communities and CDP's by Borough/Census Area							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Tununak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,338	85.4	28.0
Upper Kalskag	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,958	75.5	39.7
Bristol Bay Borough							
King Salmon	Non-Distressed		Non-Distressed		34,938	56.5	38.7
Naknek	Non-Distressed		Non-Distressed		32,789	64.7	33.4
South Naknek	Distressed	Surrogate Std.	Distressed	Expanded Std.	20,468	77.8	24.4
Denali Borough							
Anderson	Non-Distressed		Non-Distressed		28,147	64.0	35.4
Cantwell	Distressed	Surrogate Std.	Non-Distressed		19,671	72.1	28.5
Ferry	Distressed	Surrogate Std.	Distressed	Surrogate Std.	17,274	81.0	19.0
Healy	Non-Distressed		Non-Distressed		28,796	60.7	38.9
McKinley Park	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,898	68.9	22.8
Dillingham Census Area							
Aleknagik	Distressed	Surrogate Std.	Distressed	Expanded Std.	19,378	72.2	31.5
Clark's Point	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,010	90.5	19.0
Dillingham	Non-Distressed		Non-Distressed		36,589	51.8	47.4
Ekwok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,740	81.1	35.1
Koliganek	Distressed	Surrogate Std.	Non-Distressed		14,812	82.7	30.8
Manokotak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,955	84.2	33.3
New Stuyahok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,402	84.9	32.8
Portage Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	0	100.0	0.0
Togiak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,902	86.3	20.9
Twin Hills	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,786	78.2	36.4
Fairbanks North Star Borough							
Badger	Non-Distressed		Non-Distressed		25,157	59.6	41.1
Chena Ridge	Non-Distressed		Non-Distressed		33,607	53.3	46.1
College	Non-Distressed		Non-Distressed		28,254	56.9	44.4
Eielson AFB	Distressed	Surrogate Std.	Distressed	Surrogate Std.	3,618	93.7	8.3
Ester	Non-Distressed		Non-Distressed		26,493	58.2	43.5
Fairbanks	Non-Distressed		Non-Distressed		22,277	61.9	40.4
Farmers Loop	Non-Distressed		Non-Distressed		30,789	55.2	44.2
Fox	Non-Distressed		Non-Distressed		25,418	56.2	37.9
Goldstream	Non-Distressed		Non-Distressed		28,151	56.4	43.5
Harding-Birch Lakes	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,493	73.8	28.9
Moose Creek	Distressed	Expanded Std.	Non-Distressed		16,498	69.2	34.1
North Pole	Non-Distressed		Non-Distressed		23,068	62.0	40.1
Pleasant Valley	Non-Distressed		Non-Distressed		22,296	65.4	34.0
Salcha	Distressed	Surrogate Std.	Distressed	Expanded Std.	17,969	70.4	29.8
South Van Horn	Non-Distressed		Non-Distressed		18,927	64.5	35.2
Steele Creek	Non-Distressed		Non-Distressed		30,750	56.0	43.9
Two Rivers	Non-Distressed		Non-Distressed		23,126	62.9	37.1
Haines Borough							
Covenant Life	Distressed	Expanded Std.	Distressed	Expanded Std.	16,384	67.6	39.7
Excursion Inlet	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	93.3	20.0
Haines	Distressed	Expanded Std.	Distressed	Expanded Std.	21,362	71.4	31.9
Lutak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,958	73.9	13.0
Mosquito Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,106	81.1	20.5
Mud Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,306	75.8	24.2

Distressed Community Status							
Communities and CDP's by Borough/Census Area							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Hoonah - Angoon Census Area							
Angoon	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,274	80.8	28.4
Elfin Cove	Distressed	Surrogate Std.	Distressed	Surrogate Std.	63,086	96.2	11.5
Game Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	91.7	8.3
Gustavus	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,271	85.6	21.2
Hoonah	Distressed	Surrogate Std.	Distressed	Expanded Std.	20,582	73.0	29.6
Klukwan	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,339	74.0	39.0
Pelican	Distressed	Surrogate Std.	Distressed	Surrogate Std.	24,138	82.9	25.0
Tenakee Springs	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,659	90.1	18.8
Juneau Borough							
Juneau	Non-Distressed		Non-Distressed		29,262	54.0	47.2
Kenai Peninsula Borough							
Anchor Point	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,835	72.3	26.8
Bear Creek	Non-Distressed		Non-Distressed		23,823	58.5	41.6
Beluga	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	84.6	15.4
Clam Gulch	Distressed	Expanded Std.	Distressed	Expanded Std.	29,222	68.3	26.8
Cohoe	Distressed	Surrogate Std.	Distressed	Expanded Std.	17,459	72.4	28.8
Cooper Landing	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,650	75.8	19.0
Crown Point	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,980	73.9	28.3
Diamond Ridge	Distressed	Expanded Std.	Non-Distressed		19,589	69.4	31.0
Fox River	Distressed	Surrogate Std.	Distressed	Surrogate Std.	4,615	91.3	14.5
Fritz Creek	Distressed	Surrogate Std.	Non-Distressed		19,586	72.3	28.9
Funny River	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,852	73.2	28.4
Halibut Cove	Distressed	Surrogate Std.	Distressed	Surrogate Std.	27,823	87.5	10.0
Happy Valley	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,551	82.8	20.0
Homer	Distressed	Expanded Std.	Distressed	Expanded Std.	37,844	70.6	31.2
Hope	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,274	77.7	20.0
Kachemak	Distressed	Surrogate Std.	Distressed	Expanded Std.	19,391	71.6	27.6
Kalifornsky	Non-Distressed		Non-Distressed		29,011	59.8	40.1
Kasilof	Non-Distressed		Non-Distressed		34,508	66.8	33.9
Kenai	Non-Distressed		Non-Distressed		27,192	62.0	41.7
Lowell Point	Non-Distressed		Non-Distressed		25,326	54.3	52.2
Moose Pass	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,361	73.5	28.2
Nanwalek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,340	75.8	42.5
Nikiski	Non-Distressed		Non-Distressed		23,830	67.4	33.9
Nikolaevsk	Distressed	Expanded Std.	Distressed	Surrogate Std.	20,876	75.4	30.2
Ninilchik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	17,002	77.4	20.6
Port Graham	Distressed	Surrogate Std.	Non-Distressed		15,415	74.2	44.3
Primrose	Distressed	Expanded Std.	Non-Distressed		18,550	65.7	31.4
Ridgeway	Non-Distressed		Non-Distressed		26,774	63.2	38.2
Salamatof	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,906	70.9	29.7
Seldovia	Distressed	Surrogate Std.	Distressed	Surrogate Std.	23,561	86.1	19.3
Seldovia Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	17,855	71.3	31.5
Seward	Non-Distressed		Non-Distressed		28,396	63.5	36.0
Soldotna	Non-Distressed		Non-Distressed		27,628	63.4	38.8
Sterling	Non-Distressed		Non-Distressed		26,972	64.5	35.8
Sunrise	Non-Distressed		Non-Distressed		27,415	50.0	41.7
Tyonek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,916	84.8	22.0

Distressed Community Status							
Communities and CDP's by Borough/Census Area							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Ketchikan Gateway Borough							
Ketchikan	Non-Distressed		Non-Distressed		26,608	59.2	44.7
Loring	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	100.0	0.0
Saxman	Distressed	Expanded Std.	Distressed	Expanded Std.	17,823	69.4	34.2
Kodiak Island Borough							
Akhiok	Non-Distressed		Distressed	Surrogate Std.	22,066	69.5	44.1
Aleneva	Distressed	Surrogate Std.	Distressed	Surrogate Std.	0	100.0	0.0
Chiniak	Distressed	Expanded Std.	Distressed	Surrogate Std.	23,694	73.3	30.0
Karluk	Distressed	Surrogate Std.	Non-Distressed		19,749	63.2	26.3
Kodiak	Non-Distressed		Non-Distressed		48,998	60.0	51.0
Kodiak Station	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,610	83.8	18.0
Larsen Bay	Distressed	Surrogate Std.	Non-Distressed		23,954	73.7	19.3
Old Harbor	Distressed	Surrogate Std.	Distressed	Surrogate Std.	26,640	83.3	22.0
Ouzinkie	Distressed	Surrogate Std.	Non-Distressed		19,429	76.8	34.8
Port Lions	Distressed	Surrogate Std.	Distressed	Surrogate Std.	23,310	81.0	28.9
Womens Bay	Non-Distressed		Non-Distressed		24,083	64.3	37.8
Kusilvak Census Area							
Alakanuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,616	81.7	29.2
Chevak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,765	84.2	26.2
Emmonak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,432	74.0	33.7
Hooper Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,405	80.6	28.5
Kotlik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,059	81.0	27.3
Marshall	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,554	85.4	23.3
Mountain Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,610	78.2	32.3
Nunam Iqua	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,705	82.3	37.9
Pilot Station	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,874	82.1	30.5
Pitkas Point	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,570	91.4	20.0
Russian Mission	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,451	84.7	30.1
Scammon Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,994	78.5	28.8
St. Mary's	Distressed	Surrogate Std.	Distressed	Expanded Std.	15,376	74.7	38.4
Lake and Peninsula Borough							
Chignik	Non-Distressed		Non-Distressed		49,728	69.2	48.1
Chignik Lagoon	Non-Distressed		Non-Distressed		155,120	79.0	35.5
Chignik Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,115	78.5	35.4
Egegik	Non-Distressed		Non-Distressed		35,832	61.4	47.7
Igiugig	Non-Distressed		Non-Distressed		27,128	57.5	55.0
Iliamna	Non-Distressed		Non-Distressed		26,080	61.2	43.2
Ivanof Bay	Distressed	Surrogate Std.	not evaluated		0	100.0	0.0
Kokhanok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,056	84.4	36.7
Levelock	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,900	77.4	34.0
Newhalen	Non-Distressed		Non-Distressed		23,690	65.5	34.5
Nondalton	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,476	82.9	31.8
Pedro Bay	Non-Distressed		Non-Distressed		28,107	61.5	57.7
Perryville	Distressed	Surrogate Std.	Distressed	Surrogate Std.	31,389	82.9	29.3
Pilot Point	Distressed	Surrogate Std.	Distressed	Expanded Std.	20,179	70.5	38.6
Pope-Vannoy Landing	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	75.0	25.0
Port Alsworth	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,782	71.3	34.1
Port Heiden	Non-Distressed		Non-Distressed		33,040	55.9	48.5
Ugashik	Distressed	Surrogate Std.	Non-Distressed		19,815	90.9	0.0

Distressed Community Status							
Communities and CDP's by Borough/Census Area							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Matanuska – Susitna Borough							
Alexander Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	100.0	0.0
Big Lake	Distressed	Expanded Std.	Non-Distressed		21,130	69.1	31.4
Buffalo Soapstone	Non-Distressed		Non-Distressed		24,561	64.7	36.5
Butte	Non-Distressed		Non-Distressed		23,061	65.0	34.8
Chase	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,891	74.4	15.4
Chickaloon	Distressed	Surrogate Std.	Distressed	Expanded Std.	19,806	68.9	27.8
Eureka Roadhouse	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,707	72.7	30.3
Farm Loop	Non-Distressed		Non-Distressed		25,067	63.8	39.2
Fishhook	Non-Distressed		Non-Distressed		29,802	58.2	42.2
Gateway	Non-Distressed		Non-Distressed		30,289	58.5	42.1
Glacier View	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,240	81.7	18.8
Houston	Distressed	Expanded Std.	Non-Distressed		18,121	68.4	32.6
Knik River	Non-Distressed		Non-Distressed		27,703	58.7	41.5
Knik-Fairview	Non-Distressed		Non-Distressed		22,697	61.0	39.2
Lake Louise	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,739	90.0	2.5
Lakes	Non-Distressed		Non-Distressed		27,223	60.8	40.8
Lazy Mountain	Non-Distressed		Non-Distressed		21,578	67.4	34.4
Meadow Lakes	Non-Distressed		Non-Distressed		22,748	64.8	36.4
Palmer	Non-Distressed		Non-Distressed		21,856	63.3	39.6
Petersville	Non-Distressed		Non-Distressed		--	55.6	44.4
Point MacKenzie	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,370	83.1	17.6
Skwentna	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,938	90.0	3.3
Susitna North	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,346	76.4	26.3
Sutton-Alpine	Distressed	Expanded Std.	Non-Distressed		19,175	68.5	31.6
Talkeetna	Distressed	Surrogate Std.	Non-Distressed		16,622	72.1	30.8
Tanaina	Non-Distressed		Non-Distressed		26,993	59.2	43.0
Trapper Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,852	83.5	20.0
Wasilla	Non-Distressed		Non-Distressed		25,393	63.7	38.0
Willow	Distressed	Surrogate Std.	Distressed	Surrogate Std.	17,218	75.1	26.3
Nome Census Area							
Brevig Mission	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,931	79.3	25.2
Diomedes	Distressed	Expanded Std.	Distressed	Surrogate Std.	16,711	68.6	43.1
Elim	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,402	75.9	35.8
Gambell	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,540	85.1	20.8
Golovin	Non-Distressed		Non-Distressed		21,551	59.6	45.6
Koyuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,463	75.9	36.9
Nome	Non-Distressed		Non-Distressed		35,756	49.9	49.1
Savoonga	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,296	80.1	38.2
Shaktolik	Distressed	Surrogate Std.	Non-Distressed		9,242	83.9	26.6
Shishmaref	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,025	70.2	38.5
St. Michael	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,085	79.0	29.9
Stebbins	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,507	80.9	32.1
Teller	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,122	75.3	38.8
Unalakleet	Non-Distressed		Non-Distressed		24,104	63.1	39.4
Wales	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,188	72.9	51.0
White Mountain	Distressed	Surrogate Std.	Distressed	Surrogate Std.	16,861	73.6	43.2

North Slope Borough							
Anaktuvuk Pass	Distressed	Surrogate Std.	Non-Distressed		18,202	71.5	35.0
Atkasuk	Non-Distressed		Non-Distressed		24,565	54.9	49.3
Utqiagvik (Barrow)	Non-Distressed		Non-Distressed		39,374	47.0	49.8
Kaktovik	Non-Distressed		Non-Distressed		28,984	51.8	51.8
Nuiqsut	Non-Distressed		Non-Distressed		22,106	63.0	31.5
Point Hope	Distressed	Surrogate Std.	Non-Distressed		17,445	72.0	31.3
Point Lay	Non-Distressed		Non-Distressed		25,060	58.5	44.4
Prudhoe Bay	Non-Distressed		Non-Distressed		68,973	16.7	75.0
Wainwright	Non-Distressed		Non-Distressed		19,655	65.8	36.9
Northwest Arctic Borough							
Ambler	Distressed	Surrogate Std.	Non-Distressed		19,772	63.4	28.5
Buckland	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,493	75.3	27.2
Deering	Non-Distressed		Non-Distressed		18,897	57.5	41.4
Kiana	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,055	76.7	19.3
Kivalina	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,531	77.2	28.1
Kobuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,628	80.7	30.7
Kotzebue	Non-Distressed		Non-Distressed		25,575	58.0	28.0
Noatak	Distressed	Surrogate Std.	Distressed	Expanded Std.	15,886	74.1	32.1
Noorvik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,631	77.5	25.6
Selawik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,763	83.0	12.8
Shungnak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,804	76.4	24.7
Petersburg Census Area							
Hobart Bay	Non-Distressed		not evaluated		--	0	100
Kupreanof	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	89.5	5.3
Petersburg	Distressed	Expanded Std.	Distressed	Surrogate Std.	46,677	70.8	32.5
Prince of Wales – Hyder Census Area							
Coffman Cove	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,926	80.8	31.4
Craig City	Non-Distressed		Non-Distressed		34,064	64.8	38.8
Edna Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,981	82.1	17.9
Hollis	Non-Distressed		Non-Distressed		20,608	65.3	36.3
Hydaburg	Distressed	Surrogate Std.	Distressed	Surrogate Std.	22,880	76.4	25.6
Hyder	Distressed	Surrogate Std.	Distressed	Surrogate Std.	2,295	98.3	12.1
Kake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	18,371	74.2	34.9
Kasaan	Non-Distressed		Non-Distressed		24,420	62.2	51.1
Klawock	Non-Distressed		Non-Distressed		24,269	65.1	38.8
Metlakatla	Distressed	Surrogate Std.	Non-Distressed		16,885	72.1	17.7
Naukati Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,384	83.3	20.6
Point Baker	Distressed	Surrogate Std.	Distressed	Surrogate Std.	26,033	100.0	8.3
Port Alexander	Distressed	Surrogate Std.	Distressed	Surrogate Std.	26,410	89.7	10.3
Port Protection	Distressed	Surrogate Std.	Distressed	Surrogate Std.	4,783	94.1	9.8
Thorne Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,486	76.4	25.4
Whale Pass	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,345	81.8	21.2
Sitka Borough							
Sitka	Non-Distressed		Non-Distressed		29,789	61.5	41.2
Skagway Municipality							
Skagway	Non-Distressed		Non-Distressed		22,394	60.1	37.3
Southeast Fairbanks Census Area							
Alcan Border	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	93.8	6.3
Big Delta	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,243	76.7	24.5
Chicken	Distressed	Surrogate Std.	Distressed	Surrogate Std.	51,527	93.3	6.7
Delta Junction	Distressed	Expanded Std.	Non-Distressed		23,121	69.1	30.8
Deltana	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,148	71.9	27.1
Dot Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,342	89.7	17.2
Dot Lake Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,747	91.7	12.5
Dry Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,129	89.6	14.9
Eagle	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,349	80.0	28.6
Eagle Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	7,265	86.5	25.0
Fort Greely	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,080	82.2	17.8
Healy Lake	Non-Distressed		Distressed	Surrogate Std.	15,438	63.6	36.4
Northway	Distressed	Surrogate Std.	Non-Distressed		15,034	71.0	33.3
Northway Junction	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,523	82.1	30.8
Northway Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,357	85.7	18.4

Tanacross	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,211	80.7	27.5
Tetlin	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,866	83.6	31.5
Tok	Distressed	Expanded Std.	Non-Distressed		17,842	69.3	32.2
Whitestone	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,523	81.4	34.3
Valdez – Cordova Census Area							
Chenega	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,385	81.3	40.6
Chisana	Distressed	Surrogate Std.	Distressed	Surrogate Std.	0	100.0	0.0
Chistochina	Distressed	Surrogate Std.	Non-Distressed		20,209	70.3	37.5
Chitina	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,456	88.1	16.4
Copper Center	Distressed	Surrogate Std.	Non-Distressed		20,223	74.7	22.9
Cordova	Non-Distressed		Non-Distressed		53,338	65.8	34.4
Gakona	Distressed	Expanded Std.	Distressed	Expanded Std.	22,535	22,535	25.0
Glennallen	Non-Distressed		Non-Distressed		23,683	63.4	36.9
Gulkana	Distressed	Surrogate Std.	Non-Distressed		16,407	70.4	21.0
Kenny Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,253	79.8	20.6
McCarthy	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,284	85.7	6.5
Mendeltna	Distressed	Surrogate Std.	Distressed	Expanded Std.	17,404	76.2	19.0
Mentasta Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,985	88.2	15.1
Nabensa	Distressed	Surrogate Std.	Distressed	Surrogate Std.	0	100.0	0.0
Nelchina	Distressed	Expanded Std.	Non-Distressed		23,673	70.0	26.7
Paxon	Non-Distressed		Non-Distressed		--	66.7	33.3
Silver Springs	Distressed	Expanded Std.	Non-Distressed		20,004	68.4	32.1
Slana	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,510	88.4	17.4
Tatitlek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,657	76.7	38.3
Tazlina	Non-Distressed		Non-Distressed		23,569	64.5	36.4
Tolsona	Non-Distressed		Distressed	Surrogate Std.	34,588	55.6	33.3
Tonsina	Distressed	Surrogate Std.	Distressed	Surrogate Std.	4,243	92.4	7.6
Valdez	Non-Distressed		Non-Distressed		42,297	51.5	49.9
Whittier	Non-Distressed		Non-Distressed		20,593	68.5	35.3
Willow Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,686	77.2	20.6
Wrangell Borough							
Wrangell	Distressed	Expanded Std.	Distressed	Expanded Std.	24,650	70.4	31.6
Yakutat Borough							
Yakutat	Non-Distressed		Non-Distressed		32,073	63.1	38.5
Yukon – Koyukuk Census Area							
Alatna	Non-Distressed		Distressed	Surrogate Std.	12,182	63.6	36.4
Allakaket	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,655	83.6	27.9
Anvik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,582	78.2	47.3
Arctic	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,574	82.1	26.8
Beaver	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,583	87.5	18.8
Bettles	Non-Distressed		Non-Distressed		38,695	47.1	52.9
Birch Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	7,758	83.3	22.2
Central	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,699	90.9	8.0
Chalkyitsik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,177	77.8	50.0
Circle	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,728	87.8	25.7
Coldfoot	Non-Distressed		Non-Distressed		22,270	57.1	57.1
Evansville	Non-Distressed		not evaluated		--	50.0	50.0
Fort Yukon	Distressed	Surrogate Std.	Non-Distressed		16,874	67.1	28.5
Four Mile Road	Non-Distressed		Non-Distressed		30,029	52.0	40.0
Galena	Non-Distressed		Non-Distressed		24,001	55.6	46.5
Grayling	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,757	84.7	40.3
Holy Cross	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,246	73.8	32.0
Hughes	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,367	78.6	45.7
Hustlia	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,664	78.0	30.0
Kaltag	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,506	79.7	25.6
Koyukuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,079	82.2	34.2
Lake Minchumina	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	92.3	7.7
Livengood	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,310	83.9	12.9
Manley Hot Springs	Distressed	Surrogate Std.	Distressed	Surrogate Std.	22,868	63.4	38.4
McGrath	Non-Distressed		Non-Distressed		14,598	78.6	17.0
Minto	Non-Distressed		Non-Distressed		22,134	63.7	40.0
Nenana	Distressed	Expanded Std.	Non-Distressed		19,597	67.7	34.0
Nikolai	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,204	85.1	43.2
Nulato	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,541	75.8	29.8

Rampart	Distressed	Surrogate Std.	Non-Distressed		20,645	78.3	26.1
Ruby	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,076	81.7	31.7
Shageluk	Distressed	Surrogate Std.	Non-Distressed		12,319	78.3	30.4
Stevens Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,900	83.3	26.7
Takotna	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,782	77.1	48.6
Tanana	Distressed	Surrogate Std.	Non-Distressed		14,015	70.6	23.7
Venetie	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,878	84.6	20.6
Wiseman	Distressed	Surrogate Std.	Distressed	Expanded Std.	14,374	76.9	0.0

Notes:

1. Cells marked with – were not able to be disclosed due to confidentiality policies
2. Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section; and Commercial Fisheries Entry Commission
3. Rose shaded = status has declined since 2016
4. Green shaded = status has improved since 2016

Distressed Community Status							
Alphabetical List							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Adak	Non-Distressed		Non-Distressed		31,520	54.7	47.2
Akiak	Non-Distressed		Distressed	Surrogate Std.	22,066	69.5	44.1
Akiachak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,624	81.0	31.0
Akiak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,340	87.1	34.6
Akutan	Non-Distressed		Non-Distressed		34,372	20.1	77.7
Alakanuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,616	81.7	29.2
Alatna	Non-Distressed		Distressed	Surrogate Std.	12,182	63.6	36.4
Alcan Border	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	93.8	6.3
Aleknagik	Distressed	Surrogate Std.	Distressed	Expanded Std.	19,378	72.2	31.5
Aleneva	Distressed	Surrogate Std.	Distressed	Surrogate Std.	0	100.0	0.0
Alexander Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	100.0	0.0
Allakaket	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,655	83.6	27.9
Ambler	Distressed	Surrogate Std.	Non-Distressed		19,772	63.4	28.5
Anaktuvuk Pass	Distressed	Surrogate Std.	Non-Distressed		18,202	71.5	35.0
Anchor Point	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,835	72.3	26.8
Anchorage	Non-Distressed		Non-Distressed		29,238	56.7	44.9
Anderson	Non-Distressed		Non-Distressed		28,147	64.0	35.4
Angoon	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,274	80.8	28.4
Aniak	Distressed	Expanded Std.	Non-Distressed		19,195	67.3	41.8
Anvik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,582	78.2	47.3
Arctic	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,574	82.1	26.8
Atka	Non-Distressed		Non-Distressed		29,147	63.6	54.5
Atmautluak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,046	88.9	18.3
Atkasuk	Non-Distressed		Non-Distressed		24,565	54.9	49.3
Badger	Non-Distressed		Non-Distressed		25,157	59.6	41.1
Bear Creek	Non-Distressed		Non-Distressed		23,823	58.5	41.6
Beaver	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,583	87.5	18.8
Beluga	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	84.6	15.4
Bethel	Non-Distressed		Non-Distressed		32,299	50.5	48.5
Bettles	Non-Distressed		Non-Distressed		38,695	47.1	52.9
Big Delta	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,243	76.7	24.5
Big Lake	Distressed	Expanded Std.	Non-Distressed		21,130	69.1	31.4

Distressed Community Status							
Alphabetical List							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Birch Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	7,758	83.3	22.2
Brevig Mission	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,931	79.3	25.2
Buckland	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,493	75.3	27.2
Buffalo Soapstone	Non-Distressed		Non-Distressed		24,561	64.7	36.5
Butte	Non-Distressed		Non-Distressed		23,061	65.0	34.8
Cantwell	Distressed	Surrogate Std.	Non-Distressed		19,671	72.1	28.5
Central	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,699	90.9	8.0
Chalkyitsik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,177	77.8	50.0
Chase	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,891	74.4	15.4
Chefornak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,710	83.7	36.7
Chena Ridge	Non-Distressed		Non-Distressed		33,607	53.3	46.1
Chenega	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,385	81.3	40.6
Chevak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,765	84.2	26.2
Chickaloon	Distressed	Surrogate Std.	Distressed	Expanded Std.	19,806	68.9	27.8
Chicken	Distressed	Surrogate Std.	Distressed	Surrogate Std.	51,527	93.3	6.7
Chignik	Non-Distressed		Non-Distressed		49,728	69.2	48.1
Chignik Lagoon	Non-Distressed		Non-Distressed		155,120	79.0	35.5
Chignik Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,115	78.5	35.4
Chiniak	Distressed	Expanded Std.	Distressed	Surrogate Std.	23,694	73.3	30.0
Chisana	Distressed	Surrogate Std.	Distressed	Surrogate Std.	0	100.0	0.0
Chistochina	Distressed	Surrogate Std.	Non-Distressed		20,209	70.3	37.5
Chitina	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,456	88.1	16.4
Chuathbaluk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,679	77.1	35.7
Circle	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,728	87.8	25.7
Clam Gulch	Distressed	Expanded Std.	Distressed	Expanded Std.	29,222	68.3	26.8
Clark's Point	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,010	90.5	19.0
Coffman Cove	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,926	80.8	31.4
Cohoe	Distressed	Surrogate Std.	Distressed	Expanded Std.	17,459	72.4	28.8
Cold Bay	Non-Distressed		Non-Distressed		29,485	62.9	40.0
Coldfoot	Non-Distressed		Non-Distressed		22,270	57.1	57.1
College	Non-Distressed		Non-Distressed		28,254	56.9	44.4
Cooper Landing	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,650	75.8	19.0
Copper Center	Distressed	Surrogate Std.	Non-Distressed		20,223	74.7	22.9
Cordova	Non-Distressed		Non-Distressed		53,338	65.8	34.4
Covenant Life	Distressed	Expanded Std.	Distressed	Expanded Std.	16,384	67.6	39.7
Craig City	Non-Distressed		Non-Distressed		34,064	64.8	38.8
Crooked Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	7,512	89.2	18.9
Crown Point	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,980	73.9	28.3
Deering	Non-Distressed		Non-Distressed		18,897	57.5	41.4
Delta Junction	Distressed	Expanded Std.	Non-Distressed		23,121	69.1	30.8
Deltana	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,148	71.9	27.1
Diamond Ridge	Distressed	Expanded Std.	Non-Distressed		19,589	69.4	31.0
Dillingham	Non-Distressed		Non-Distressed		36,589	51.8	47.4
Diomedes	Distressed	Expanded Std.	Distressed	Surrogate Std.	16,711	68.6	43.1
Dot Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,342	89.7	17.2
Dot Lake Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,747	91.7	12.5
Dry Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,129	89.6	14.9
Eagle	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,349	80.0	28.6
Eagle Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	7,265	86.5	25.0

Distressed Community Status							
Alphabetical List							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Edna Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,981	82.1	17.9
Eek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,392	75.1	32.3
Egegik	Non-Distressed		Non-Distressed		35,832	61.4	47.7
Eielson AFB	Distressed	Surrogate Std.	Distressed	Surrogate Std.	3,618	93.7	8.3
Ekwok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,740	81.1	35.1
Elfin Cove	Distressed	Surrogate Std.	Distressed	Surrogate Std.	63,086	96.2	11.5
Elim	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,402	75.9	35.8
Emmonak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,432	74.0	33.7
Ester	Non-Distressed		Non-Distressed		26,493	58.2	43.5
Eureka Roadhouse	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,707	72.7	30.3
Evansville	Non-Distressed		not evaluated		--	50.0	50.0
Excursion Inlet	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	93.3	20.0
Fairbanks	Non-Distressed		Non-Distressed		22,277	61.9	40.4
False Pass	Non-Distressed		Non-Distressed		60,102	71.4	42.9
Farm Loop	Non-Distressed		Non-Distressed		25,067	63.8	39.2
Farmers Loop	Non-Distressed		Non-Distressed		30,789	55.2	44.2
Ferry	Distressed	Surrogate Std.	Distressed	Surrogate Std.	17,274	81.0	19.0
Fishhook	Non-Distressed		Non-Distressed		29,802	58.2	42.2
Fort Greely	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,080	82.2	17.8
Fort Yukon	Distressed	Surrogate Std.	Non-Distressed		16,874	67.1	28.5
Four Mile Road	Non-Distressed		Non-Distressed		30,029	52.0	40.0
Fox	Non-Distressed		Non-Distressed		25,418	56.2	37.9
Fox River	Distressed	Surrogate Std.	Distressed	Surrogate Std.	4,615	91.3	14.5
Fritz Creek	Distressed	Surrogate Std.	Non-Distressed		19,586	72.3	28.9
Funny River	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,852	73.2	28.4
Gakona	Distressed	Expanded Std.	Distressed	Expanded Std.	22,535	69.6	25.0
Galena	Non-Distressed		Non-Distressed		24,001	55.6	46.5
Gambell	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,540	85.1	20.8
Game Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	91.7	8.3
Gateway	Non-Distressed		Non-Distressed		30,289	58.5	42.1
Glacier View	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,240	81.7	18.8
Glennallen	Non-Distressed		Non-Distressed		23,683	63.4	36.9
Goldstream	Non-Distressed		Non-Distressed		28,151	56.4	43.5
Golovin	Non-Distressed		Non-Distressed		21,551	59.6	45.6
Goodnews Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,262	81.5	30.9
Grayling	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,757	84.7	40.3
Gulkana	Distressed	Surrogate Std.	Non-Distressed		16,407	70.4	21.0
Gustavus	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,271	85.6	21.2
Haines	Distressed	Expanded Std.	Distressed	Expanded Std.	21,362	71.4	31.9
Halibut Cove	Distressed	Surrogate Std.	Distressed	Surrogate Std.	27,823	87.5	10.0
Happy Valley	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,551	82.8	20.0
Harding-Birch Lakes	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,493	73.8	28.9
Healy	Non-Distressed		Non-Distressed		28,796	60.7	38.9
Healy Lake	Non-Distressed		Distressed	Surrogate Std.	15,438	63.6	36.4
Hobart Bay	Non-Distressed		not evaluated		--	0.0	100.0
Hollis	Non-Distressed		Non-Distressed		20,608	65.3	36.3
Holy Cross	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,246	73.8	32.0
Homer	Distressed	Expanded Std.	Distressed	Expanded Std.	37,844	70.6	31.2
Hoonah	Distressed	Surrogate Std.	Distressed	Expanded Std.	20,582	73.0	29.6

Distressed Community Status							
Alphabetical List							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Hooper Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,405	80.6	28.5
Hope	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,274	77.7	20.0
Houston	Distressed	Expanded Std.	Non-Distressed		18,121	68.4	32.6
Hughes	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,367	78.6	45.7
Huslia	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,664	78.0	30.0
Hydaburg	Distressed	Surrogate Std.	Distressed	Surrogate Std.	22,880	76.4	25.6
Hyder	Distressed	Surrogate Std.	Distressed	Surrogate Std.	2,295	98.3	12.1
Igiugig	Non-Distressed		Non-Distressed		27,128	57.5	55.0
Iliamna	Non-Distressed		Non-Distressed		26,080	61.2	43.2
Ivanof Bay	Distressed	Surrogate Std.	not evaluated		0	100.0	0.0
Juneau	Non-Distressed		Non-Distressed		28,834	54.8	46.6
Kachemak	Distressed	Surrogate Std.	Distressed	Expanded Std.	19,391	71.6	27.6
Kake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	18,371	74.2	34.9
Kaktovik	Non-Distressed		Non-Distressed		28,984	51.8	51.8
Kalifornsky	Non-Distressed		Non-Distressed		29,011	59.8	40.1
Kaltag	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,506	79.7	25.6
Karluk	Distressed	Surrogate Std.	Non-Distressed		19,749	63.2	26.3
Kasaan	Non-Distressed		Non-Distressed		24,420	62.2	51.1
Kasigluk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,100	83.2	30.0
Kasilof	Non-Distressed		Non-Distressed		34,508	66.8	33.9
Kenai	Non-Distressed		Non-Distressed		27,192	62.0	41.7
Kenny Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,253	79.8	20.6
Ketchikan	Non-Distressed		Non-Distressed		26,608	59.2	44.7
Kiana	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,055	76.7	19.3
King Cove	Non-Distressed		Non-Distressed		43,109	66.8	38.3
King Salmon	Non-Distressed		Non-Distressed		34,938	56.5	38.7
Kipnuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,014	83.5	25.7
Kivalina	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,531	77.2	28.1
Klawock	Non-Distressed		Non-Distressed		24,269	65.1	38.8
Klukwan	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,339	74.0	39.0
Knik River	Non-Distressed		Non-Distressed		27,703	58.7	41.5
Knik-Fairview	Non-Distressed		Non-Distressed		22,697	61.0	39.2
Kobuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,628	80.7	30.7
Kodiak	Non-Distressed		Non-Distressed		48,998	60.0	51.0
Kodiak Station	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,610	83.8	18.0
Kokhanok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,056	84.4	36.7
Koliganek	Distressed	Surrogate Std.	Non-Distressed		14,812	82.7	30.8
Kongiganak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,236	77.5	39.2
Kotlik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,059	81.0	27.3
Kotzebue	Non-Distressed		Non-Distressed		25,575	58.0	28.0
Koyuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,463	75.9	36.9
Koyukuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,079	82.2	34.2
Kupreanof	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	89.5	5.3
Kwethluk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,556	81.9	27.4
Kwigillingok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,690	80.9	36.4
Lake Louise	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,739	90.0	2.5
Lake Minchumina	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	92.3	7.7
Lakes	Non-Distressed		Non-Distressed		27,223	60.8	40.8
Larsen Bay	Distressed	Surrogate Std.	Non-Distressed		23,954	73.7	19.3

Distressed Community Status							
Alphabetical List							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Lazy Mountain	Non-Distressed		Non-Distressed		21,578	67.4	34.4
Levelock	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,900	77.4	34.0
Lime	Distressed	Surrogate Std.	Distressed	Surrogate Std.	1,749	100.0	5.3
Livengood	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,310	83.9	12.9
Loring	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	100.0	0.0
Lowell Point	Non-Distressed		Non-Distressed		25,326	54.3	52.2
Lower Kalskag	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,869	88.4	32.6
Lutak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,958	73.9	13.0
Manley Hot Springs	Distressed	Surrogate Std.	Distressed	Surrogate Std.	22,868	63.4	38.4
Manokotak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,955	84.2	33.3
Marshall	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,554	85.4	23.3
McCarthy	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,284	85.7	6.5
McGrath	Non-Distressed		Non-Distressed		14,598	78.6	17.0
McKinley Park	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,898	68.9	22.8
Meadow Lakes	Non-Distressed		Non-Distressed		22,748	64.8	36.4
Mekoryuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,867	77.3	42.9
Mendeltna	Distressed	Surrogate Std.	Distressed	Expanded Std.	17,404	76.2	19.0
Mentasta Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,985	88.2	15.1
Metlakatla	Distressed	Surrogate Std.	Non-Distressed		16,885	72.1	17.7
Minto	Non-Distressed		Non-Distressed		22,134	63.7	40.0
Moose Creek	Distressed	Expanded Std.	Non-Distressed		16,498	69.2	34.1
Moose Pass	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,361	73.5	28.2
Mosquito Lake	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,106	81.1	20.5
Mountain Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,610	78.2	32.3
Mud Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,306	75.8	24.2
Nabensa	Distressed	Surrogate Std.	Distressed	Surrogate Std.	0	100.0	0.0
Naknek	Non-Distressed		Non-Distressed		32,789	64.7	33.4
Nanwalek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,340	75.8	42.5
Napakiak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,849	84.8	32.0
Napaskiak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,227	76.7	34.7
Naukati Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,384	83.3	20.6
Nelchina	Distressed	Expanded Std.	Non-Distressed		23,673	70.0	26.7
Nelson Lagoon	Distressed	Surrogate Std.	Non-Distressed		36,974	82.1	20.5
Nenana	Distressed	Expanded Std.	Non-Distressed		19,597	67.7	34.0
New Stuyahok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,402	84.9	32.8
Newhalen	Non-Distressed		Non-Distressed		23,690	65.5	34.5
Newtok	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,031	84.5	35.0
Nightmute	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,534	82.8	28.0
Nikiski	Non-Distressed		Non-Distressed		23,830	67.4	33.9
Nikolaevsk	Distressed	Expanded Std.	Distressed	Surrogate Std.	20,876	75.4	30.2
Nikolai	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,204	85.1	43.2
Nikolski	Distressed	Expanded Std.	Non-Distressed		18,672	69.2	61.5
Ninilchik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	17,002	77.4	20.6
Noatak	Distressed	Surrogate Std.	Distressed	Expanded Std.	15,886	74.1	32.1
Nome	Non-Distressed		Non-Distressed		35,756	49.9	49.1
Nondalton	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,476	82.9	31.8
Noorvik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,631	77.5	25.6
North Pole	Non-Distressed		Non-Distressed		23,068	62.0	40.1
Northway	Distressed	Surrogate Std.	Non-Distressed		15,034	71.0	33.3

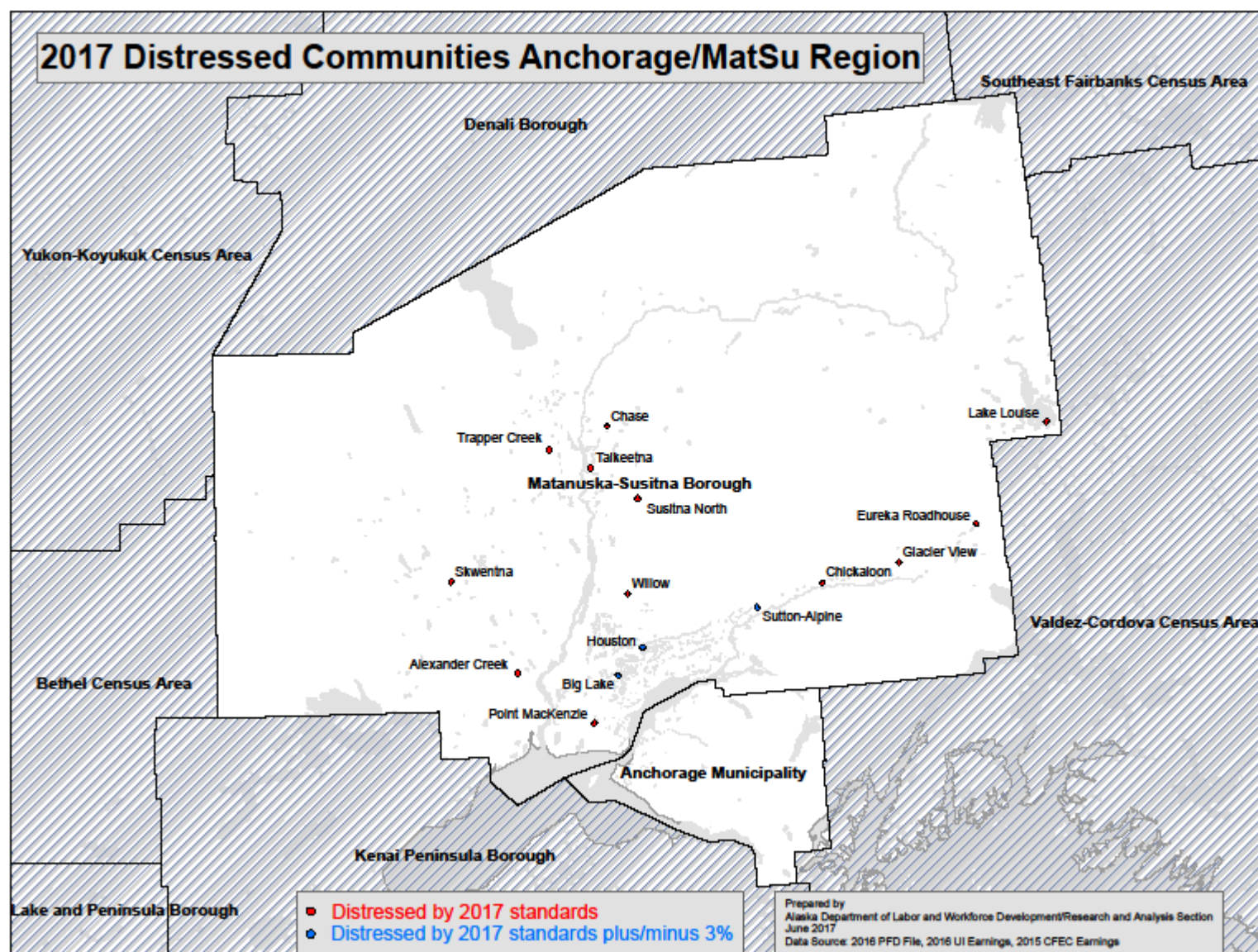
Distressed Community Status							
Alphabetical List							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Northway Junction	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,523	82.1	30.8
Northway Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,357	85.7	18.4
Nuiqsut	Non-Distressed		Non-Distressed		22,106	63.0	31.5
Nulato	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,541	75.8	29.8
Nunam Iqua	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,705	82.3	37.9
Nunapitchuk	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,195	84.7	39.1
Old Harbor	Distressed	Surrogate Std.	Distressed	Surrogate Std.	26,640	83.3	22.0
Oscarville	Non-Distressed		Non-Distressed		16,920	64.0	44.0
Ouzinkie	Distressed	Surrogate Std.	Non-Distressed		19,429	76.8	34.8
Palmer	Non-Distressed		Non-Distressed		21,856	63.3	39.6
Paxson	Non-Distressed		Non-Distressed		--	66.7	33.3
Pedro Bay	Non-Distressed		Non-Distressed		28,107	61.5	57.7
Pelican	Distressed	Surrogate Std.	Distressed	Surrogate Std.	24,138	82.9	25.0
Perryville	Distressed	Surrogate Std.	Distressed	Surrogate Std.	31,389	82.9	29.3
Petersburg	Distressed	Expanded Std.	Distressed	Surrogate Std.	46,677	70.8	32.5
Petersville	Non-Distressed		Non-Distressed		--	55.6	44.4
Pilot Point	Distressed	Surrogate Std.	Distressed	Expanded Std.	20,179	70.5	38.6
Pilot Station	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,874	82.1	30.5
Pitkas Point	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,570	91.4	20.0
Platinum	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,104	69.7	27.3
Pleasant Valley	Non-Distressed		Non-Distressed		22,296	65.4	34.0
Point Baker	Distressed	Surrogate Std.	Distressed	Surrogate Std.	26,033	100.0	8.3
Point Hope	Distressed	Surrogate Std.	Non-Distressed		17,445	72.0	31.3
Point Lay	Non-Distressed		Non-Distressed		25,060	58.5	44.4
Point MacKenzie	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,370	83.1	17.6
Pope-Vannoy Landing	Distressed	Surrogate Std.	Distressed	Surrogate Std.	--	75.0	25.0
Port Alexander	Distressed	Surrogate Std.	Distressed	Surrogate Std.	26,410	89.7	10.3
Port Alsworth	Distressed	Surrogate Std.	Distressed	Expanded Std.	18,782	71.3	34.1
Port Graham	Distressed	Surrogate Std.	Non-Distressed		15,415	74.2	44.3
Port Heiden	Non-Distressed		Non-Distressed		33,040	55.9	48.5
Port Lions	Distressed	Surrogate Std.	Distressed	Surrogate Std.	23,310	81.0	28.9
Port Protection	Distressed	Surrogate Std.	Distressed	Surrogate Std.	4,783	94.1	9.8
Portage Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	0	100.0	0.0
Primrose	Distressed	Expanded Std.	Non-Distressed		18,550	65.7	31.4
Prudhoe Bay	Non-Distressed		Non-Distressed		68,973	16.7	75.0
Quinhagak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,402	82.1	27.8
Rampart	Distressed	Surrogate Std.	Non-Distressed		20,645	78.3	26.1
Red Devil	Distressed	Surrogate Std.	Distressed	Surrogate Std.	1,982	100.0	17.6
Ridgeway	Non-Distressed		Non-Distressed		26,774	63.2	38.2
Ruby	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,076	81.7	31.7
Russian Mission	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,451	84.7	30.1
Salamatof	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,906	70.9	29.7
Salcha	Distressed	Surrogate Std.	Distressed	Expanded Std.	17,969	70.4	29.8
Sand Point	Non-Distressed		Non-Distressed		57,785	63.9	37.0
Savoonga	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,296	80.1	38.2
Saxman	Distressed	Expanded Std.	Distressed	Expanded Std.	17,823	69.4	34.2
Scammon Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,994	78.5	28.8
Selawik	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,763	83.0	12.8
Seldovia	Distressed	Surrogate Std.	Distressed	Surrogate Std.	23,561	86.1	19.3

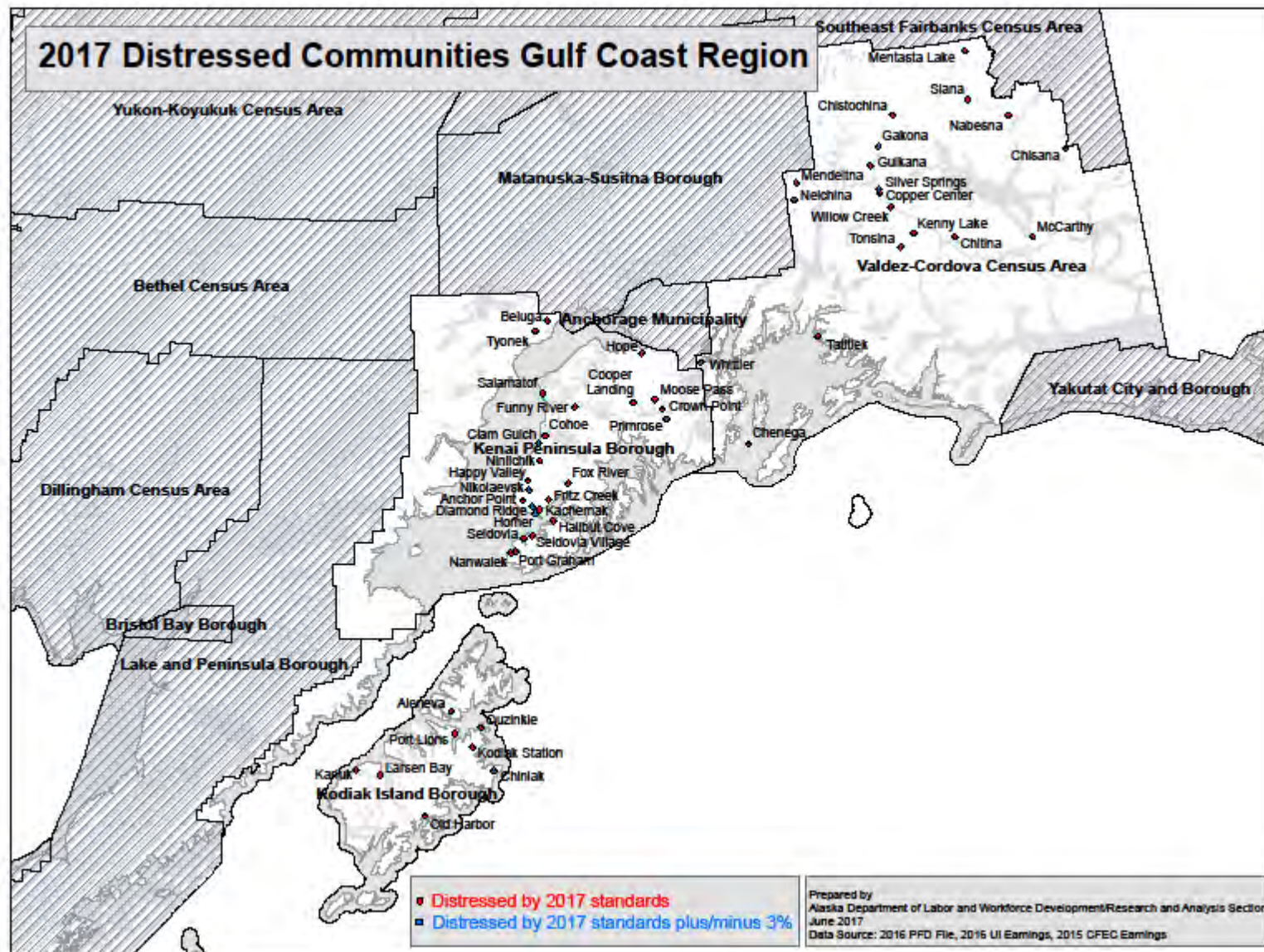
Distressed Community Status							
Alphabetical List							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Seldovia Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	17,855	71.3	31.5
Seward	Non-Distressed		Non-Distressed		28,396	63.5	36.0
Shageluk	Distressed	Surrogate Std.	Non-Distressed		12,319	78.3	30.4
Shaktoolik	Distressed	Surrogate Std.	Non-Distressed		9,242	83.9	26.6
Shishmaref	Distressed	Surrogate Std.	Distressed	Surrogate Std.	19,025	70.2	38.5
Shungnak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,804	76.4	24.7
Silver Springs	Distressed	Expanded Std.	Non-Distressed		20,004	68.4	32.1
Sitka	Non-Distressed		Non-Distressed		29,789	61.5	41.2
Skagway	Non-Distressed		Non-Distressed		22,394	60.1	37.3
Skwentna	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,938	90.0	3.3
Slana	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,510	88.4	17.4
Sleetmute	Distressed	Surrogate Std.	Distressed	Surrogate Std.	5,326	91.8	17.8
Soldotna	Non-Distressed		Non-Distressed		27,628	63.4	38.8
South Naknek	Distressed	Surrogate Std.	Distressed	Expanded Std.	20,468	77.8	24.4
South Van Horn	Non-Distressed		Non-Distressed		18,927	64.5	35.2
St. George	Non-Distressed		Non-Distressed		22,754	61.5	40.4
St. Mary's	Distressed	Surrogate Std.	Distressed	Expanded Std.	15,376	74.7	38.4
St. Michael	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,085	79.0	29.9
St. Paul	Non-Distressed		Non-Distressed		29,828	60.1	47.7
Stebbins	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,507	80.9	32.1
Steele Creek	Non-Distressed		Non-Distressed		30,750	56.0	43.9
Sterling	Non-Distressed		Non-Distressed		26,972	64.5	35.8
Stevens Village	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,900	83.3	26.7
Stony River	Distressed	Surrogate Std.	Distressed	Surrogate Std.	7,639	91.7	37.5
Sunrise	Non-Distressed		Non-Distressed		27,415	50.0	41.7
Susitna North	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,346	76.4	26.3
Sutton-Alpine	Distressed	Expanded Std.	Non-Distressed		19,175	68.5	31.6
Takotna	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,782	77.1	48.6
Talkeetna	Distressed	Surrogate Std.	Non-Distressed		16,622	72.1	30.8
Tanacross	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,211	80.7	27.5
Tanaina	Non-Distressed		Non-Distressed		26,993	59.2	43.0
Tanana	Distressed	Surrogate Std.	Non-Distressed		14,015	70.6	23.7
Tatitlek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,657	76.7	38.3
Tazlina	Non-Distressed		Non-Distressed		23,569	64.5	36.4
Teller	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,122	75.3	38.8
Tenakee Springs	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,659	90.1	18.8
Tetlin	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,866	83.6	31.5
Thorne Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,486	76.4	25.4
Togiak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	14,902	86.3	20.9
Tok	Distressed	Expanded Std.	Non-Distressed		17,842	69.3	32.2
Toksook Bay	Distressed	Surrogate Std.	Distressed	Surrogate Std.	13,106	80.1	39.1
Tolsona	Non-Distressed		Distressed	Surrogate Std.	34,588	55.6	33.3
Tonsina	Distressed	Surrogate Std.	Distressed	Surrogate Std.	4,243	92.4	7.6
Trapper Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,852	83.5	20.0
Tuluksak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	6,888	88.9	31.6
Tuntutuliak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,556	81.1	34.1
Tununak	Distressed	Surrogate Std.	Distressed	Surrogate Std.	9,338	85.4	28.0
Twin Hills	Distressed	Surrogate Std.	Distressed	Surrogate Std.	11,786	78.2	36.4
Two Rivers	Non-Distressed		Non-Distressed		23,126	62.9	37.1

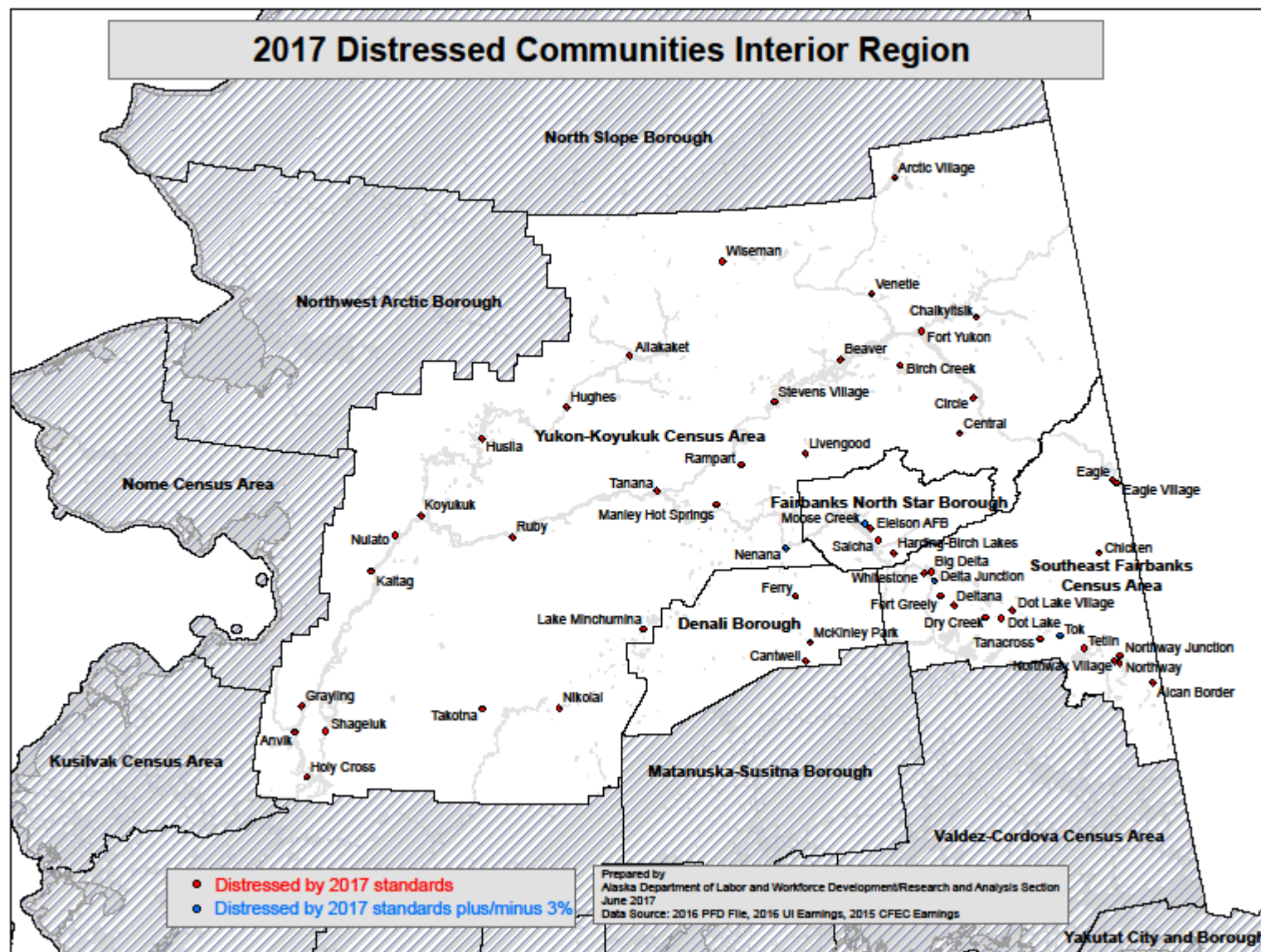
Distressed Community Status							
Alphabetical List							
Community	2017		2016		Data Used to Determine 2017 Status		
	Status	Qualification Method	Status	Qualification Method	Average Earnings in 2016	% With Earnings Less Than \$20,280	% Employed All Four Quarters
Tyonek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,916	84.8	22.0
Ugashik	Distressed	Surrogate Std.	Non-Distressed		19,815	90.9	0.0
Unalakleet	Non-Distressed		Non-Distressed		24,104	63.1	39.4
Unalaska	Non-Distressed		Non-Distressed		48,382	38.2	62.9
Upper Kalskag	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,958	75.5	39.7
Utqiagvik	Non-Distressed		Non-Distressed		39,374	47.0	49.8
Valdez	Non-Distressed		Non-Distressed		42,297	51.5	49.9
Venetie	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,878	84.6	20.6
Wainwright	Non-Distressed		Non-Distressed		19,655	65.8	36.9
Wales	Distressed	Surrogate Std.	Distressed	Surrogate Std.	15,188	72.9	51.0
Wasilla	Non-Distressed		Non-Distressed		25,393	63.7	38.0
Whale Pass	Distressed	Surrogate Std.	Distressed	Surrogate Std.	10,345	81.8	21.2
White Mountain	Distressed	Surrogate Std.	Distressed	Surrogate Std.	16,861	73.6	43.2
Whitestone	Distressed	Surrogate Std.	Distressed	Surrogate Std.	8,523	81.4	34.3
Whittier	Distressed	Expanded Std.	Non-Distressed		20,593	68.5	35.3
Willow	Distressed	Surrogate Std.	Distressed	Surrogate Std.	17,218	75.1	26.3
Willow Creek	Distressed	Surrogate Std.	Distressed	Surrogate Std.	12,686	77.2	20.6
Wiseman	Distressed	Surrogate Std.	Distressed	Expanded Std.	14,374	76.9	0.0
Womens Bay	Non-Distressed		Non-Distressed		24,083	64.3	37.8
Wrangell	Distressed	Expanded Std.	Distressed	Expanded Std.	24,650	70.4	31.6
Yakutat	Non-Distressed		Non-Distressed		32,073	63.1	38.5

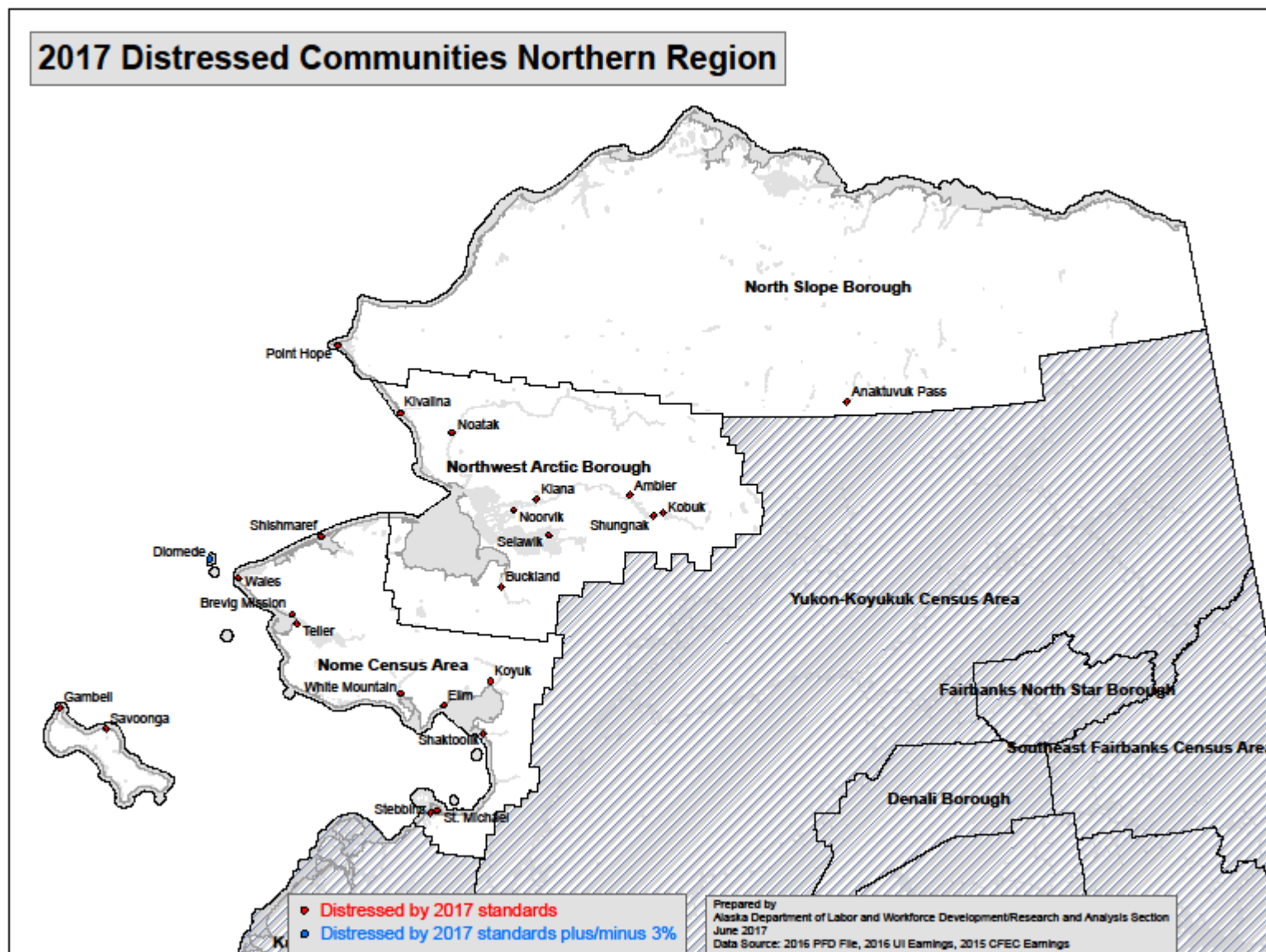
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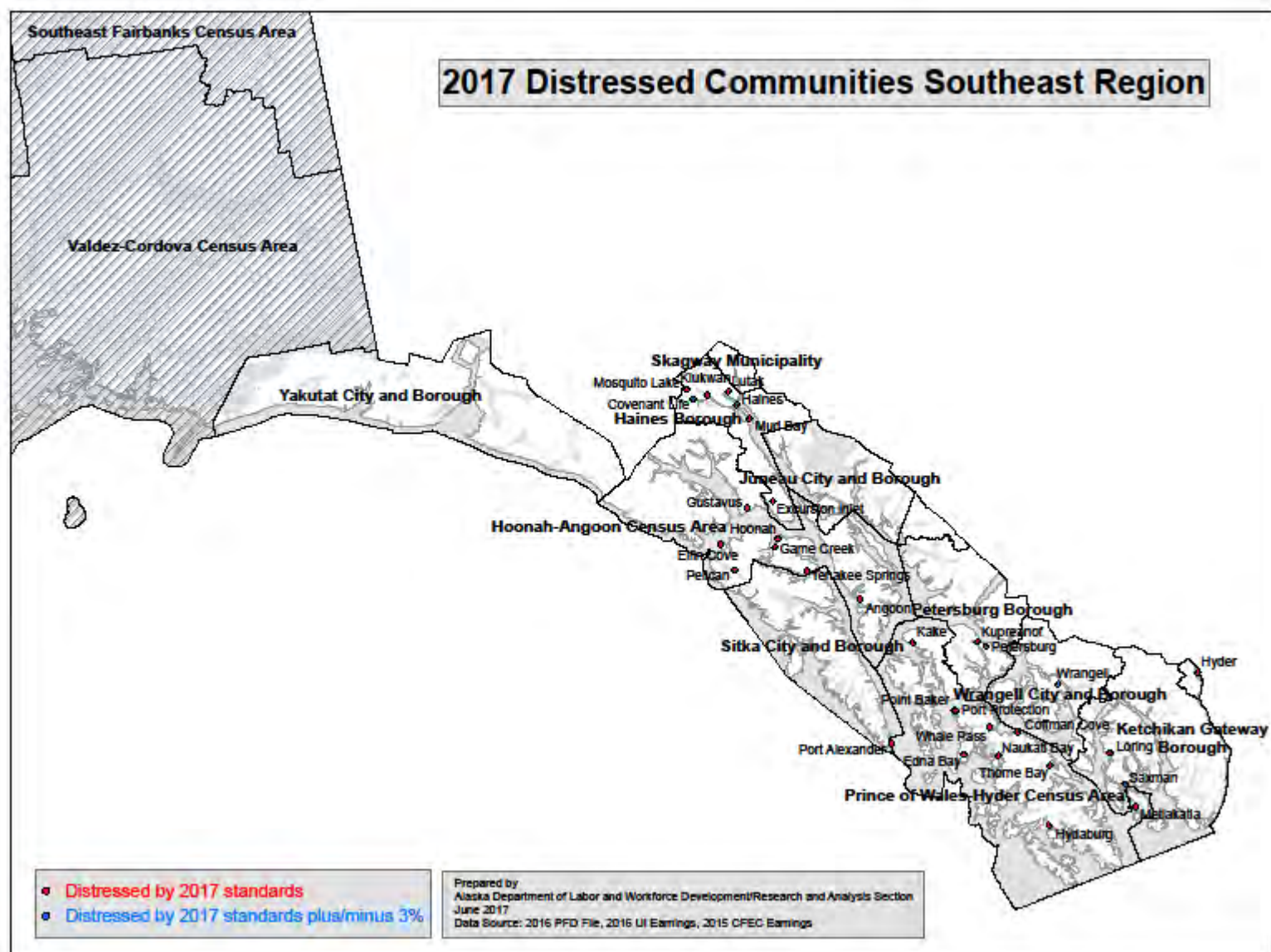
1. Cells marked with – were not able to be disclosed due to confidentiality policies
2. Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section; and Commercial Fisheries Entry Commission
3. Rose shaded = status has declined since 2016
4. Green shaded = status has improved since 2016

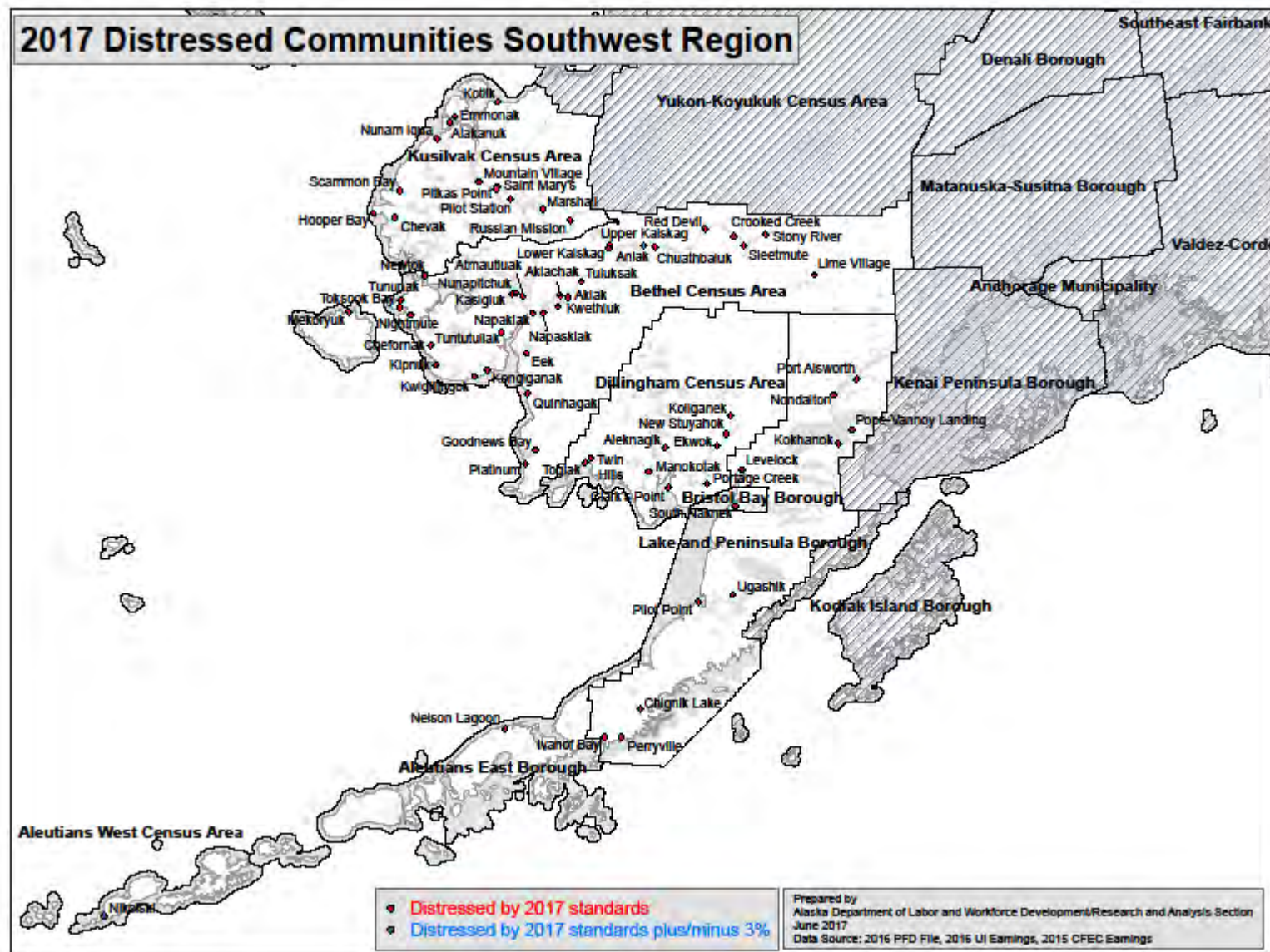












APPENDIX 13.24 POTENTIAL AGENCY MITIGATION FUNDING RESOURCES

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Federal Funding Resources

The federal government requires local governments to have a HMP in place to be eligible for mitigation funding opportunities through FEMA such as the UHMA Programs and the HMGP. The Mitigation Technical Assistance Programs available to local governments are also a valuable resource. FEMA may also provide temporary housing assistance through rental assistance, mobile homes, furniture rental, mortgage assistance, and emergency home repairs. The Disaster Preparedness Improvement Grant also promotes educational opportunities with respect to hazard awareness and mitigation.

- FEMA, through its Emergency Management Institute, offers training in many aspects of emergency management, including hazard mitigation. FEMA has also developed a large number of documents that address implementing hazard mitigation at the local level. Five key resource documents are available from FEMA Publication Warehouse (1-800-480-2520) and are briefly described here:
 - How-to Guides. FEMA has developed a series of how-to guides to assist states, communities, and tribes in enhancing their hazard mitigation planning capabilities. The first four guides describe the four major phases of hazard mitigation planning. The last five how-to guides address special topics that arise in hazard mitigation planning such as conducting cost-benefit analysis and preparing multi-jurisdictional plans. The use of worksheets, checklists, and tables make these guides a practical source of guidance to address all stages of the hazard mitigation planning process. They also include special tips on meeting DMA 2000 requirements (<http://www.fema.gov/hazard-mitigation-planning-resources#1>).
 - Local Mitigation Planning Handbook, March 2013: This handbook explains the basic concepts of hazard mitigation and provides guidance to local governments on developing or updating hazard mitigation plans to meet the requirements of Title 44 CFR §201.6 for FEMA approval and eligibility to apply for FEMA Hazard Mitigation Assistance grant programs. (<http://www.fema.gov/library/viewRecord.do?id=7209>)
 - Earthquake Hazard Mitigation Handbook: This handbook provides local jurisdictions with mitigation ideas, many of which have demonstrated success and timeliness. These mitigation measures should be used as a source of ideas for potential mitigation projects, regardless of whether it will receive FEMA funding. (<http://www.starr-team.com/starr/RegionalWorkspaces/RegionX/Documents/Hazard%20Mitigation%20Handbooks/EQHazMitHandbook.pdf>)
 - Flood Hazard Mitigation Handbook: This handbook provides local jurisdictions with mitigation ideas that have demonstrated success and can be timely implemented. These mitigation measures relate to the most common damages sustained by severe flood events. The handbook can be a useful mitigation tool regardless whether a specific project is proposed for FEMA funding under either the Public Assistance or Mitigation programs. (<http://www.starr-team.com/starr/RegionalWorkspaces/RegionX/Documents/Hazard%20Mitigation%20Handbooks/FloodHazMitHandbook.pdf>)
 - Hurricane Hazard Mitigation Handbook: This handbook provides local jurisdictions with mitigation ideas, many of which have demonstrated success in the past. These mitigation measures should be used as a source of ideas for potential mitigation

Potential Agency Funding Resources

- projects, regardless of whether they will receive FEMA funding. (<http://www.starr-team.com/starr/RegionalWorkspaces/RegionX/Documents/Hazard%20Mitigation%20Handbooks/HurricaneMitHandbook.pdf>)
- A Guide to Recovery Programs FEMA 229(4), September 2005. The programs described in this guide may all be of assistance during disaster incident recovery. Some are available only after a presidential declaration of disaster, but others are available without a declaration. Please see the individual program descriptions for details. (<http://www.fema.gov/txt/rebuild/ltrc/recoveryprograms229.txt>)
 - The Emergency Management Guide for Business and Industry. FEMA 141, October 1993. This guide provides a step-by-step approach to emergency management planning, response, and recovery. It also details a planning process that businesses can follow to better prepare for a wide range of hazards and emergency events. This effort can enhance a business's ability to recover from financial losses, loss of market share, damages to equipment, and product or business interruptions. This guide could be of great assistance to a community's industries and businesses located in hazard prone areas. (<https://www.fema.gov/media-library/assets/documents/3412>)
 - The 2015 Hazard Mitigation Assistance (HMA) Guidance and Addendum, February 27 and March 3, 2015 respectively. Part I of the Hazard Mitigation Assistance (HMA) Guidance introduces the three HMA programs, identifies roles and responsibilities, and outlines the organization of the document. This guidance applies to Hazard Mitigation Grant Program (HMGP) disasters declared on or after the date of publication unless indicated otherwise. This guidance is also applicable to the Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) programs; the application cycles are announced via <http://www.grants.gov/>. The guidance in this document is subject to change based on new laws or regulations enacted after publication.
 - The Hazard Mitigation Grant Program. FEMA strives to connect individuals and state, local, and tribal government representatives with the resources they need to implement hazard mitigation measures (any sustainable action taken to reduce or eliminate long-term risk to people and property from future disasters) in their communities. The HMGP supports cost-effective post-disaster projects and is the longest running mitigation program among FEMA's three grant programs. Studies have shown that every \$1 spent equals \$4 of future damages mitigated. (<https://www.fema.gov/hazard-mitigation-grant-program>)
 - HMGP Program Post Fire for Fiscal Years 2017 and 2018. FEMA places a high priority on supporting wildfire recovery using the Hazard Mitigation Grant Program (HMGP) for Fire Management Assistance declarations in fiscal years 2017 and 2018. Section 20602 of the Bipartisan Budget Act of 2018 authorizes HMGP Post Fire assistance. (https://www.fema.gov/media-library-data/1528138266076-5782b600b82656a553b68c465e8d3871/Fact_Sheet_HMGP_Post_Fire_Final_508_6.01.18.pdf)
 - States, territories, and federally-recognized tribes with Fire Management Assistance declarations from October 01, 2016, until 11:59PM local time September 30, 2018 are eligible to apply.

Potential Agency Funding Resources

- The application period is 6 months from the date of applicant funding notification, and extensions may be requested.
- FEMA encourages wildfire mitigation and related hazards such as flood or erosion. However, HMGP is available for reducing any hazard's risk reduction. Funding will be made available to the declared county or counties. The project may be outside of the designated Fire Assistance Management areas as long as the risk reduction benefits the declared county or counties (e.g., watershed mitigation). If funding cannot be used in these areas, then it may be available statewide. Applicants must detail their respective process, including deadlines, in their HMGP Administrative Plan.
- Federally recognized tribes with land burned in Fire Management Assistance declarations may choose to apply for HMGP assistance as an applicant. Tribal governments may also choose to apply through states as subapplicants. If tribal land is not burned, subapplicant funding may be unavailable since it is prioritized for declared areas. For additional questions regarding tribal eligibility, please contact your Regional Tribal Liaison (<https://www.fema.gov/tribal-contacts>).
- FEMA's website (available at: <http://www.fema.gov>) includes links to information, resources, and grants that communities can use in planning and implementing community resilience and sustainability measures.
- FEMA also administers emergency management grants (<http://www.fema.gov/help/site.shtm>) and various firefighter grant programs (<http://www.firegrantsupport.com/>) such as
 - Emergency Management Performance Grant (EMPG). This is a pass through grant. The amount is determined by the state. The grant is intended to support critical assistance to sustain and enhance state and local emergency management capabilities at the State and local levels for all-hazard mitigation, preparedness, response, and recovery including coordination of inter-governmental (federal, state, regional, local, and tribal) resources, joint operations, and mutual aid compacts state-to-state and nationwide. Sub-recipients must be compliant with National Incident Management System (NIMS) implementation as a condition for receiving funds. Requires 50 percent match. (<https://www.fema.gov/emergency-management-performance-grant-program>)
 - National Earthquake Hazards Reduction Program (NEHRP). The National Earthquake Hazards Reduction Program (NEHRP) seeks to mitigate earthquake losses in the U.S. through both basic and directed research and implementation activities in the fields of earthquake science and engineering. (<https://www.fema.gov/national-earthquake-hazards-reduction-program>)

The NEHRP is the federal government's coordinated approach to addressing earthquake risks. Congress established the program in 1977 (Public Law 95-124) as a long-term, nationwide program to reduce the risks to life and property in the U.S. resulting from earthquakes. The NEHRP is managed as a collaborative effort among FEMA, the National Institute of Standards and Technology, the National Science Foundation, the U.S. Geological Survey, and the Department of Interior.

Potential Agency Funding Resources

The four goals of the NEHRP are to:

- Develop effective practices and policies for earthquake loss-reduction and accelerate their implementation.
- Improve techniques to reduce seismic vulnerability of facilities and systems.
- Improve seismic hazards identification and risk-assessment methods and their use.
- Improve the understanding of earthquakes and their effects.

NEHRPDHS information may be found at:

<https://nehrp.gov/contracts/index.htm>

- Assistance to Fire Fighters Grant (AFG), Fire Prevention and Safety (FP&S), Staffing for Adequate Fire and Emergency Response Grants (SAFER), and Assistance to Firefighters Station Construction Grant programs. Information can be found at: (<http://forestry.alaska.gov/fire/vfa.htm>).
- Department of Homeland Security (DHS) provides the following grants:
 - Homeland Security Grant Programs (HSGP) and State Homeland Security Programs (SHSP) are 80 percent passed through grants. SHSP supports implementing the State Homeland Security Strategies to address identified planning, organization, equipment, training, and exercise needs for acts of terrorism and other catastrophic events. In addition, SHSP supports implementing the National Preparedness Guidelines, the NIMS, and the National Response Framework (NRF). Must ensure that at least 25 percent of funds are dedicated towards law enforcement terrorism prevention-oriented activities. (<https://www.dhs.gov/homeland-security-grant-program-hsgp>)
 - Citizen Corps Program (CCP). The Citizen Corps' mission is to bring community and government leaders together to coordinate involving community members in emergency preparedness, planning, mitigation, response, and recovery activities. (<http://www.dhs.gov/citizen-corps>)
 - Emergency Operations Center (EOC) Guidance. This program is intended to improve emergency management and preparedness capabilities by supporting flexible, sustainable, secure, strategically located, and fully interoperable Emergency Operations Centers (EOCs) with a focus on addressing identified deficiencies and needs. Fully capable emergency operations facilities at the State and local levels are an essential element of a comprehensive national emergency management system and are necessary to ensure continuity of operations and continuity of government in major disasters or emergencies caused by any hazard. Requires 25 percent match. (<https://www.fema.gov/media-library/assets/documents/20622>)
 - Emergency Alert System (EAS). Resilient public alert and warning tools are essential to save lives and protect property during times of national, state, regional, and local emergencies. The Emergency Alert System (EAS) is used by alerting authorities to send warnings via broadcast, cable, satellite, and wireline communications pathways. Emergency Alert System participants, which consist of broadcast, cable, satellite, and wireline providers, are the stewards of this important public service in close partnership with alerting officials at all levels of government. The EAS is also used

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- when all other means of alerting the public are unavailable, providing an added layer of resiliency to the suite of available emergency communication tools. The EAS is in a constant state of improvement to ensure seamless integration of CAP-based and emerging technologies. (<https://www.fema.gov/emergency-alert-system>)
- The U.S. Department of Commerce's grant programs include:
 - The National Oceanic and Atmospheric Administration (NOAA), provides funds to the state of Alaska due to Alaska's high threat for tsunami. The allocation supports the promotion of local, regional, and state level tsunami mitigation and preparedness; installation of warning communications systems; installation of warning communications systems; installation of tsunami signage; promotion of the Tsunami Ready Program in Alaska; development of inundation models; and delivery of inundation maps and decision-support tools to communities in Alaska. (http://www.tsunami.noaa.gov/warning_system_works.html)
 - Remote Community Alert Systems (RCASP) grant for outdoor alerting technologies in remote communities effectively underserved by commercial mobile service for the purpose of enabling residents of those communities to receive emergency messages. (<http://www.federalgrants.com/Remote-Community-Alert-Systems-Program-11966.html>). This program is a contributing element of the Warning, Alert, and Response Network (WARN) Act.
 - The U.S. Economic Development Administration (EDA's). The EDA's role in disaster recovery is to facilitate timely and effective delivering Federal economic development assistance to support long-term community economic recovery planning and project implementation, redevelopment, and resiliency. EDA is uniquely positioned to coordinate regional disaster recovery efforts in partnership with its extensive network of Economic Development Districts (EDDs), University Centers, institutions of higher education and other partners in designated impact areas. EDA has published the FY18 Disaster Supplemental Notice of Funding Opportunity (NOFO) making \$587 million available to eligible grantees in communities where a Presidential declaration of a major disaster was issued under the Stafford Act as a result of Hurricanes Harvey, Irma and Maria, wildfires and other natural disasters in 2017.
 - Public Works and Development Facilities Program. EDA's Public Works program helps distressed communities revitalize, expand, and upgrade their physical infrastructure. This program enables communities to attract new industry; encourage business expansion; diversify local economies; and generate or retain long-term, private-sector jobs and investment through the acquisition or development of land and infrastructure improvements needed for the successful establishment or expansion of industrial or commercial enterprises. (<https://www.eda.gov/pdf/about/Public-Works-Program-1-Pager.pdf>)
 - The U.S. Environmental Protection Agency (EPA). EPA's mission is to protect human health and the environment by ensuring that Americans have clean air, land and water.
 - Under EPA's Clean Water State Revolving Fund (CWSRF) program, each state maintains a revolving loan fund to provide independent and permanent sources of low-cost financing for a wide range of water quality infrastructure projects, including: municipal wastewater treatment projects; non-point source projects; watershed

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protection or restoration projects; and estuary management projects.

(<https://www.epa.gov/cwsrf>)

- Indian Environmental General Assistance Program (IGAP). 1992, Congress passed the Indian Environmental General Assistance Program Act (42 U.S.C. 4368b) which authorizes EPA to provide General Assistance Program (GAP) grants to federally recognized tribes and tribal consortia for planning, developing, and establishing environmental protection programs in Indian country, as well as for developing and implementing solid and hazardous waste programs on tribal lands.

The goal of this program is to assist tribes in developing the capacity to manage their own environmental protection programs, and to develop and implement solid and hazardous waste programs in accordance with individual tribal needs and applicable federal laws and regulations. <http://www.epa.gov/Indian/gap.htm>

- Department of Agriculture (USDA). Provides diverse funding opportunities; providing a wide benefit range. Their grants and loans website provides a brief programmatic overview with links to specific programs and services.

(<http://www.rd.usda.gov/programs-services>)

- Farm Service Agency: Emergency Conservation Program, Non-Insured Assistance, Emergency Forest Restoration Program, Emergency Watershed Protection, Rural Housing Service, Rural Utilities Service, and Rural Business and Cooperative Service.

(<http://www.fsa.usda.gov/FSA/stateoffapp?mystate=ak&area=home&subject=landing&topic=landing>)

- Natural Resources Conservation Service (NRCS) has several funding sources to fulfill mitigation needs.

(<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/alphabetical/>)

- ♦ Conservation Technical Assistance Program (CTA) is voluntary program available to any group or individual interested in conserving their natural resources and sustaining agricultural production. The program assists land users with addressing opportunities, concerns, and problems related to using their natural resources enabling them to make sound natural resource management decisions on private, tribal, and other non-federal lands.
(<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/>)
- ♦ Conservation Innovation Grants (CIG) is a voluntary program intended to stimulate developing and adopting innovative conservation approaches and technologies while leveraging federal investment in environmental enhancement and protection, in conjunction with agricultural production. Under CIG, Environmental Quality Incentives Program funds are used to award competitive grants to non-federal governmental or nongovernmental organizations, tribes, or individuals.

CIG enables NRCS to work with other public and private entities to accelerate technology transfer and adoption of promising technologies and approaches to address some of the nation's most pressing natural resource concerns. CIG will benefit agricultural producers by providing more options for environmental

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enhancement and compliance with federal, state, and local regulations.

(<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cig/>)

- ♦ The Environmental Quality Incentives Program (EQIP) is a voluntary program that provides financial and technical assistance to agricultural producers through contracts up to a maximum term of ten years in length. These contracts provide financial assistance to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland. In addition, a purpose of EQIP is to help producers meet federal, state, tribal and local environmental regulations. (<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>)
- ♦ The Emergency Watershed Protection Program (EWP) is designed is to undertake emergency measures, including the purchase of flood plain easements, for runoff retardation and soil erosion prevention to safeguard lives and property from floods, drought, and the products of erosion on any watershed whenever fire, flood or any other natural occurrence is causing or has caused a sudden impairment of the watershed. (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/>)
- ♦ Watershed Surveys and Planning. NRCS watershed activities in Alaska are voluntary efforts requested through conservation districts and units of government and/or tribes. The purpose of the program is to assist federal, state, and local agencies and tribal governments to protect watersheds from damage caused by erosion, floodwater, and sediment and to conserve and develop water and land resources. Resource concerns addressed by the program include water quality, opportunities for water conservation, wetland and water storage capacity, agricultural drought problems, rural development, municipal and industrial water needs, upstream flood damages, and water needs for fish, wildlife, and forest-based industries. (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/wsp/>)
- Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy, Weatherization Assistance Program. This program minimizes the adverse effects of high energy costs on low-income, elderly, and handicapped citizens through client education activities and weatherization services such as an all-around safety check of major energy systems, including heating system modifications and insulation checks. (<https://www.energy.gov/eere/wipo/weatherization-assistance-program>)
 - The Tribal Energy Program offers financial and technical assistance to Indian tribes to help them create sustainable renewable energy installations on their lands. This program promotes tribal energy self-sufficiency and fosters employment and economic development on America's tribal lands. (<https://www.energy.gov/indianenergy/office-indian-energy-policy-and-programs>)
- Department of Health and Human Services, Administration of Children & Families, Administration for Native Americans (ANA). The ANA awards funds through grants to American Indians, Native Americans, Native Alaskans, Native Hawaiians, and Pacific

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Islanders. These grants are awarded to individual organizations that successfully apply for discretionary funds. ANA publishes in the Federal Register an announcement of funds available, the primary areas of focus, review criteria, and application information.

(<https://ami.grantsolutions.gov/>)

- Department of Housing and Urban Development (HUD) provides a variety of disaster resources. They also partner with federal and state agencies to help implement disaster recovery assistance. Under the National Response Framework the FEMA and the Small Business Administration (SBA) offer initial recovery assistance.
(<https://www.hud.gov/info/disasterresources>)
 - HUD, Office of Homes and Communities, Section 108 Loan Guarantee Programs. This program provides loan guarantees as security for federal loans for acquisition, rehabilitation, relocation, clearance, site preparation, special economic development activities, and construction of certain public facilities and housing.
(<https://www.hudexchange.info/programs/section-108/>)
 - HUD, Office of Homes and Communities, Section 184 Indian Home Loan Guarantee Programs (IHLGP). The Section 184 Indian Home Loan Guarantee Program is a home mortgage specifically designed for American Indian and Alaska Native families, Alaska Villages, Tribes, or Tribally Designated Housing Entities. Section 184 loans can be used, both on and off native lands, for new construction, rehabilitation, purchase of an existing home, or refinance.
 - Because of the unique status of Indian lands being held in Trust, Native American homeownership has historically been an underserved market. Working with an expanding network of private sector and tribal partners, the Section 184 Program endeavors to increase access to capital for Native Americans and provide private funding opportunities for tribal housing agencies with the Section 184 Program.
(https://www.hud.gov/program_offices/public_indian_housing/ih/homeownership/184)
 - Indian Housing Block Grant / Native American Housing Assistance and Self Determination Act (IHBG/NAHASDA) administration, operating & construction funds. The act is separated into seven sections:

The Indian Housing Block Grant Program (IHBG) is a formula grant that provides a range of affordable housing activities on Indian reservations and Indian areas. The block grant approach to housing for Native Americans was enabled by the Native American Housing Assistance and Self Determination Act of 1996 (NAHASDA).

Eligible IHBG recipients are federally recognized Indian tribes or their tribally designated housing entity (TDHE), and a limited number of state recognized tribes who were funded under the Indian Housing Program authorized by the U.S. Housing Act of 1937 (USHA). With the enactment of NAHASDA, Indian tribes are no longer eligible for assistance under the USHA.

An eligible recipient must submit to HUD an Indian Housing Plan (IHP) each year to receive funding. At the end of each year, recipients must submit to HUD an Annual Performance Report (APR) reporting on their progress in meeting the goals and objectives included in their IHPs.

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- Eligible activities include housing development, assistance to housing developed under the Indian Housing Program, housing services to eligible families and individuals, crime prevention and safety, and model activities that provide creative approaches to solving affordable housing problems.
(http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/i/h/grants/ihbg)
- Community Development Block Grants (CDBG) provides grant assistance and technical assistance to aid communities in planning activities that address issues detrimental to the health and safety of local residents, such as housing rehabilitation, public services, community facilities, and infrastructure improvements that would primarily benefit low-and moderate-income. persons
(<https://myecosystem.aecom.com/SitePages/Home.aspx>)
 - National Disaster Resilience (NDR) grant is a HUD/CDBG. The grant opportunity is called the Community Block Development Grant-National Disaster Resilience (CDBG-NDR). HUD sponsors the National Disaster Resilience Competition (NDRC) to help eligible communities impacted by federally declared disasters in 2011, 2012 and 2013 become more resilient. The NDRC is a two-phase process that will competitively award nearly \$1 billion in HUD Disaster Recovery funds to the most impacted, distressed and needy eligible communities. The grant opportunity is called the Community Block Development Grant-National Disaster Resilience (CDBG-NDR). The State of Alaska is one of many applicants nationwide eligible to apply on behalf of its impacted communities. (<https://www.hudexchange.info/programs/cdbg-dr/>)
 - HUD/Indian Community Development Block Grants (ICDBG) provide grant assistance and technical assistance to aid communities or Indian tribes in planning activities that address issues detrimental to the health and safety of local residents, such as housing rehabilitation, public services, community facilities, and infrastructure improvements that would primarily benefit low-and moderate-income. persons
(http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/i/h/grants/icdbg)
 - Department of Labor (DOL), Employment and Training Administration, Disaster Unemployment Assistance (DUA). Provides weekly unemployment subsistence grants for those who become unemployed because of a major disaster or emergency. Applicants must have exhausted all benefits for which they would normally be eligible.
(<http://www.workforcesecurity.doleta.gov/unemploy/disaster.asp>)
 - The Workforce Investment Act contains provisions aimed at supporting employment and training activities for Indian, Alaska Native, and Native Hawaiian individuals. The Department of Labor's Indian and Native American Programs (INAP) funds grant programs that provide training opportunities at the local level for this target population. (<http://www.dol.gov/dol/topic/training/indianprograms.htm>)
 - Department of Transportation (DOT), Hazardous Materials Emergency Preparedness (HMEP) Grant. The Hazardous Materials Transportation Safety and Security Reauthorization Act of 2005 authorizes the U.S. DOT to provide assistance to public sector employees through training and planning grants to States, Territories, and Native

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American tribes for emergency response. The purpose of this grant program is to increase State, Territorial, Tribal, and local effectiveness in safely and efficiently handling hazardous materials accidents and incidents, enhance implementation of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), and encourage a comprehensive approach to emergency training and planning by incorporating the unique challenges of responses to transportation situations.

(<http://www.phmsa.dot.gov/hazmat/grants>)

- Federal Financial Institutions. Member banks of Federal Deposit Insurance Corporation, Financial Reporting Standards or Federal Home Loan Bank Board may be permitted to waive early withdrawal penalties for Certificates of Deposit and Individual Retirement Accounts.
- Internal Revenue Service (IRS), Disaster Tax Relief. Provides extensions to current year's tax return, allows deductions for disaster losses, and allows amendment of previous year's tax returns. (<https://www.irs.gov/newsroom/tax-relief-in-disaster-situations>)
- Small Business Administration (SBA) Disaster Assistance Loans and Grants program provides information concerning disaster assistance, preparedness, planning, cleanup, and recovery planning. (<https://disasterloan.sba.gov/ela/Information/Index>)
- U.S. Army Corps of Engineers (USACE) Alaska District's Civil Works Branch studies potential water resource projects in Alaska. These studies analyze and solve water resource issues of concern to the local communities. These issues may involve navigational improvements, flood control or ecosystem restoration. The agency also tracks flood hazard data for over 300 Alaskan communities on floodplains or the sea coast. These data help local communities assess the risk of floods to their communities and prepare for potential future floods. The USACE is a member and co-chair of the Alaska Climate Change Sub-Cabinet.
 - Civil Works and Planning
(<http://www.poa.usace.army.mil/Missions/CivilWorksandPlanning.aspx>)
 - Environmental Resources Section
(<http://www.poa.usace.army.mil/About/Offices/Engineering/EnvironmentalResources.aspx>)
 - USACE Alaska District Grants
(http://search.usa.gov/search?affiliate=alaska_district&query=grants)
- The Grants.gov program management office was established, in 2002, as a part of the President's Management Agenda. Managed by the Department of Health and Human Services, Grants.gov is an E-Government initiative operating under the governance of the Office of Management and Budget.

Under the president's management agenda, the office was chartered to deliver a system that provides a centralized location for grant seekers to find and apply for federal funding opportunities. Today, the Grants.gov system houses information on over 1,000 grant programs and vets grant applications for 26 federal grant-making agencies.

State Funding Resources

- Department of Military and Veterans Affairs (DMVA): Provides damage appraisals and settlements for VA-insured homes, and assists with filing of survivor benefits. (<http://veterans.alaska.gov/>)
 - DHS&EM within DMVA is responsible for improving hazard mitigation technical assistance for local governments for the State of Alaska. Providing hazard mitigation training, current hazard information and communication facilitation with other agencies will enhance local hazard mitigation efforts. DHS&EM administers FEMA mitigation grants to mitigate future disaster damages such as those that may affect infrastructure including elevating, relocating, or acquiring hazard-prone properties. (<http://ready.alaska.gov/Plans/Mitigation>)

DHS&EM also provides mitigation funding resources for mitigation planning on their Web site at <http://ready.alaska.gov/grants>.
- Division of Health and Social Services (DHSS): On this site you will find information intended to assist all who are interested in DHSS grants and services they support. (<http://dhss.alaska.gov/fms/grants/pages/default.aspx> and <http://dhss.alaska.gov/fms/grants/Pages/grants.aspx>)
- Division of Health and Social Services (DSS): Provides special outreach services for seniors, including food, shelter and clothing. (<http://dhss.alaska.gov/dsds/Pages/hcb/hcb.aspx>)
- Division of Insurance (DOI): Provides assistance in obtaining copies of policies and provides information regarding filing claims. (<http://commerce.state.ak.us/dnn/ins/Consumers/AlaskaConsumerGuide.aspx>)
- DCRA within the DCCED administers the HUD/CDBG, FMA Program, and the Climate Change Sub-Cabinet's Interagency Working Group's program funds and administers various flood and erosion mitigation projects, including the elevation, relocation, or acquisition of flood-prone homes and businesses throughout the State. This division also administers programs for State's "distressed" and "targeted" communities. (<http://www.commerce.state.ak.us/dca/>)
 - DCRA Planning and Land Management staff provide Alaska Climate Change Impact Mitigation Program (ACCIMP) funding to Alaskan communities that meet one or more of the following criteria related to flooding, erosion, melting permafrost, or other climate change-related phenomena: Life/safety risk during storm/flood events; loss of critical infrastructure; public health threats; and loss of 10% of residential dwellings. (<http://commerce.state.ak.us/dnn/dcra/PlanningLandManagement/ACCIMP.aspx>)

The Hazard Impact Assessment is the first step in the ACCIMP process. The HIA identifies and defines the climate change-related hazards in the community, establishes current and predicted impacts, and provides recommendations to the community on alternatives to mitigate the impact. (http://commerce.alaska.gov/dca/planning/accimp/hazard_impact.html)
- Department of Environmental Conservation (DEC). DEC's primary roles and responsibilities concerning hazards mitigation are ensuring safe food and safe water, and

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pollution prevention and pollution response. DEC ensures water treatment plants, landfills, and bulk fuel storage tank farms are safely constructed and operated in communities. Agency and facility response plans include hazards identification and pollution prevention and response strategies. (<http://dec.alaska.gov/>)

- The Division of Water's Village Safe Water (VSW) Program works with rural communities to develop sustainable sanitation facilities. Communities apply each year to VSW for grants for sanitation projects. Federal and state funding for this program is administered and managed by the VSW program. VSW provides technical and financial support to Alaska's smallest communities to design and construct water and wastewater systems. In some cases, funding is awarded by VSW through the Alaska Native Tribal Health Consortium (ANTHC), who in turn assist communities in design and construct of sanitation projects.
- The Alaska Municipal Matching Grant (AMMG) program provides partial funding and engineering support for drinking water, wastewater (sewer), solid waste and non-point source pollution projects, such as water body restoration and recovery. These state grants primarily assist the larger communities and boroughs in the state. (<http://dec.alaska.gov/water/technical-assistance-and-financing/state-revolving-fund/>)
- The Alaska Clean Water Fund (ACWF) and the Alaska Drinking Water Fund (ADWF) are two Alaska Department of Environmental Conservation (ADEC) loan fund programs that offer low interest loans to Alaskan municipalities and other qualified entities for financing water, wastewater and water quality related projects. Loans can finance up to 100 percent of a project's eligible costs for planning, design and construction of publicly owned facilities. In addition, loans can serve as local match for the ADEC Municipal Water, Sewer and Solid Waste Matching Grants Program or most other federal or state funding sources. (<http://dec.alaska.gov/water/technical-assistance-and-financing/state-revolving-fund/loan-overview>)
- Department of Transportation and Public Facilities (DOT/PF) personnel provide technical assistance to the various emergency management programs, to include mitigation. This assistance is addressed in the DHS&EM-DOT/PF Memorandum of Agreement and includes but is not limited to: environmental reviews, archaeological surveys, and historic preservation reviews.
 - DOT/PF and DHS&EM coordinate buy-out projects to ensure that there are no potential right-of-way conflicts with future use of land for bridge and highway projects, and collaborate on earthquake mitigation.
 - Additionally, DOT/PF provides the safe, efficient, economical, and effective State highway, harbor, and airport operation. DOT/PF uses its Planning, Design and Engineering, Maintenance and Operations, and Intelligent Transportation Systems resources to identify hazards, plan and initiate mitigation activities to meet the transportation needs of Alaskans, and make Alaska a better place to live and work. DOT/PF budgets for temporary bridge replacements and materials necessary to make the multi-modal transportation system operational following natural disaster events.

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- DNR administers various projects designed to reduce stream bank erosion, reduce localized flooding, improve drainage, and improve discharge water quality through the stormwater grant program funds. Within DNR,
 - The Division of Geological and Geophysical Survey (DGGS) is responsible Alaska's mineral, land, and water resources use, development, and earthquake mitigation collaboration.

Their geologists and support staff are leaders in researching Alaska's geology and implementing technological tools to most efficiently collect, interpret, publish, archive, and disseminate information to the public.
(<http://dggs.alaska.gov/pubs/advanced-search>)
 - The DNR's Division of Forestry (DOF) in collaboration with other agencies participates in a statewide wildfire control program in cooperation with the forest industry, rural fire departments and other agencies. Prescribed burning may increase the risks of fire hazards; however, prescribed burning reduces the availability of fire fuels and therefore the potential for future, more serious fires.
<http://dhss.alaska.gov/dph/emergency/documents/02-internal/08firesuppressionmediaguide.pdf>
 - DOF also manages various wildland fire programs, activities, and grant programs such as the FireWise Program (<http://forestry.alaska.gov/fire/firewise.htm>), Community Forestry Program (CFP) (<http://forestry.alaska.gov/community/>), Assistance to Fire Fighters Grant (AFG), Fire Prevention and Safety (FP&S), Staffing for Adequate Fire and Emergency Response Grants (SAFER), and Volunteer Fire Assistance and Rural Fire Assistance Grant (VFA-RFA) programs (<http://forestry.alaska.gov/fire/vfarfa.htm>). Information can be found at <http://forestry.alaska.gov/fire/current.htm>.
 - The Alaska Interagency Coordination Center (AICC) is the Geographic Area Coordination Center for Alaska. AICC serves as the focal point for initial attack resource coordination, logistics support, and predictive services for all state and federal agencies involved in wildland fire management and suppression in Alaska.

Fire management planning, preparedness, suppression operations, prescribed burning, and related activities are coordinated on an interagency basis. DOF has cooperative agreements with the departments of Agriculture and Interior, and numerous local government and volunteer fire departments to respond to wildland fires, reduce duplication of efforts, and share resources.

In 1984, the State of Alaska adopted the National Interagency Incident Management System Incident Command System concept for managing fire suppression. The Incident Command System (ICS) guiding principles are followed in all wildland fire management operations. All State of Alaska Departments adopted ICS in 1996 through the governor's administrative order.

Other Funding Resources

The following provide focused access to valuable planning resources for communities interested in sustainable development activities.

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- Rural Alaska Community Action Program Inc. (RurALCAP) In the nearly 50 years since it began, it is difficult to imagine any aspect of rural Alaskan lives which has not been touched in some way by the people and programs of RurALCAP. From Head Start, parent education, adult basic education, and elder-youth programs, to Native land claims and subsistence rights, energy and weatherization programs, and alcohol and substance abuse prevention, RurALCAP has left a lasting mark on the history and development of Alaska and its rural Peoples.
 - Weatherization Assistance Program assists low to moderate income households in weatherization needs. The program is available to homeowners as well as renters and includes; single family homes, cabins, mobile homes, condominiums and multifamily dwellings. (http://weatherizeme.org/?page_id=32)
 - Solid Waste Management. RurALCAP continues to host an expert solid waste liaison, Ted Jacobson, through funding provided by the Environmental Protection Agency (EPA) and Senior Services America, Inc. The liaison provides solid waste management technical assistance to rural communities through training, site visits, hands-on demonstrations, and remote contact. Resources are provided for dump management activities, collaborating with funders for funding and technical assistance on solid waste management, recycling, and backhaul. (<https://ruralcap.com/energy-and-environment/solid-waste-management/>)
- American Planning Association (APA), <https://www.planning.org> - a non-profit professional association that serves as a resource for planners, elected officials, and citizens concerned with planning and growth initiatives.
- Institute for Business and Home Safety (IBHS), an initiative of the insurance industry to reduce deaths, injuries, property damage, economic losses, and human suffering caused by natural disasters. (<http://www.disastersafety.org/>)
- American Red Cross (ARC). Provides for the critical needs of individuals such as food, clothing, shelter, and supplemental medical needs. Provides recovery needs such as furniture, home repair, home purchasing, essential tools, and some bill payment may be provided. (<http://www.redcross.org/find-help>)
- Catalog of Federal Domestic Assistance (DFDA) Crisis Counseling Program (CCP). Provides grants to State and Borough Mental Health Departments, which in turn provide training for screening, diagnosing and counseling techniques. Also provides funds for counseling, outreach, and consultation for those affected by disaster. (<http://dialoguemakers.org/Resources4states+Nonprofits.htm>)
- Denali Commission. Introduced by Congress in 1998, the Denali Commission is an independent federal agency designed to provide critical utilities, infrastructure, and economic support throughout Alaska. With the creation of the Denali Commission, Congress acknowledged the need for increased inter-agency cooperation and focus on Alaska's remote communities. Since its first meeting in April 1999, the commission is credited with providing numerous cost-shared infrastructure projects across the State that exemplifies effective and efficient partnership between federal and state agencies, and the private sector. (<http://www.denali.gov/grants>)
 - The Energy Program primarily funds design and construction of replacement bulk fuel storage facilities, upgrades to community power generation and distribution

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- systems, alternative-renewable energy projects, and some energy cost reduction projects. The Commission works with the Alaska Energy Authority (AEA), Alaska Village Electric Cooperative (AVEC), Alaska Power and Telephone and other partners to meet rural communities' fuel storage and power generation needs.
- The goal of the solid waste program at the Denali Commission is to provide funding to address deficiencies in solid waste disposal sites which threaten to contaminate rural drinking water supplies.
 - Lindbergh Foundation Grants. Each year, the Charles A. and Anne Morrow Lindbergh Foundation provides grants of up to \$10,580 (a symbolic amount representing the cost of the Spirit of St. Louis) to men and women whose individual initiative and work in a wide spectrum of disciplines furthers the Lindbergh's vision of a balance between the advance of technology and the preservation of the natural/human environment.
(<http://www.thelindberghfoundation.org/awards>)
 - Rasmussen Foundation Grants. The Rasmussen foundation invests both in individuals and well-managed 501(c)(3) organizations dedicated to improving the quality of life for Alaskans.

Rasmussen Foundation awards grants both to organizations serving Alaskans through a base of operations in Alaska, and to individuals for projects, fellowships and sabbaticals. To be considered for a grant award, grant seekers must meet specific criteria and complete and submit the required application according to the specific guidelines of each program. (<http://www.rasmuson.org/index.php?switch=viewpage&pageid=5>)

- Tier 1 Awards: Grants of up to \$25,000 for capital projects, technology updates, capacity building, program expansion, and creative works.
- Tier 2 Awards: Grants over \$25,000 for projects of demonstrable strategic importance or innovative Hazard Characteristics.
- Pre-Development Program: Guidance and technical resources for planning new, sustainable capital projects.

The foundation trustees believe successful organizations can sustain their basic operations through other means of support and prefer to assist organizations with specific needs, focusing on requests which allow the organizations to become more efficient and effective. The trustees look favorably on organizations which demonstrate broad community support, superior fiscal management and matching project support.
(<http://www.rasmuson.org/index.php>)

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APPENDIX 13.25 SHMP REFERENCES

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Resources – Coastal Erosion

Alaska Department of Commerce, Community, and Economic Development (DCCED)

Alaska Climate Change Impact Mitigation Program (ACCIMP)

The Alaska Climate Change Impact Mitigation Program (ACCIMP) was established to provide technical assistance and funding to communities imminently threatened by climate-related natural hazards such as erosion, flooding, storm surge, and thawing permafrost. The intent of the program is to help impacted communities develop a planned approach to shoreline protection, building relocation and/or eventual relocation of the village.

<https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/ACCIMP.aspx>

Alaska Community Coastal Protection Project (ACCPP)

The Alaska Community Coastal Protection Project focuses on three of the most imminently threatened villages in Western Alaska: the communities of Kivalina, Shaktoolik and Shishmaref. The objective of the project has been to increase community resilience and sustainability to the impacts of natural hazards threatening these communities while protecting the natural coastal environment. The project is based on the premise that careful planning, agency collaboration and strong community leadership are essential to successfully addressing the needs of imperiled communities.

<https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/AlaskaCommunityCoastalProtectionProject.aspx>

Alaska Risk MAP Program

The Alaska Risk MAP Program is funded through a Cooperating Technical Partnership between the State of Alaska and FEMA. The program provides communities with flood and other hazard information, risk assessment tools and outreach support to increase local understanding of risk, inform community decisions regarding risk, and ultimately lead to local actions which will reduce risk. Increasing community resilience to natural hazards is a goal.

<https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/RiskMAP.aspx>

Alaska Division of Geological & Geophysical Surveys (DGGS)

Alaska's extensive shorelines are incompletely mapped and under-instrumented for the evaluation of coastal dynamics. The Coastal Hazards Program at DGGS is engaged in ongoing investigations that will expand our understanding of how the coastline has evolved and how it will respond to hazardous events and long-term changes. This program is dedicated to fostering partnerships that will improve the quality and quantity of the critical baseline data that are necessary to fuel informed decision making throughout the state.

<http://dggs.alaska.gov/sections/engineering/profiles/coastalhazards.html>

DGGS tools for understanding coastal erosion are the Alaska Shoreline Change Tool

<http://maps.dggs.alaska.gov/shoreline/> and the Alaska Coastal Profile Tool

<http://maps.dggs.alaska.gov/acpt/>

Denali Commission

The Denali Commission Village Infrastructure Protection (VIP) program is dedicated to assisting rural Alaska communities that are threatened by erosion, flooding and permafrost degradation. The program goal is to mitigate the impact of these threats with respect to safety, health and the protection of infrastructure. <https://www.denali.gov/programs>

National Oceanic and Atmospheric Administration (NOAA)

The National Oceanic and Atmospheric Administration is an American scientific agency within the U.S. Department of Commerce that focuses on the conditions of the oceans, major waterways, and the atmosphere. From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers, and other decision makers with reliable information they need when they need it.

Summary of NOAA facilities and programs based in, or focused on, Alaska:

<https://www.legislative.noaa.gov/NIYS/NIYSAK.pdf>

NOAA Sea Level Information: <https://oceanservice.noaa.gov/facts/sealevel.html>

U.S. Army Corps of Engineers (USACE)

The Planning Section of the Alaska Army Corps of Engineers conducts the reconnaissance and feasibility level studies on potential water resource projects in Alaska. These studies, usually requested by a community in Alaska, analyze and solve water resource issues of concern to the local communities. These issues may involve navigational improvements, flood risk

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management, riverbank or coastal shoreline protection, or ecosystem restoration. The studies may result in the preparation of a reconnaissance or feasibility report, technical report or other type of planning document. The section also conducts economic analyses to determine the economic viability of a potential water resources project.

<http://www.poa.usace.army.mil/Missions/Civil-Works-and-Planning/>

USACE Floodplain Management:

<http://www.poa.usace.army.mil/About/Offices/Engineering/Floodplain-Management/>

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS)

USDA Natural Resources Conservation Service Alaska: "The Secretary of Agriculture is authorized to undertake emergency measures, including the purchase of floodplain easements, for runoff retardation and soil erosion prevention, in cooperation with landowners and land users, as the Secretary deems necessary to safeguard lives and property from floods, drought, and the products of erosion on any watershed whenever fire, flood, or any other natural occurrence is causing or has caused a sudden impairment of that watershed."

<https://www.nrcs.usda.gov/wps/portal/nrcs/ak/programs/financial/ewp/>

Cryosphere References

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More Information

Glacial Lake Outburst Floods

DGGS Climate & Cryosphere Hazards Program Newsroom: Monitoring of glacial lake outburst floods in Alaska - ArcGIS StoryMap: [http://soa-](http://soa-dnr.maps.arcgis.com/apps/Cascade/index.html?appid=2c0ea4f0543f44c7a78741c2da30cbbb)

[dnr.maps.arcgis.com/apps/Cascade/index.html?appid=2c0ea4f0543f44c7a78741c2da30cbbb](http://soa-dnr.maps.arcgis.com/apps/Cascade/index.html?appid=2c0ea4f0543f44c7a78741c2da30cbbb)

Post, Austin, and Mayo, L.R., 1971, Glacier dammed lakes and outburst floods in Alaska: USGS Hydrologic Investigations Atlas 455, 10 p., 3 sheets, scale 1:1,000,000:

http://ak.water.usgs.gov/glaciology/glacier_dammed_lakes/HA455/HA-455%20Text.pdf

USGS Newsroom: Second-Largest Glacial Flood Worldwide in Historic Times Occurs as Russell Lake Glacier Dam Ruptures: <http://www.usgs.gov/newsroom/article.asp?ID=356>

USGS Advancing Glacier Coming Close to Blocking Fjord Near Yakutat, Alaska:

<http://www.usgs.gov/newsroom/article.asp?ID=373> and Photos:

<http://www.usgs.gov/features/glaciers.html>

USGS 2002 Russell Fjord Closure and Russell Lake Outburst:

https://www2.usgs.gov/climate_landuse/clu_rd/glacierstudies/hubbard.asp

Permafrost

Permafrost Laboratory, University of Alaska Fairbanks Geophysical Institute:

<http://permafrost.gi.alaska.edu/>

Section 3.4 Ground Failure References

Alaska Department of Transportation & Public Facilities, accessed May 9, 2018, Alaska DOT Event Tracker Geoform,

<http://akdot.maps.arcgis.com/home/webmap/viewer.html?webmap=ee1ad659cc89480a86584a3c90416465&extent=-150.2046,60.8235,-149.0764,61.1545>

COMET[®] (Cooperative Program for Operational Meteorology, Education, and Training) is a meteorological support & education program out of UCAR (University Corporation for Atmospheric Research), established by NOAA's National Weather Service. See:

http://www.comet.ucar.edu/who_about_us.php

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U.S. Geological Survey, accessed May 9, 2018, Landslide types and processes,

<https://pubs.usgs.gov/fs/2004/3072/fs-2004-3072.html>

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<https://landslides.usgs.gov/>

Varnes, D.J., 1978, Slope movement types and processes, in Schuster, R.L., and Krizek, R.J., eds., Landslides—Analysis and control: National Research Council, Washington, D.C., Transportation Research Board, Special Report 176, p. 11–33.

Other Resources

The USGS has developed useful information to help the public understand and mitigate for landslides:

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- Landslide Types and Processes Fact Sheet: <https://pubs.usgs.gov/fs/2004/3072/fs-2004-3072.html> and <https://pubs.usgs.gov/fs/2004/3072/pdf/fs2004-3072.pdf>
- Landslide Handbook: Highland, L.M., and Bobrowsky, Peter, 2008, The landslide handbook—A guide to understanding landslides: Reston, Virginia, USGS Circular 1325, 129 p. <https://pubs.usgs.gov/circ/1325/>

The Alaska Department of Transportation & Public Facilities maintains an interactive web map that tracks debris flows, landslides, and rockfalls that impact roads throughout the state:

<http://akdot.maps.arcgis.com/home/webmap/viewer.html?webmap=ee1ad659cc89480a86584a3c90416465>

Tsunami and Seiche References

Dunbar, P. K., and Weaver, C. S., 2008, U. S. states and territories national tsunami hazard assessment—Historical record and sources for waves: National Oceanic and Atmospheric Administration and U. S. Geological Survey, Technical Report, 59 p., http://nthmp.tsunami.gov/documents/Tsunami_Assessment_Final.pdf

Lander, J. F., 1996, Tsunamis affecting Alaska, 1737-1996: Boulder, CO, NOAA National Geophysical Data Center (NGDC), Key to Geophysical Research Documentation, v. 31, 195 p.

Other Tsunami and Seiche Resources

National Oceanic and Atmospheric Association (NOAA) tsunami information:

<https://www.tsunami.noaa.gov/>

NOAA/National Weather Service U.S. Tsunami Warning System: <https://tsunami.gov>

Volcano References

Guffanti, Marianne, Casadevall, T.J., and Budding, Karin, 2010, Encounters of aircraft with volcanic ash clouds: A compilation of known incidents, 1953-2009: U.S. Geological Data Series 545, ver. 1.0, 12 p., plus 4 appendixes including the compilation database, available only at <http://pubs.usgs.gov/ds/545>.

Kienle, J., Kowalik, Z., and Murty, T. S., 1987, Tsunamis generated by eruptions from Mount St. Augustine volcano, Alaska: Science, v. 236, n. 4807, p. 1442-1447.

Mulliken, K.M., Schaefer, J.R., and Cameron, C.E., 2018, Geospatial distribution of tephra fall in Alaska: a geodatabase compilation of published tephra fall occurrences from the Pleistocene to the present: Alaska Division of Geological & Geophysical Surveys Miscellaneous Publication 164, 46 p. <http://doi.org/10.14509/29847>

Neal, C.A., and Guffanti, Marianne, 2010, Airborne volcanic ash - a global threat to aviation: USGS Fact Sheet 2010-3116, 6 p., available online at <http://pubs.usgs.gov/fs/2010/3116/fs2010-3116.pdf>.

Schaaf, J. M., 2004, Witness, firsthand accounts of the largest volcanic eruption in the twentieth century: Anchorage, AK, National Park Service, Lake Clark-Katmai Studies Center, unpaginated.

Other Volcano Resources

General

USGS's Volcano Hazards Program

The mission of the USGS Volcano Hazards Program (VHP) is to enhance public safety and minimize social and economic disruption from eruptions through delivery of effective forecasts, warnings, and information of volcano hazards based on scientific understanding of volcanic processes. The VHP monitors and studies active and potentially active volcanoes, assesses their hazards, and conducts research on how volcanoes work in order for the USGS to issue "timely warnings" of potential volcanic hazards to emergency-management professionals and the public. Thus, in addition to collecting and interpreting the best possible scientific information, the program works to effectively communicate its scientific findings and volcanic activity alerts to authorities and the public.

USGS Fact Sheet 002-97:

What Are Volcano Hazards? <http://pubs.usgs.gov/fs/fs002-97>

PDF <http://pubs.usgs.gov/fs/fs002-97/fs002-97.pdf>

Spanish PDF <http://pubs.usgs.gov/fs/fs144-00/fs144-00.pdf>

Alaska Volcano Observatory (AVO)

The Alaska Volcano Observatory is a joint program of the USGS, the Geophysical Institute of the University of Alaska Fairbanks (UAFGI), and the State DGGs. AVO was formed in 1988, and uses federal, state, and university resources to monitor and study Alaska's hazardous volcanoes, to predict and record eruptive activity, and to mitigate volcanic hazards to life and property. <https://avo.alaska.edu/>

Hazards from Alaska Volcanoes <https://avo.alaska.edu/volcanoes/hazards.php>

Volcanic Ashfallout and Ash Clouds

Airports Council International 2014 World Traffic Report

<http://www.aci.aero/News/Releases/Most-Recent/2015/08/31/ACI-releases-2014-World-Airport-Traffic-Report-Airports-in-advanced-economies-rebound-in-2014--global-passenger-traffic-up-by-over-5-air-cargo-volumes-rise-after-three-years-of-stagnation->

USGS Fact Sheet 027-00: Volcanic Ash—A “Hard Rain” of Abrasive Particles

Webpage <http://pubs.usgs.gov/fs/fs027-00/>

PDF <http://pubs.usgs.gov/fs/fs027-00/fs027-00.pdf>

USGS: Volcanic Ash Impacts & Mitigation: <http://volcanoes.usgs.gov/ash/>

International Volcano Health Hazard Network's (IVHHN) <http://www.ivhnh.org/>

The Health Hazards of Volcanic Ash and Guidelines on Preparedness Before, During and After an Ashfall:

http://www.ivhnh.org/images/pamphlets/preparedness_guidelines_english_print_imposed.pdf

Alaska Volcano Observatory Event-Specific Information: Okmok 2008:

<http://www.avo.alaska.edu/volcanoes/volcact.php?volname=Okmok&eruptionid=604&page=basics>

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Ballistics

Volcanic Hazards – Ballistic Projectiles: <http://uwiseismic.com/General.aspx?id=18>

The Communication and Risk Management of Volcanic Ballistic Hazards:

https://link.springer.com/chapter/10.1007%2F11157_2016_35

How to protect people and property from volcanic ballistics: <https://physicsworld.com/a/how-to-protect-people-and-property-from-volcanic-ballistics/>

Pyroclastic Flows and Surges and Lava Domes

USGS Fact Sheet 075-98: Can Another Great Volcanic Eruption Happen in Alaska?

Webpage <http://pubs.usgs.gov/fs/fs075-98/>

Volcanic Gases

2005 Volcanic activity in Alaska, Kamchatka, and the Kurile Islands: Summary of events and response of the Alaska Volcano Observatory:

<http://pubs.usgs.gov/sir/2007/5269/pdf/sir20075269.pdf>

Volcanic gases can be harmful to health, vegetation and infrastructure:

<https://volcanoes.usgs.gov/vhp/gas.html>

Volcanic Gases, Michigan Tech Volcano Page:

<http://www.geo.mtu.edu/volcanoes/hazards/primer/gas.html>

Acidification

Alaska Volcano Observatory Event Specific Information: Chiginagak 2005:

<http://www.avo.alaska.edu/volcanoes/volcact.php?volcane=Chiginagak&eruptionid=535&page=basics>

Historic Volcanic Activity in Alaska

USGS Fact Sheet 030-97: Volcanic Ash—Danger to Aircraft in the North Pacific

Webpage <http://pubs.usgs.gov/fs/fs030-97/>; PDF <http://pubs.usgs.gov/fs/fs030-97/fs030-97.pdf>

Alaska Volcano Observatory: About Alaska's Volcanoes:

<http://www.avo.alaska.edu/volcanoes/about.php>

USGS Fact Sheet 075-98: Can Another Great Volcanic Eruption Happen in Alaska?

Webpage <http://pubs.usgs.gov/fs/fs075-98/>

Alaska Volcano Observatory Event Specific Information:

Augustine 1986:

<https://avo.alaska.edu/volcanoes/activity.php?volcane=Augustine&eruptionid=411&page=basic>

Augustine 2005:

<https://avo.alaska.edu/volcanoes/activity.php?volcane=Augustine&eruptionid=547&page=basic>

Augustine 1883:

<https://avo.alaska.edu/volcanoes/activity.php?volcane=Augustine&eruptionid=332&page=basic>

Redoubt 1989:

<https://avo.alaska.edu/volcanoes/activity.php?volcname=Redoubt&eruptionid=442&page=basic>

Alaska interagency operating plan for volcanic ash episodes (2008):

http://www.avo.alaska.edu/pdfs/cit3996_2008.pdf

Redoubt Volcano, Cook Inlet, Alaska, 2009

Alaska Volcano Observatory Event Specific Information: Redoubt 2009:

<https://avo.alaska.edu/volcanoes/activity.php?volcname=Redoubt&eruptionid=610&page=basic>

Alaska Department of Environmental Conservation Unified Command: Drift River Terminal Coordination:

http://www.dec.state.ak.us/spar/perp/response/sum_fy09/090324201/090324201_index.htm

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APPENDIX 13.26 LEGACY 2013 MEDIUM AND LOW PRIORITY PROJECTS

(Projects Not Included within Mitigation Action Plan)

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Legacy 2013 Projects Not Included within Mitigation Action Plan

Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
(Blue text items are the legacy 2018 SHMPMAP actions and their respective status determinations)

Goals		Status			Actions
No.	Description	Responsible Agency (ies)	New <u>Considered,</u> <u>Selected</u> <u>Brought Forward</u> <u>Complete,</u> <u>Deferred,</u> <u>Deleted,</u> or <u>Ongoing</u>	Explain Status	Description
EQ 6	Reduce earthquake (EQ) damage and loss possibilities	<i>Medium EQ Priority will not be addressed in 2018 SHMP</i>			
		Lead: AEIC, DOT/PF Support: UAFGI, USGS, DNR/DGGS, UAA, Advanced National Seismic Safety (ANSS)	Deferred Former timeline: 10 years	No available funding Combined objective and action into one concise action	Objective 5.1: Develop a real-time preliminary damage assessment capability. Action 5.1.1: Deploy modern seismic instrumentation in critical facilities, infrastructure, and major transportation arteries.
					Develop a real-time preliminary damage assessment capability using real time data to project potential damages to critical facilities and infrastructure.
		Lead: AEIC, UAA Support: USGS, ASHSC, DHS&EM	Deferred Former timeline: 10 years	No available funding Moved to MH 1 Combined objective and action into one concise action to reflect all-hazard focus	EQ Objective 5.2: Record and evaluate the seismic response of built infrastructure for opportunities to improve design and construction.
					EQ Action 5.2.1: Expand the number and locations of modern free field and built environment seismic recording instruments.
				No available funding Moved to MH 1 Combined objective and action into one concise action to reflect all-hazard focus	EQ Action 5.2.2: Expand the number and locations of modern strong motion and broadband seismic recording instruments in "low-noise" installations throughout Alaska.
		Lead: DHS&EM Support: ARC, ASHSC, FEMA	Deferred Former timeline: 5 years	Move to MH1 No available funding Combined objective and action into one concise action	Edited EQ Obj 5.2, Action 5.2.1, & 5.2.2: Expand the number and locations of modern strong motion and broadband seismic recording instruments in "low-noise" installations throughout Alaska to record and evaluate the seismic response of built infrastructure for opportunities to improve design and construction in all hazard locations.
					Objective 6.1: Promote statewide earthquake preparation and response training. Action 6.1.1: Conduct earthquake preparation and response training.
				No available funding	Edited: Promote and conduct earthquake preparedness and response training throughout Alaska.
					Action 6.1.2: Update the Department of Education and Early Development and State school districts with the most current earthquake education materials.
		Lead: DNR/DGGS	Delete	Completed 2013	Objective 7.1: Provide a publicly accessible map of active earthquake faults in Alaska.

Legacy 2013 Projects Not Included within Mitigation Action Plan

Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
(Blue text items are the legacy 2018 SHMPMAP actions and their respective status determinations)

Goals		Status			Actions
No.	Description	Responsible Agency (ies)	New <u>Considered,</u> <u>Selected</u> <u>Brought Forward</u> <u>Complete,</u> <u>Deferred,</u> <u>Deleted,</u> or <u>Ongoing</u>	Explain Status	Description
		Support: Alaska Earthquake Center (AEC), USGS, ASHSC			Action 7.1.1: Identify and map active earthquake faults in Alaska.
		Lead: DNR/DGGS Support: DHS&EM, AEC, USGS, FEMA	Deferred Former timeline: 10 years	No available funding Combined objective and action into one concise action	Objective 8.1: Promote developing large-scale area earthquake-hazard maps. Action 8.1.1: Create and update seismic hazard area maps in Alaska.
		Lead: DHS&EM, FEMA, Support: ASHSC, DNR/DGGS, AEC, USGS, NEHRP, Earthquake Engineering Research Institute (EERI)	Ongoing Former timeline: 5 years		Edited: Develop large-scale (similar to those created for tsunami prone areas) earthquake area hazard maps of Alaska Objective 8.2: Promote the development and use of scientific seismic scenarios for planning, zoning and response.
					Action 8.2.1: Develop training seismic scenarios for Alaska communities.
		Lead: University of Alaska (UA) Support: ASHSC	Delete	Move to MH 1 Complete – UA currently offers a M.S. degree in Geophysics with an emphasis in seismology	Objective 9.1: Support advanced earthquake sciences education in Alaska's Universities.
					Action 9.1.1: Encourage the University of Alaska to develop and offer advanced earthquake science degrees.
		Medium Flood Priority			
		Lead: DCCED Support: DHS&EM, DNR, DOT/PF	Ongoing	Move to MH 1 Communities affected by disasters are receiving floodplain management training	Action 2.1.2: Educate Alaska communities about floodplain management.
FL 7	Reduce flood, coastal storm surge, and erosion related damage and loss possibilities	Lead: DCCED Support: DHS&EM	Ongoing	Move to MH 1 DCCED conducts routine outreach in coordination with FEMA.	Action 2.2.1: Publicize the benefits and availability of flood insurance in NFIP communities.
		Lead: DCCED, Insurance Servicing Organization	Deferred Former timeline: 3-5 years	Move to MH 2 Nome has become a CRS participant.	Action 3.1.1: Encourage CRS applications from appropriate NFIP communities.

Legacy 2013 Projects Not Included within Mitigation Action Plan

Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
(Blue text items are the legacy 2018 SHMPMAP actions and their respective status determinations)

Goals		Status			Actions
No.	Description	Responsible Agency (ies)	New <u>Considered,</u> <u>Selected</u> <u>Brought Forward</u> <u>Complete,</u> <u>Deferred,</u> <u>Deleted, or</u> <u>Ongoing</u>	Explain Status	Description
		(ISO) Support: Denali Commission, DHS&EM		Bethel, Mat-Su Borough, and Fairbanks North Star Borough are considering this program.	
		Lead: DCCED Support: DHS&EM, DOT&PF, FEMA	Deferred Former timeline: 2- years	Move to MH 2 Combined objective with action, then edited for clarity and to better allow for fulfilling regulatory intent	Objective 3.2: Encourage FEMA to create special considerations for Alaska building conditions and engineer certification to the CRS program.
					Action 3.2.1: Seek an appropriate change in FEMA policy, procedure, and regulation where necessary.
					Edited for clarity: Encourage FEMA to modify building and engineer certification policy, procedure, and regulations to recognize rural Alaska's environmental conditions that will allow rural communities to fulfill CRS programmatic requirements.
		Lead: DCCED Support: DHS&EM, DOT/PF, DEED, DEC	Deferred Former timeline: 2- years	Move to MH 2 Edited objective and associated action to better fulfill intent	Objective 3.3: Encourage FEMA to permit applicable agencies to develop and enforce ordinances in the Unincorporated Communities within the Unorganized Borough.
					Action 3.3.1: Seeking similar NFIP waiver that was approved for HMP planning requirement for rural Unincorporated communities within Alaska's Unorganized Borough.
					Edited for clarity: Encourage FEMA to develop a waiver process for permitting applicable agencies to develop and enforce ordinances in the Unincorporated Communities within the Unorganized Borough. i.e.: NFIP membership and CRS participation
		Lead: DOT/PF, Local Communities Support: FEMA, ADF&G, DNR, DEC, USACE, USGS, EPA, NMFS	Ongoing	Combined redundant objective and actions into one concise action	Objective 4.1: Reduce flooding caused by undersized culverts statewide .
					Action 4.1.1: Support studies identifying culvert capacities that accommodate floodwaters and prevent flood damage.
					Action 4.1.2: Support culvert replacement projects that meet or exceed expected floodwater discharges.
					Edited for clarity: Replace undersized culverts by identifying and mitigating culvert capacities that exceed expected capacity or do not accommodate flood water damage. This could help reduce or prevent statewide flooding events
		Lead: USACE,	Deferred Former	Combined objective and	Objective 4.2: Reduce flooding and damage caused by ice jams statewide.

Legacy 2013 Projects Not Included within Mitigation Action Plan

Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
(Blue text items are the legacy 2018 SHMPMAP actions and their respective status determinations)

Goals		Status			Actions
No.	Description	Responsible Agency (ies)	New <i>Considered, Selected Brought Forward Complete, Deferred, Deleted, or Ongoing</i>	Explain Status	Description
		DCCED, NRCS, FEMA Support: DHS&EM	Timeline: 5-years	action into one concise action	Action 4.2.1: Support studies focused upon ice jam flood mitigation and ice impact damage in Alaska. Edited for clarity: Fund ice jam mitigation and impact avoidance studies to reduce repetitive ice jam location damage and losses.
		Low Flood Priority			
		Lead: NWS Support: DHS&EM, USGS, USACE, DCCED, DOT/PF	Ongoing	Combined objective and actions into one concise action	<u>Goal 5: Improve forecasting and warning systems</u>
					Objective 5.1: Increase the water discharge, flood, and tidal data available.
					Action 5.1.1: Install additional stream and precipitation gauges.
					Edited for Clarity: Install additional stream and precipitation gauges to improve flood forecasting and warnings with readily available water discharge, flood, and tidal data.
		Lead: DCCED Support: DHS&EM, USACE, UAF/GI, FEMA, DNR/DGGS, DEED, USGS	Ongoing	Convert Objective and edited as a statewide action. No available funding for statewide remote communities	Objective 6.1 - Carry forward as a stand-alone project: Increase the coverage and accuracy of Alaska's flood-prone communities by developing flood hazard area mapping.
					Action 6.1.1: Implement RISK Map principles in high-risk communities. Reformatted for clarity: Develop statewide Risk Mapping initiatives to provide fact based locational discharge rates and future and ongoing flood estimates for all "at risk-flood prone" communities along Alaska's complex river systems.
		Lead: DCCED Support: DHS&EM, USACE, UAF/GI, FEMA, DNR/DGGS, DEED, USGS	Ongoing	No available funding for statewide remote communities	
		Lead: FEMA and City & Borough of Juneau Support: DCCED, DHS&EM, USACE, UAF/GI, FEMA, DNR/DGGS, DEED	Delete	Completed May 2010	Action 6.2.1: Update flood hazard maps for the Juneau area and produce Flood Insurance Rate Maps (FIRM) in digital and GIS formats.
		Lead: DCEED, FEMA Support: DHS&EM,	Ongoing	Combined objective and action into one concise action	Objective 6.3: Update and digitize all NFIP participating Community FIRM maps.
Action 6.3.1: Continue to digitize FIRM's through the RISK Mapping.					
Combined for clarity: Encourage DCCED					

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Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
(Blue text items are the legacy 2018 SHMPMAP actions and their respective status determinations)

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No.	Description	Responsible Agency (ies)	New <u>Considered,</u> <u>Selected</u> <u>Brought Forward</u> <u>Complete,</u> <u>Deferred,</u> <u>Deleted, or</u> <u>Ongoing</u>	Explain Status	Description
		USACE, UAF/GI, FEMA, DNR/DGGS, DEED			to continue updating and digitizing all NFIP participating Community FIRM maps through the State's RISK Map program.
		Lead: DOT/PF Support: USGS	Ongoing	Combined objective and action into one concise action	Objective 6.4: Improve methods for estimating the magnitude of potential floods.
					Action 6.4.1: Collect annual peak flow and flood hydrograph data at representative streams throughout Alaska.
					Action 6.4.2: Maintain updated flood-frequency regression equations.
					Combined for clarity: Improve annual peak flow and flood hydrographic data collection to provide accurate flood-frequency regression equations and reporting for Alaska rivers and streams.
		Lead: DOT/PF Support: DHS&EM, DCCED, DNR, UAF/GI, DEC	Ongoing	Combined objective and action into one concise action	Objective 7.1: Identify alluvial fans and investigate strategies or incentives to preclude construction or improvements to private lands within these flood corridors.
					Action 7.1.1: Develop strategic planning incentives and model strategies addressing land-use planning and permitting initiatives in alluvial fan areas.
					Combined for clarity: Identify alluvial fans develop strategies or incentives to preclude construction or improvements to private lands within alluvial fan flood corridors.
		Lead: DOT/PF Support: DHS&EM, DCCED, DNR, UAF/GI, DEC	Ongoing	Combined objective and action into one concise action	Objective 7.2: Maintaining debris flow corridors
					Action 7.2.1: Develop strategic planning incentives and strategies addressing land-use planning and permitting initiatives in debris flow corridors to maintain their intended purpose.
					Edited to clarify: Develop strategic planning incentives, permitting initiatives, and strategies to maintain intended land-use purposes in debris flow corridors
		Lead: All SME agencies, local governments, ADF&GHD. Support: DHS&EM, DEC, DNR, DCCED, and local communities	Ongoing	Combined objective and actions to eliminate duplication Created one concise action	Objective 8.1: Create habitat protection corridors and restore damaged habitat.
					Action 8.1.1: Encourage local enforcement policies, and education
					Action 8.1.2: Encourage communities to adopt habitat protection corridors along streams and rivers.
					Section 5.9.3 Erosion Goals, Objectives, and Actions, Action 3.1.2: Encourage local action and education
					Edited for simplicity: Create localized

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Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
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Goals		Status			Actions
No.	Description	Responsible Agency (ies)	New <u>Considered</u> , <u>Selected</u> <u>Brought Forward</u> <u>Complete</u> , <u>Deferred</u> , <u>Deleted</u> , or <u>Ongoing</u>	Explain Status	Description
					habitat protection corridors and encourage local community adoption and enforcement to protect and restore damaged habitat.
		Lead: Federal, State, and Local Communities with tax authorities. Support: DHS&EM, DEC, DNR, DCCED	Ongoing	Combined duplicated actions into one concise action	Action 8.1.3: Provide habitat tax credits for property owners who improve stream/river habitat or maintain a vegetative buffer adjacent to streams or rivers.
					Section 5.9.3 Erosion Goals, Objectives, and Actions , Action 3.1.3: Provide habitat tax credits for property owners who improve stream/river habitat or maintain a vegetative buffer adjacent to streams or rivers.
					Edited for clarity: Encourage State, federal and local jurisdictions with tax authority to provide habitat tax credits for property owners who improve stream/river habitat or maintain a vegetative buffer adjacent to streams or rivers.
		Lead: DCCED, Governor's Office, State Legislature Support: DHS&EM, local communities, Alaska Municipal League (AML)	Ongoing	Edited objective to create a more concise action	Goal 9: Encourage the adoption of Model State Legislation for Floodplain Management contained in the 1990 Flood Mitigation Plan.
					Edited for clarity: Encourage the State Legislature to adopt the "1990 Flood Mitigation Plan's, Model State Floodplain Management Legislation" initiative.
		Lead: DCCED, Governor's Office, State Legislature Support: DHS&EM, local communities, Alaska Municipal League (AML)	Ongoing	Edited objective to create a more concise action	Action 9.1.1: Encourage legislation to develop initiatives and authorities for local governments at all levels to develop land use ordinances and policies along with appropriate enforcement powers.
					Edited for clarity: Encourage local jurisdictions to develop floodplain management focused land use ordinances and policies along with appropriate enforcement powers.
		Lead: DCCED Support: DHS&EM, DOT/PF, ADF&G, NMFS, USGS, USACE, DNR, DEC, EPA	Ongoing	Edited goal to create a more concise action	Goal 10: Foster interagency coordination. Reduce potential debris jams by creating interagency cooperation and agreements concerning riverbank and riverbed management. Agencies need to coordinate and refine permitting processes and annual drainage system maintenance plans to minimize flood related damages.
					Edited as a direct action: Reduce potential debris jams by creating interagency cooperation and agreements concerning:

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Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
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Goals		Status			Actions
No.	Description	Responsible Agency (ies)	New <i>Considered, Selected Brought Forward Complete, Deferred, Deleted, or Ongoing</i>	Explain Status	Description
					<ul style="list-style-type: none"> Riverbank stabilization and riverbed management, Coordinate, refine, and streamline emergency permitting processes, and Develop annual drainage system maintenance plans to minimize flood related damages.
		Lead: DCCED Support: DHS&EM, DOT/PF, ADF&G, NMFS, USGS, USACE, DNR, DEC, EPA	Ongoing	Draft initiatives held up in SHMAC since 2011	Action 10.2.1: Develop groundwater recharge, nutrient transport, and wetland habitat initiatives throughout threatened watersheds.
					Edited for clarity: Develop agency coordinated groundwater recharge, nutrient transport, and wetland habitat initiatives throughout threatened watersheds.
		Lead: ADF&G, Support: DHS&EM, USACE, DCCED, DOT/PF, DEC, USACE, NMFS, EPA, USGS	Ongoing	Draft initiatives held up in SHMAC since 2011	Objective 11.1: Develop a State disaster mitigation grant program to fund projects and planning.
					Action 11.1.1: Research the feasibility of establishing a State fund for structural or channel modifying mitigation projects.
					Edited for clarity: Develop a State Disaster Mitigation Program to fund damaged public facility structural, riverine, or coastal channel modifications, that fall below federal disaster support criteria.
GF 8	Reduce ground failure (GF) damage and loss possibilities	Medium Priority			
		Lead: DCCED Support: DHS&EM, DGGS, and Local communities	Deferred Former timeline: 3-5 years	Moved to MH 3 Combined objective and action into one concise action Move to MH 1	Objective 2.1: Encourage construction practices that mitigate soil instability.
					Action 2.1.1: Provide education and training demonstrating improved construction practices.
					Objective 2.2: Encourage land-use planners to consider landslide zones.
					Action 2.2.1: Encourage the State and local communities to enact land use regulations addressing ground failure hazards in known areas.
					Action 3.4.2: Support building practices reducing damage from permafrost.
		Lead: Local communities, DOT/PF, DNR/DGGS, and Risk Management Support: DHS&EM	Deferred Former timeline: 2-5 years	Move to MH 2 No Available funding	Action 3.1.1: Include ground failure/landslide hazards in the risk and vulnerability assessment-mitigation planning so that at risk facilities, structures, and roadways are identified.
		Lead: DCCED, DOT/PF	Deferred Former timeline:	Combined objective and action into one	GF Action 3.1.2: Obtain funding for the mitigation of landslide prone structures, facilities, and roadways.

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Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
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No.	Description	Responsible Agency (ies)	New <u>Considered,</u> <u>Selected</u> <u>Brought Forward</u> <u>Complete,</u> <u>Deferred,</u> <u>Deleted,</u> <u>or</u> <u>Ongoing</u>	Explain Status	Description
		Support: DHS&EM, FEMA, DNR/DGGS, State Risk Management, local communities	5 years	concise action	GF Action 3.2.2: Fund community acquisition of property in ground failure/landslide areas.
					GF Snow Avalanche Action 1.1.3: Encourage communities to relocate buildings out of the hazard area
					GF Actions 3.1.2, 3.2.2, & Snow Avalanche 1.1.3: Encourage communities to fund relocating residential and public structures away from ground failure (land subsidence, permafrost, landslide, and snow avalanche) locations.
		Lead: USACE and DNR/DGGS Support: DHS&EM and FEMA	Deferred Former timeline: 5 years	Combined objective and action into one concise action	Objective 3.3: Control and stabilize landslides where appropriate and cost-effective.
					Action 3.3.1: Support and fund landslide mitigation projects.
					Edited for simplicity: Fund landslide mitigation projects that relocate or prevent landslides by stabilizing threat areas.
		Lead: DGGS, UAF Support: USGS	Deferred Former timeline: 5 years	Combined objective and action into one concise action	Objective 3.4: Identify areas vulnerable to subsidence and determine mitigation solutions.
					Action 3.4.1: Identify permafrost areas
					Edited for simplicity: Identify permafrost and other ground failure locations or areas and develop a suite of potential mitigation solutions.
		Legacy 2013 SHMP Section 5.3.3 Snow Avalanche Goals, Objectives, and Actions			
		Medium Priority			
		Lead: DOT&PF, DPS, Avalanche centers, Local communities, Alaska State Parks Support: DHS&EM	Deferred Former timeline: 5 years	No available programmatic funding	Action 3.1.2: Support a standardized community avalanche warning sign program that clearly communicates avalanche danger areas.
		Lead: Avalanche centers, Alaska State Parks, DNR, USFS, NPS Support: AAIC	Ongoing	Edited for simplicity No available programmatic funding	Action 3.1.4: Distribute avalanche safety information through recreational equipment stores.
		Medium Priority			
WF 12	Reduce tundra/wildland fire (WF) damage and loss	Lead: DHS&EM, Local communities	Ongoing Former Timeline: 1-year	Combined similar project Objectives and associated	Objective 3.1: Encourage communities susceptible to wildland fire to conduct a wildland/urban interface fire hazard assessment and risk analysis.

Legacy 2013 Projects Not Included within Mitigation Action Plan

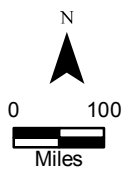
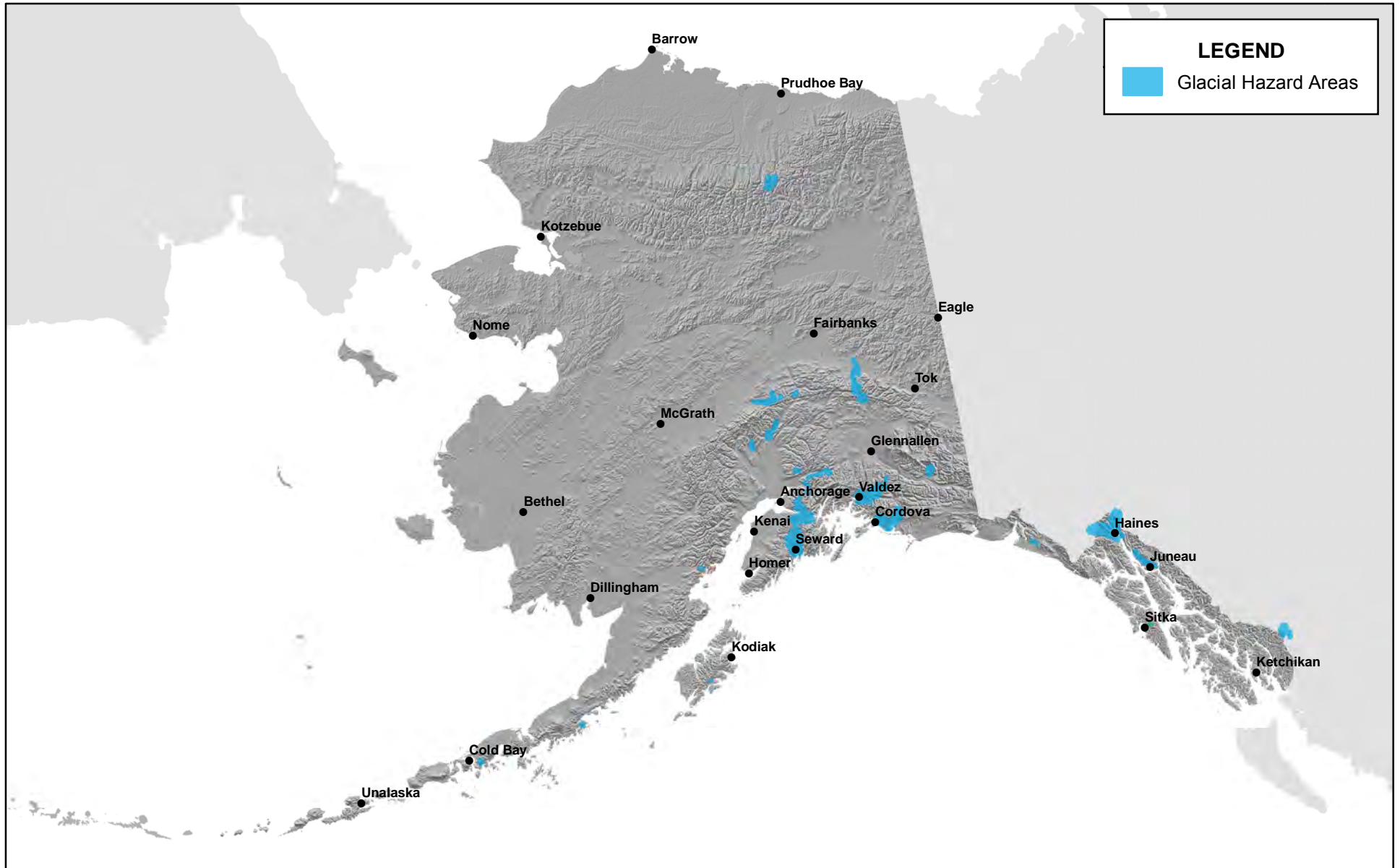
Table 9-7a Alaska SHMP Update – Medium and Low Priority Actions
(Blue text items are the legacy 2018 SHMPMAP actions and their respective status determinations)

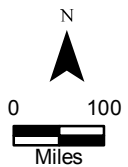
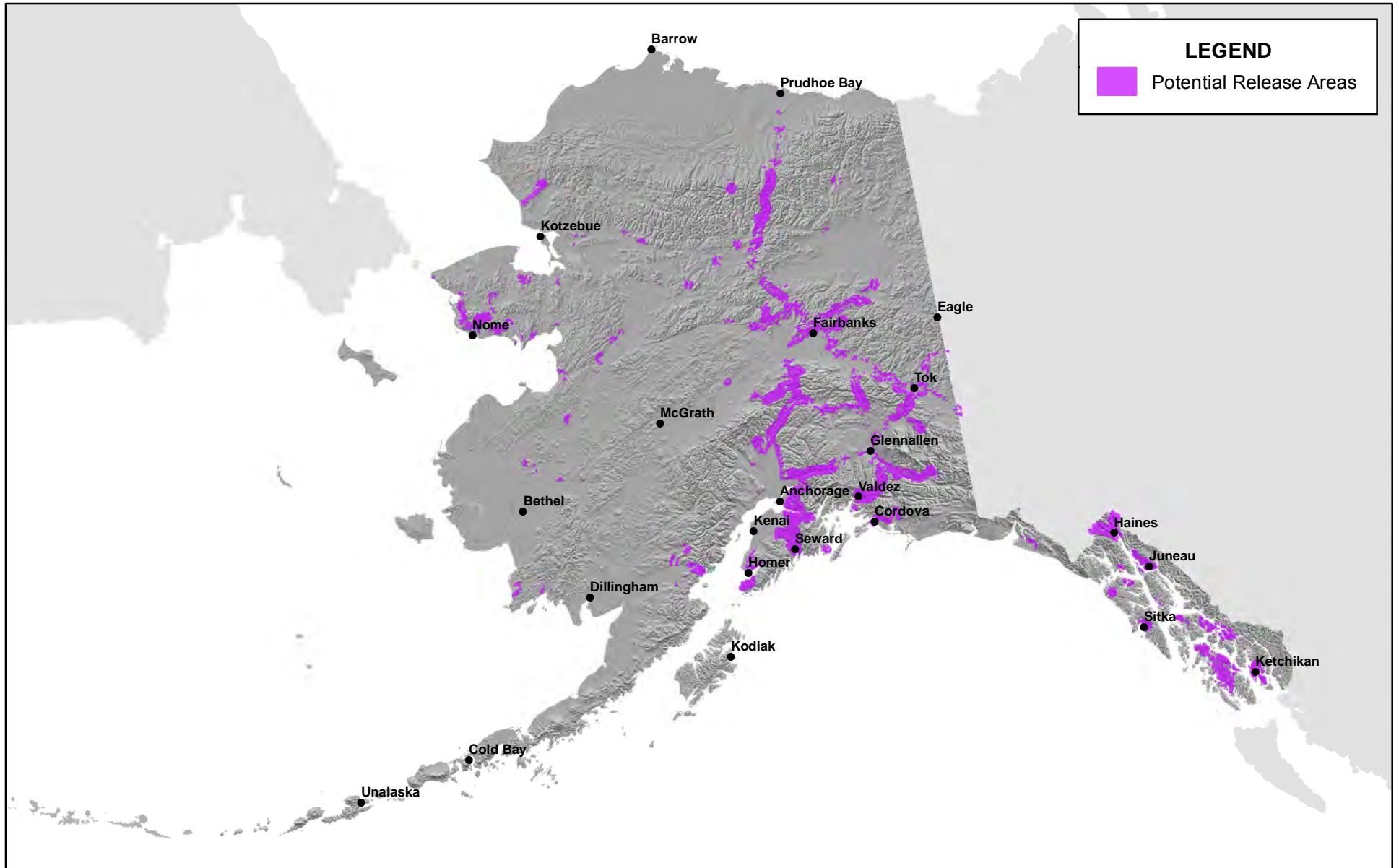
Goals		Status			Actions
No.	Description	Responsible Agency (ies)	New <u>Considered</u> , <u>Selected</u> <u>Brought Forward</u> <u>Complete</u> , <u>Deferred</u> , <u>Deleted</u> , or <u>Ongoing</u>	Explain Status	Description
	possibilities	<i>Support: DNR/DOF, BLM/AFS, USFS, USFWS</i>		<i>actions to create one viable action.</i> <i>The US Fish and Wildlife Service established a program assisting native communities in Alaska with wildland fire assessments and mitigation projects.</i> <i>DHS&EM began presenting planning techniques during their bi-annual disaster preparedness conferences in 2014.</i>	<i>Action 3.1.1: Provide technical assistance and grant funding to local jurisdictions conducting wildland fire hazard assessments and incorporate the results into their hazard mitigation planning.</i> <i>Objective 3.2: Encourage communities to incorporate their wildland fire risk assessments into their community development (CDPs), capital improvement projects (CIPs), hazard mitigation (HMPs), and emergency response (ERPs) plans.</i> <i>Action 3.2.1: Provide technical assistance integrating wildland fire risk assessments with hazard mitigation and emergency operations plans.</i> <i>Edited: Provide technical assistance and grant funding for local jurisdictions conducting wildland fire hazard assessments to incorporate the results into their hazard mitigation (HMP), community development (CDPs), capital improvement projects (CIPs), and emergency response (ERPs) plans</i>

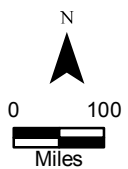
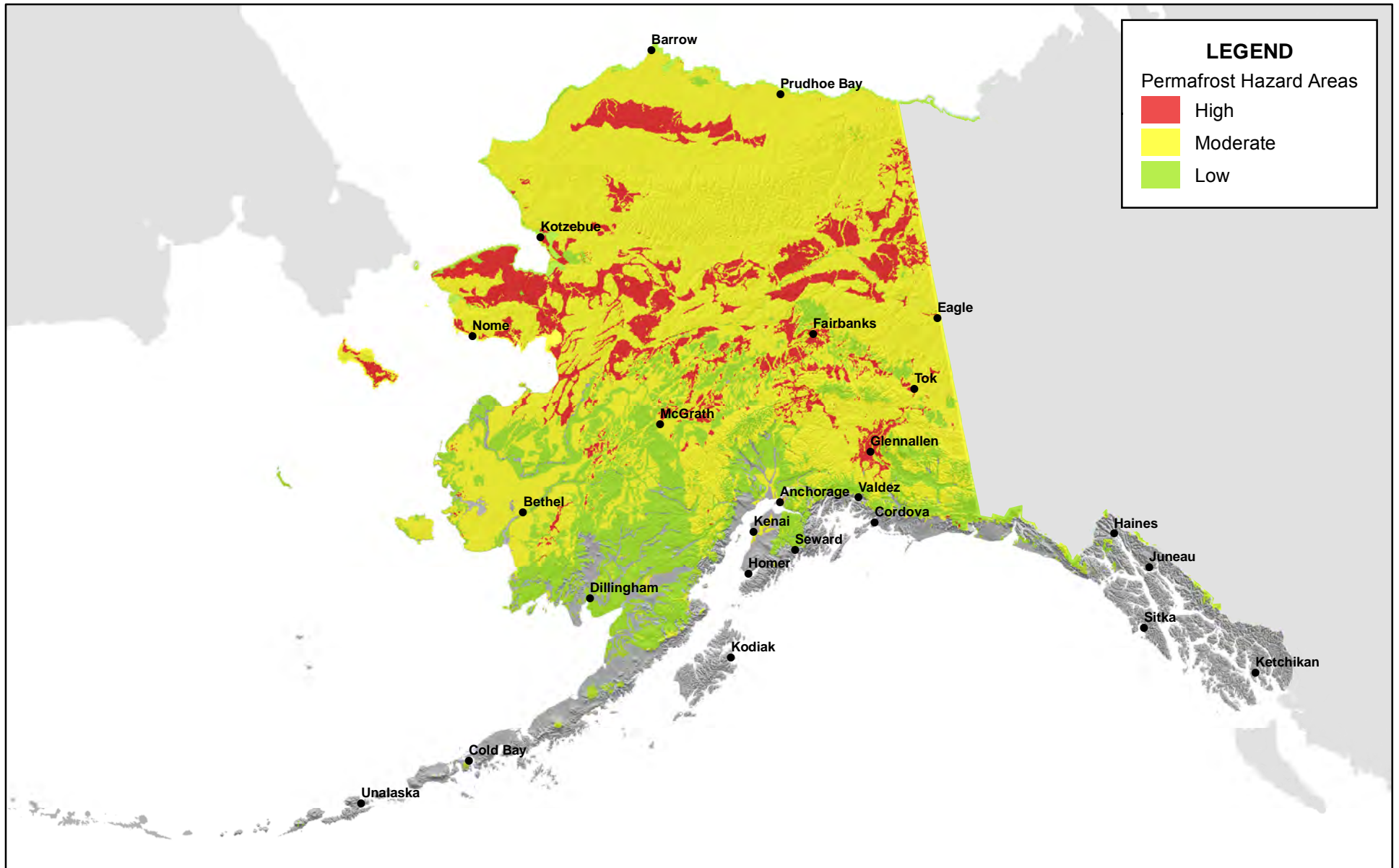
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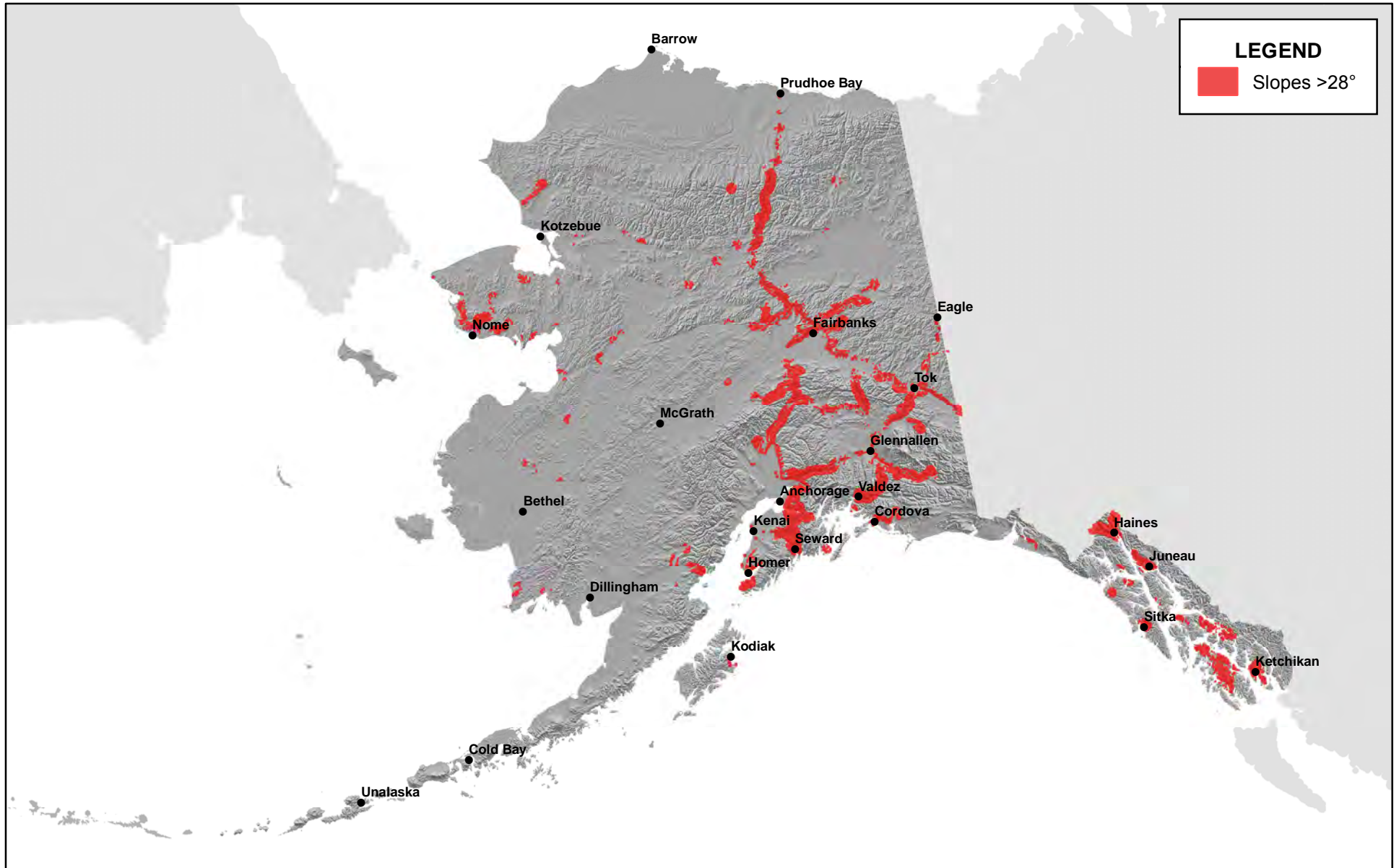
APPENDIX 13.27 2018 ALASKA HAZARD RISK LOCATION FIGURES

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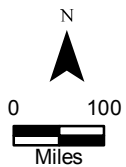


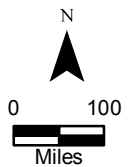
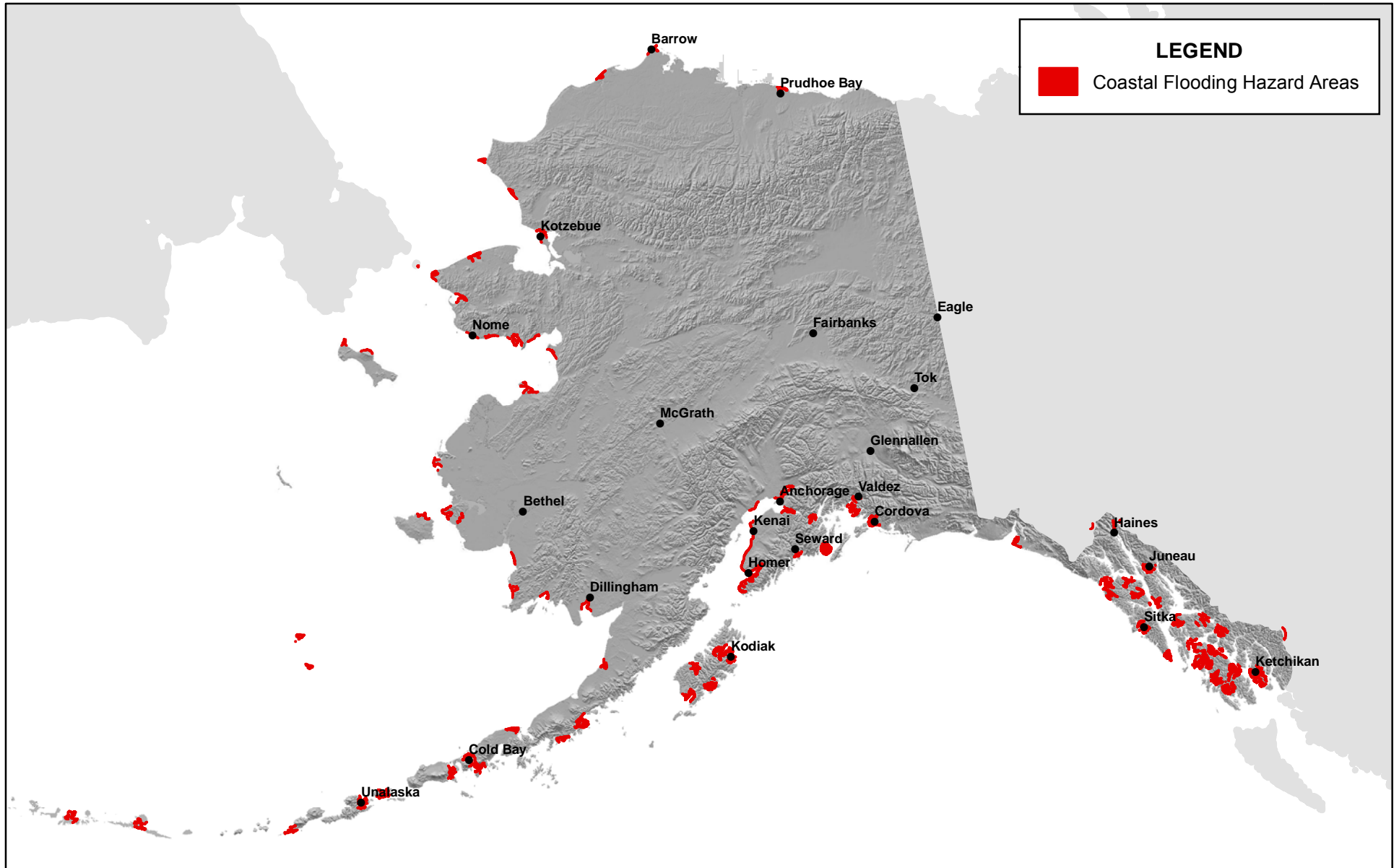


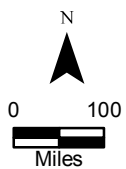
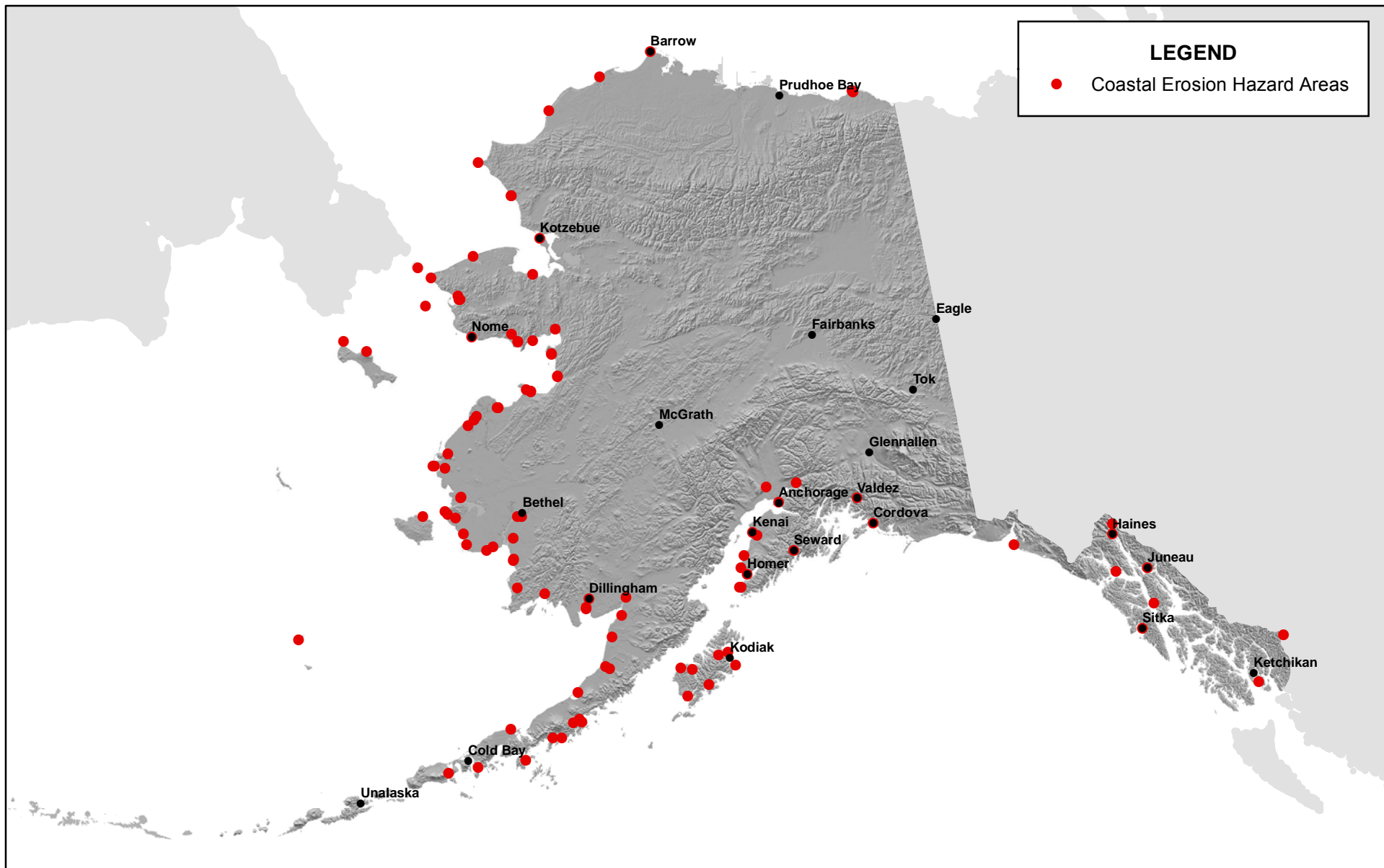


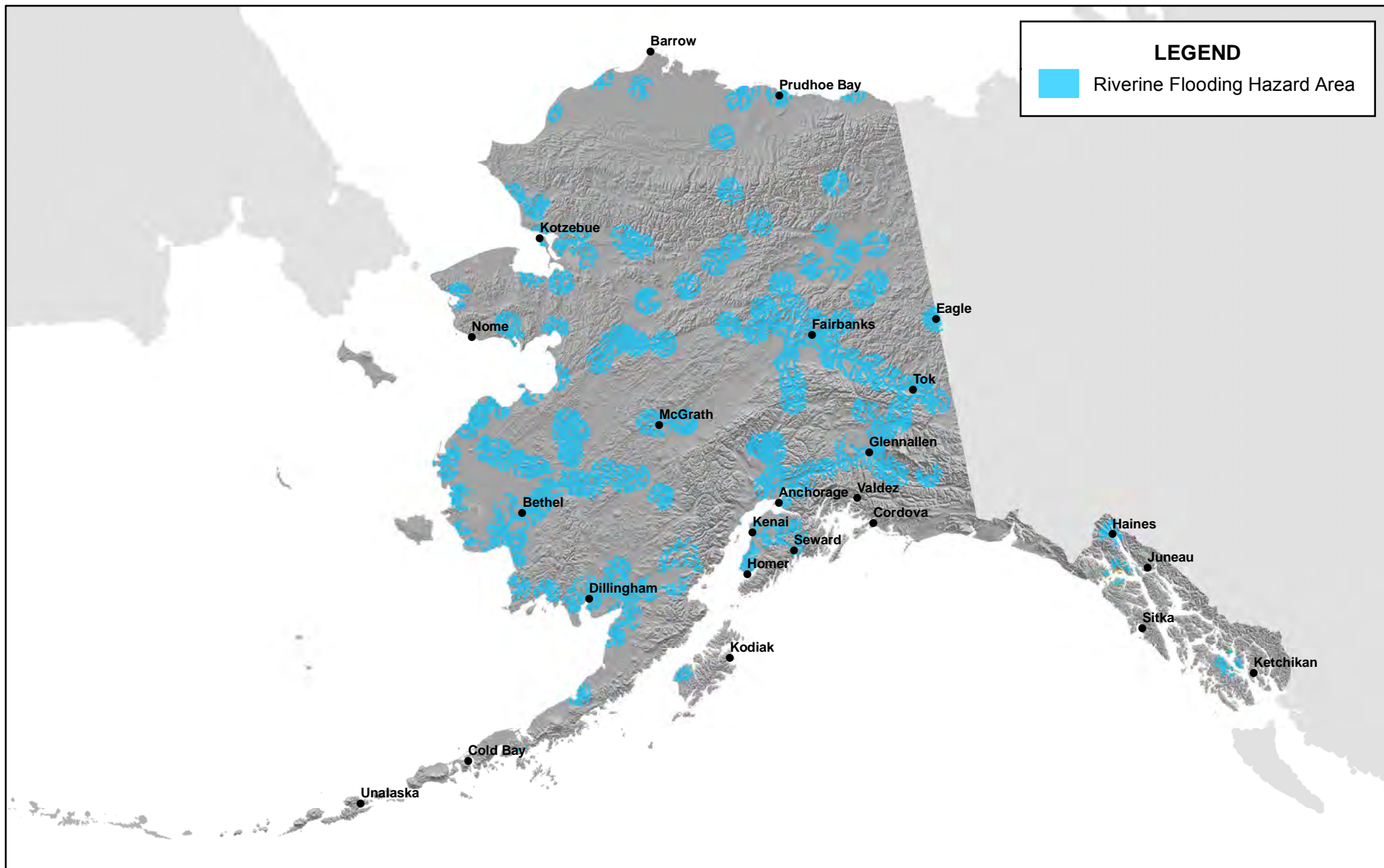
LEGEND

Slopes >28°



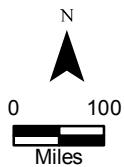


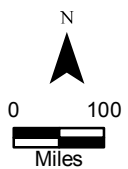
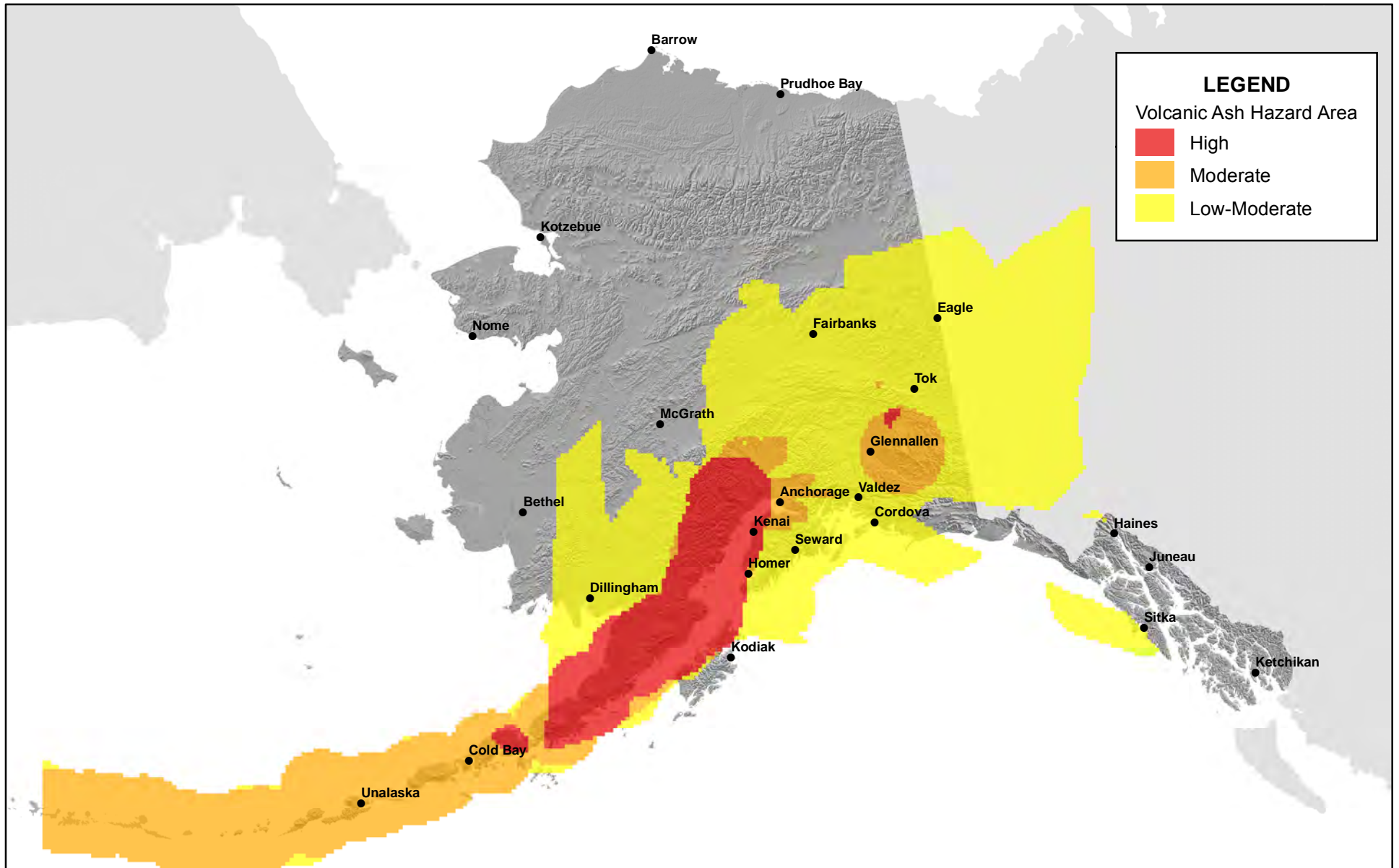


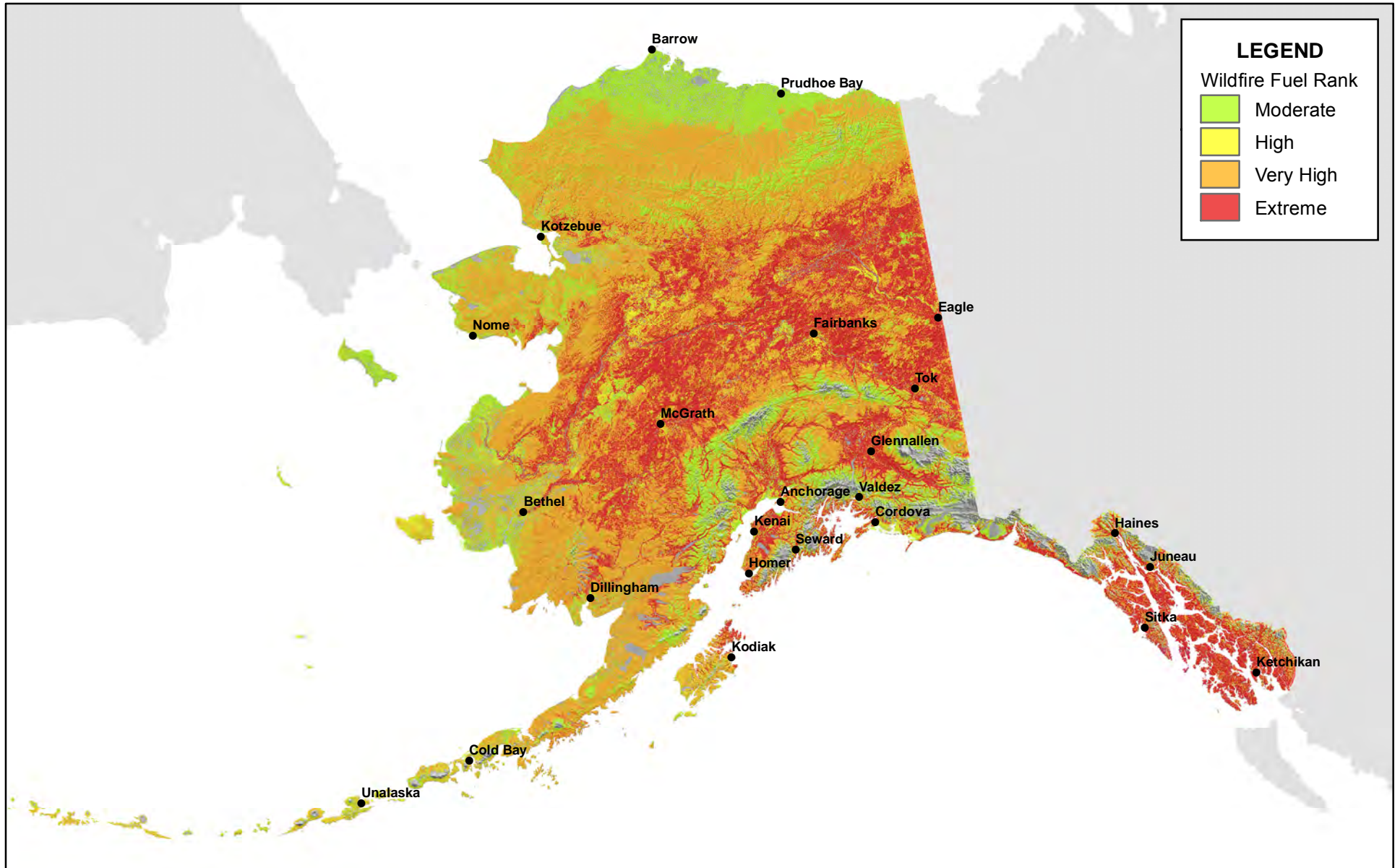


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Riverine Flooding Hazard Area



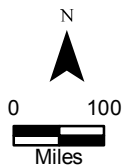




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Wildfire Fuel Rank

■	Moderate
■	High
■	Very High
■	Extreme



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