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Governor Michael J. Dunleavy
STATE OF ALASKA

January 3, 2019

The Honorable Donald J. Trump
President of the United States
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500

Through: Mr. Michael O'Hare
Regional Administrator
FEMA Region X
130-228th Street SW
Bothell, WA 98021-9796

Dear Mr. President:

Under the provisions of Section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §5121-§5207 (Stafford Act), and implemented by 44 CFR §206.36, I respectfully request you declare a major disaster authorizing the full suite of individual, public, and temporary housing assistance, as well as necessary administrative and disaster management expenses, for the State of Alaska as a result of a major earthquake on November 30, 2018.

As a result of the scope of the earthquake damage and associated response efforts, my predecessor, Governor Bill Walker, verbally declared a State Disaster Emergency for the Municipality of Anchorage (MOA), Matanuska-Susitna Borough (MSB), and Kenai Peninsula Borough (KPB) on November 30, 2018. This verbal declaration was followed by an official written declaration on December 2, 2018. This declaration authorized funds be made available from the State's public assistance, individual assistance, and temporary housing programs, as well as necessary administrative and disaster management expenses. The Division of Homeland Security and Emergency Management (DHS&EM), through the State Emergency Operations Center (SEOC), was assigned to lead and manage the State's response and recovery for this event.

The cost and scope of the disaster was sufficient to warrant immediate federal disaster assistance; thus, in consultation with the Federal Emergency Management Agency (FEMA), Governor Walker requested and received an Emergency Declaration (EM-3410-AK) for direct federal assistance from you on November 30, 2018.

Overview

On November 30, 2018, at 8:29 am Alaska Standard Time, a 7.0 magnitude earthquake located seven miles north of Anchorage produced very strong seismic shaking that caused widespread and severe damage primarily within the MOA, MSB, and KPB. The earthquake caused widespread and severe damage to major highways and important public roads, bridges, and other transportation infrastructure; undermining of road embankments and railroad tracks, and loss of track base; widespread power, water, and communication disruption; structural collapse and resulting fires to several buildings; and severe damage to private homes, personal property, and businesses.

These conditions required local emergency protective measures to protect life and property, including activation and staffing of emergency operation centers, emergency debris clearance and temporary repairs to highways, public roads, and railroad tracks to protect critical infrastructure and maintain access, placement of road barricades to protect roads and bridges, operation of mass shelters for affected residents, and school, business, and government office closures.

All of the affected communities are located around Cook Inlet in Southcentral Alaska. The MOA is the largest metropolitan area in the State with a 2017 population of 297,483. The MSB encompasses 24,682 square miles (slightly larger than the State of West Virginia) and has a population 104,166 and is located approximately 30 miles north of Anchorage. The KPB (2017 population: 58,024) is located across the Turnagain Arm approximately 40 miles south of Anchorage. The three contiguous jurisdictions affected by the earthquake comprise over 60 percent of the State's total population and a substantial portion of Alaska's economic base.

The MOA is the predominant economic center of the State, and is comprised of the City of Anchorage, and suburban areas to the north and south. The 2010 Census found a population of 34,982 in Eagle River and smaller settlements further north of Anchorage -- Chugiak, Birchwood, Peters Creek, Thunderbird Falls, and Eklutna, an Alaska Native village of about 70 residents. These communities were annexed into the MOA in 1975 and remain major suburban centers. The search for affordable housing and property encouraged Anchorage residents to move further north to the cities of Palmer, Wasilla, Houston, Sutton, and other communities of the MSB. Over 52,000 vehicles use the Glenn Highway that connects Anchorage and the MSB every day, serving commuters, visitors and commercial traffic.

State and Local Actions

Immediately following the earthquake, the State of Alaska activated the Emergency Operations Plan (EOP), and activated and staffed the SEOC to Level three (actual event). The SEOC remains at level three to support mass care operations from the earthquake. The Department of Transportation and Public Facilities (DOT&PF) and Department of Health and Social Services (DHSS) also activated their EOCs. The MOA and MSB each activated their EOCs to coordinate the response. All three jurisdictions declared local states of emergency.

The National Weather Service (NWS) issued a tsunami warning for the Cook Inlet, including MOA and MSB, and the southern Kenai Peninsula within minutes of the earthquake. A 5.7 magnitude aftershock, the largest aftershock associated with this earthquake, occurred at the same time. The United States Geological Survey (USGS) Shake Map for this earthquake showed a seismic shaking

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intensity of 7.0 predicting moderate to heavy building damage throughout the region. MOA, MSB, and KPB swiftly employed their public safety assets. Throughout the day, the Anchorage Fire Department responded to eight structure fires.

DOT&PF responded with road and bridge inspectors, emergency contractors, and road-clearing teams to approximately 60 locations within the three jurisdictions. Several rock falls occurred over the next few days along the Seward Highway south of Anchorage produced dangerous life-threatening situations for travelers and commuters. The work by DOT&PF was nothing less than remarkable. All eight major transportation corridors with severe damage reopened within five days of the earthquake. DOT&PF also conducted two rounds of inspections for 245 bridges, pedestrian tunnels, and other non-highway structures in Alaska.

A community-wide power outage affected more than 80,000 residents of the region immediately after the earthquake. Full service was not restored until the next day. Two dozen water line breaks, 39 suspected breaks, and other water-related facility damages were addressed by local water utilities in the days following the earthquake.

On November 30, the Alaska Railroad Corporation (ARRC) activated their EOC and suspended both north and south rail service out of Anchorage until inspections could be made and the tracks deemed safe. Following several large aftershocks, rail service was disrupted until the routes could be re-inspected.

All schools in the Anchorage School District (ASD) and MSB School District (MSBSD) were evacuated until safety inspections could be conducted. ASD canceled school for a full week. Follow-on inspections by ASD revealed some damage to most schools, and major damage to the Eagle River Elementary and Gruening Middle School. MSBSD reports major damage to the Houston Middle School and the gymnasium at Colony High School. Significant damage was discovered at several other schools. On December 3, 2018, ASD inspectors identified 85 schools with repairs underway and eight schools safe to occupy. The damages to Eagle River Elementary, Gruening Middle School, and Houston Middle School prompted their closure for rest of the academic year, and all 1,300 students were transferred to temporary facilities or nearby schools for the remainder of the school year.

Request Specifics:

I believe the severity, magnitude, and impact of this disaster meets the following factors outlined in 44 CFR §206.48(6)(a) for Public Assistance.

Damage Assessment

The joint Preliminary Damage Assessment (PDA) was comprised of two missions: first, an Individual Assistance (IA) PDA followed by a Public Assistance (PA) PDA. The PA PDA was conducted by local, State, and FEMA staff in the MOA and MSB between December 17 – 21, 2018. A follow on PA PDA in the KPB was conducted by State of Alaska staff December 20 – 21, 2018. Due to the worsening winter weather conditions in the latter half of December 2018, the PA PDA focused on potential applicants reporting \$100,000 or greater in damages. There are likely a

significant number of damaged buildings and facilities with damages below \$100,000 that were not included in the PA PDA, but will be eligible for public assistance.

The PA PDA validated the following public assistance damages:

• Category A	–	\$20,000 (0.04%)
• Category B	–	\$1,801,040 (3.74%)
• Category C	–	\$3,085,685 (6.41%)
• Category D	–	\$0 (0.00%)
• Category E	–	\$41,411,160 (86.07%)
• Category F	–	\$50,000 (2.77%)
• Category G	–	\$463,000 (0.96%)
Total Estimated Cost	–	\$48,112,398

Category C estimates did not include an estimated \$50 million in response and recovery costs eligible under the Federal Highways Administration (FHWA) Emergency Relief to Federal Roads program. Category E costs did not include costs covered by insurance.

As of December 24, 2018, the State of Alaska has expended \$326,394.73 in personnel, \$90,219.34 in temporary sheltering, and \$1,469,377.14 for contract support and other costs for a total of \$1,885,991.21.

Based on preliminary damage assessments provided by the affected jurisdictions, the State of Alaska has determined the total estimated eligible expenses associated with this disaster are \$48,112,398, which far exceeds the minimum threshold for a major disaster declaration in Alaska. The minimum statewide per capita threshold required by the Stafford Act of \$1,036,937.26, calculated by multiplying 710,231 Alaska residents (2010 Census) by the Fiscal Year 2018 per capita indicator of \$1.46.

Alaska Disaster History

Major earthquakes are not uncommon in Alaska. A few significant events are summarized below:

- **The Great Alaska Earthquake and Tsunami, March 27, 1964.** This event occurred in the Prince William Sound region of Alaska approximately 75 miles east of Anchorage. The earthquake measured 9.2 magnitude, the most powerful earthquake in U.S. history and the second-largest earthquake ever recorded is estimated to have caused \$311 million in damages (estimated at \$2.3 billion in 2013 dollars).
- **Denali Fault Earthquake, November 3, 2002.** The epicenter for this earthquake was located in a remote and sparsely-populated area of the Alaska Interior approximately 150 miles northeast of Anchorage. The earthquake measured 7.9 magnitude, the largest event in Alaska in 37 years, and caused over \$25 million in damages. This earthquake was declared a federal disaster (DR-1440-AK).

- **Iniskin Earthquake, January 24, 2016.** The epicenter for this earthquake was located in a sparsely-populated area of the Kenai Peninsula approximately 150 miles southwest of Anchorage. Although the earthquake measured 7.1 magnitude, it occurred 78 miles below ground; thus, the damages were not substantial enough for State or federal assistance.
- **January 23, 2018 Offshore Kodiak Earthquake.** On January 23, 2018, a magnitude 7.9 occurred off Kodiak Island approximately 360 miles south of Anchorage. The earthquake was felt strongly throughout southcentral Alaska and prompted the National Tsunami Warning center to issue a tsunami warning for the entire southern coast of Alaska at 12:31 am Alaska Standard Time. Many Alaskan communities along the coast issued evacuation orders, requiring entire communities to evacuate inland and to higher ground. The warnings were cancelled by 4:13 am Alaska Standard Time. Although no significant damage was reported, the trauma of evacuations throughout southern Alaska in the middle of a cold, dark, January night had lasting effects on the population impacted by the earthquake on November 30, 2018.

Although the effects were felt hundreds of miles away, two of these earthquakes occurred in generally remote areas of Alaska. The November 30 earthquake was located less than 10 miles from Anchorage – essentially a direct hit to the most populous and economically important area of Alaska.

The State of Alaska continues to manage recovery for several disasters. Within the past two years, there have been a variety of large disasters in Alaska. For events that receive Presidential disaster declarations, the State covers the full 25 percent cost share requirement, and all other costs are 100 percent funded through State disaster relief funds. The estimated total amount of state disaster costs since summer 2013 now exceed \$240 million. A list of recent State-and federally-declared disasters is provided below:

State Declarations

- **2016 West Coast Storms.** On December 27, 2016, the State Emergency Operations Center received a phone call from the National Weather Service informing them about a series of strong winter storms expected to impact the West Coast of Alaska. By December 29, the SEOC received multiple reports of inundation within coastal communities and significant storm/wind damage to infrastructure within the communities. The city of Savoonga reported power outages as well as wind damage to thirty homes resulting in the sheltering of approximately 117 persons. As a result, a two-person damage assessment team was sent to the affected communities from January 5 to 9, 2017. On February 1, 2017, Governor Walker issued a State Declaration (AK-17-262) for the damages associated with these storms, resulting in \$874,577.22 in repairs. The State of Alaska did not request Federal assistance for this State disaster.
- **2018 October Kenai Peninsula Borough Flooding.** Over the weekend of October 12 – 14, the KPB emergency manager contacted the SEOC to report ongoing flooding in Seward due to heavy rainfall. The Lowell Point Bridge was threatened by runoff from Lowell Creek requiring emergency protective measures and flood-fighting operations. Flood protection barriers were also placed at one subdivision. The City of Seward declared a local disaster and sought

assistance from KPB. On October 16, the SEOC received the KPB declaration of disaster emergency and a notification letter from the City Manager to the Mayor of Seward outlining the specifics of their emergency declaration made October 13. Governor Walker declared the Kenai Peninsula Flooding a disaster (AK-17-264) on October 16. A joint FEMA-State PDA was conducted November 1 – 2 that developed a cost estimate of \$499,954 in eligible public assistance costs plus approximately \$984,000 in FHWA-covered costs. The State of Alaska did not request Federal assistance for this state disaster.

Federal Declarations

- **Alaska Railroad May Flood Damage.** On the evening of May 11, 2018, an ice jam on the Susitna River north of Talkeetna, Alaska redirected river flow that flooded the Alaska Railroad Corporation (ARRC) track bed between mileposts (MP) 235 and 252. Approximately five miles of rail and track bed were submerged under ten feet of fast-moving water and three to four-foot-thick ice blocks. Between MP 248 and 249, floodwaters completely dislodged the rails and scoured the track bed, exposing a buried fiber optic communication line servicing communities to the north. This event also stopped all rail service between Talkeetna and Fairbanks, effectively interrupting all passenger and cargo service between Fairbanks and Anchorage for several days. A robust clean up and emergency repair effort was conducted between May 13 and May 25. ARRC provided a cost estimate of \$2,582,378 for temporary and emergency work, and permanent repairs to the railroad. Governor Walker declared the incident a state disaster on June 21, 2018. The incident was declared a federal disaster (DR-4391-AK) on September 5, 2018.
- **2017 December Kenai Peninsula Storm.** 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, coinciding almost perfectly with the highest astronomical tide of the year, caused extensive damage to coastal areas along the Peninsula. The combined total damage cost was \$6,485,069. Since the costs associated from this storm were substantial, the State requested federal assistance for this incident on January 22, 2018. This event was declared a federal disaster (DR-4369-AK) on June 8, 2018.
- **2017 North Slope Borough Storm.** On September 29, 2017, the SEOC received a local declaration of disaster from the North Slope Borough for an unusually early and strong sea storm that impacted in and around the city of Utqiagvik. The initial damage assessment presented costs of \$1.32 million in emergency response and recovery. On November 14, 2017, a State disaster declaration was issued which resulted in \$6,319,658 of damages and associated costs. This event was declared a federal disaster (DR-4351-AK) on December 20, 2017.

In total, the DHS&EM is actively engaged in the management of 14 State declared disasters and 11 federally declared disasters.

I believe the severity, magnitude, and impact of this disaster meets the following factors outlined in 44 CFR §206.48(6)(b) for Individual Assistance.

Damaged Residences and Concentration of Damage

The MOA, specifically the residential and commercial areas of Sand Lake, Eagle River, and Chugiak, have experienced the bulk of damages to businesses, homes and personal property. Within the MSB, the Knik-Goose Bay Road and Point MacKenzie areas, being closest to the epicenter of the earthquake, were hardest hit, although economic and other impacts are being felt more broadly throughout the entire affected region.

On December 20, 2018, the Pacific Disaster Center (PDC) used FEMA's HAZUS modeling software to provide an initial assessment of the likely damage from the earthquake. Based on the location and magnitude of the earthquake, PDC estimated five destroyed buildings, 250 with major damage, 4,600 with minor damage, and 32,000 affected homes. This estimate helped guide planning for the IA PDA.

The IA PDA was conducted by local, State, FEMA, and SBA staff who visited 620 homes in the MOA and MSB between December 10 – 15, 2018. A follow on IA PDA in the Kenai Peninsula Borough was conducted by State of Alaska contractors December 20 – 21, 2018.

The IA PDA revealed: nine destroyed, 289 with major damage, 219 with minor damage, and 103 affected per FEMA's Damage Assessment Matrix. SBA team members evaluated homes and businesses to determine if the criteria for a physical and/or economic injury declaration were met. The IA PDA used the following methodology: initial damage assessment information compiled from local officials, private and public building inspectors, Red Cross of Alaska damage assessments, and State Individual Assistance applications were used to determine the most heavily-damaged areas of each jurisdiction. The PDA field teams focused on areas with major damage and/or destroyed homes. The PDA teams observed several areas with pronounced ground subsidence and visible fissures, with or without severe structural damage. Other areas were inaccessible, subject to restricted use, or not accessible due to geotechnical issues. The PDA was hampered by limited daylight hours (approximately six hours), recent snowfall accumulations of up to four feet total, very cold single-digit ambient temperatures, and extremely hazardous driving conditions. In addition, several homes with reported minor damage were upgraded to major damage after interior inspections revealed failures of load-bearing walls, compromised roof beams, uneven floors, missing or collapsed walls, or other signs of catastrophic structural damage. It is clear there are a substantial number of damaged homes and businesses not visited by the PDA teams.

A more complete understanding of the earthquake damages can be ascertained by combining the IA PDA results with other verified damage assessment data. The MOA deployed teams of building inspectors to evaluate homes and this information was provided to DH&EM. The MSB sent local staff and insurance adjustors, augmented by State DOT&PF staff, to evaluate home and other buildings within the Borough. The Red Cross of Alaska deployed their damage assessment staff to compile damages as well. The local government and Red Cross of Alaska damage assessments verified 21 destroyed, 193 with major damage, 345 with minor damage, and 470 affected homes.

DHS&EM was able to verify damages reported on applications taken via our State Individual Disaster Assistance hotline and website. This verification was used to determine individuals and families with major damage or destroyed homes in need of emergency assistance, immediate

sheltering, or other mass care support needs. The State verified 16 destroyed, 162 with major damage, 534 with minor damage, and 479 affected homes. The values for both verified and unverified damages, as of December 18, 2018, are shown below. It is expected that over time, unverified damages will be processed and these locations will be included in the verified category.

Together with the IA PDA results, the best assessment of impact to homes in the three jurisdictions is thereby: 46 destroyed, 643 with major damage, 1,098 with minor damage, and 1,052 affected homes. This is a total of 2,844 verified damage assessments performed since the earthquake.

*Summary Data for All Damage Assessments
 (compiled as of December 18, 2018)*

	Affected	Minor	Major	Destroyed	Inaccessible	TBD*	TOTAL
Joint PDA Results							
MOA	100	200	235	7	1	0	543
MSB	3	19	53	2	0	0	77
KPB	0	0	0	0	0	0	0
SUBTOTAL	103	219	288	9	1	0	620
Local Government/Red Cross of Alaska Assessments							
MOA	274	203	128	17	45	469	1,136
MSB	196	142	65	4	4	8	419
KPB	0	0	0	0	0	0	0
SUBTOTAL	470	345	193	21	49	477	1,555
State of Alaska Verified Applications From IA Database							
MOA	345	383	97	9	0	391	1,225
MSB	126	142	53	6	0	97	424
KPB	8	9	12	1	0	4	34
SUBTOTAL	479	534	162	16	0	492	1,683
State of Alaska Unverified Applications Form IA Database							
MOA	0	0	0	0	0	1,559	1,559
MSB	0	0	0	0	0	305	305
KPB	0	0	0	0	0	6	6
SUBTOTAL	0	0	0	0	0	1,875	1,875
TOTAL	1,052	1,098	643	46	50	2,844	5,733

*TBD – To be determined. This category includes unknown, unclear, or missing information from State IA applications and Red Cross of Alaska damage assessments.

As shown in Enclosure A, FEMA has calculated financial summaries for the 620 damaged homes verified by the IA PDA. FEMA estimates the total federal share for both housing assistance and other needs assistance for these homes will be approximately \$10.6 million. The State of Alaska share would be approximately \$184, 000. For comparison, FEMA also prepared financial summaries for the consolidation of all 5,773 homes with reported damage. For this consolidated estimate, FEMA estimates the total federal share for both housing assistance and other needs assistance for these homes at approximately \$28.3 million. The State of Alaska share would then be approximately \$848,000.

Many affected residents with damaged homes are financially fragile and lack the capability to absorb unexpected costs above their normal living expenses, regardless of the federal or State damage definitions. As a result, these vulnerable residents will be unable to make permanent repairs without foregoing other vital needs such as utilities, medicine, and food, which creates a daily struggle to provide even without this disaster.

I have activated the State Individual Assistance Program to ensure timely delivery of assistance if a federal declaration is not forthcoming. Starting December 4, 2018 (five days after the earthquake), my team has staffed a toll-free hotline to assist impacted residents. Applications are still actively being taken, damages verified, and planning support has begun for recovery plans. DHS&EM has utilized all available Division staff, contract inspectors and adjustors, Alaska State Defense Force (ASDF) personnel, and other staff through the Emergency Management Assistance Compact (EMAC) to handle the ever-increasing applicant load. To date, the State of Alaska has received over 6,200 requests for assistance with a substantial number of these requests requiring immediate sheltering and other mass care needs.

For comparison, the two most recent disasters approved for federal individual assistance (2009 Spring Floods and 2013 Spring Floods) each managed fewer than 500 applications for assistance. Over the past 25 years, the total number of applications for either federal or State individual assistance has been less than 2,500. This disaster has already far exceeded previous application numbers. This disaster will be the historic benchmark for our State individual assistance program. The State Individuals and Family Grants (IFG) program sets a maximum award of \$17,450 (half the federal rate). The anticipated uninsured loss to homes will likely far exceed this cap. The cost to the State of Alaska without a federal individual assistance disaster declaration could exceed \$100 million. Even the provision of State-only disaster relief for homeowners will potentially leave hundreds or thousands of applicants with insufficient funds to recover from this disaster. Federal disaster assistance is essential to long-term recovery.

Additionally, we have activated our Disaster Housing Task Force to begin planning efforts on recovery. However, the overall impact from the earthquake exceed the financial capability of residents even with State assistance. Therefore, we require the resources and support of other federal agencies and non-governmental organizations. The steps we are taking are being done to assist us in the long-term recovery process and can be ultimately coordinated into FEMA's program if a federal declaration is provided.

Concentration of Damages and Unique Community:

The extensive damage to residential homes in the impact area of the disaster resulted in almost 300 uninhabitable homes due to major damage or destruction. The state has an abbreviated building season with most of the work accomplished during the longer-than-normal daylight in the summer months. Winter brings extreme temperatures that regularly drop to subzero ambient temperatures and severe wind chills.

Special Populations:

The Preliminary Damage Assessments suggest that a large percentage of those surveyed in the area may be considered low income. This is an indication that the homes most affected are likely owned

by those with the least ability to recover on their own. Many of the affected residents are elderly or have special needs that preclude them from taking the necessary recovery actions. Poverty rates are near the State and/or national average, but applications for assistance reveal many residents lack the capabilities and resources to recover without outside assistance.

Currently, 111 residents are being sheltered in temporary facilities or hotels; their homes are uninhabitable and they lack access to other housing resources. Planning to determine options for transient housing will need to be accomplished soon in order to provide safe shelter for hundreds of residents. Numerous families are also staying with relatives, friends, or in hotels. These forms of temporary housing are historically short-lived, and many of these families will soon require alternate housing assistance.

Compounding the sheltering problem, Brother Francis Shelter, one of the largest homeless facilities in Anchorage, was filled to capacity prior to the earthquake, and remains full today. This shelter regularly serves 400 of the estimated 1,000 persons living homeless in Anchorage.

Summary Data of Special Populations

	Average of Persons Below Poverty Level*	Median Household Income*	Percent Elderly*	American Indian/ Alaska Native *	Percent Disabled	Percent Pre-Disaster Unemployment**
National Average	12.3%	\$57,652	15.6%	1.3%	8.7%	3.5%
State Average	11.1%	\$76,114	11.2%	15.3%	8.5%	6.4%
MOA	9.6%	\$82,271	10.5%	8.8%	8.0%	4.9%
MSB	11.3%	\$74,887	11.1%	6.8%	9.1%	6.5%
KPB	10.2%	\$65,279	16.4%	7.9%	10.5%	No Data

* U.S. Bureau of Census QuickFacts and FactFinder at <https://www.census.gov/quickfacts>.

**U.S. Bureau of Labor Statistics (Oct 2018 data) at https://www.bls.gov/regions/west/summary/blssummary_anchorage.pdf.

Trauma

Residents, businesses, and all levels of government and non-governmental organizations were affected by this disastrous event. This includes State of Alaska staff working at the SEOC who are disaster survivors with home and property damages as well.

As discussed above, Alaska has had several major earthquakes in recent history. There are still many area residents that lived through and remember the Great Alaska Earthquake of 1964. Many more area residents remember the 2002 Denali Fault and 2016 Iniskin Earthquakes, both measured at 7.0 magnitude or greater. The November 30 earthquake has re-awakened the anxiety and emotional trauma from these earlier events. Television, radio, and print media continue to highlight the emotional trauma faced by the public. The emotional trauma from this earthquake is visible and manifests with angry residents who continue to voice their plight to local and State officials during public meetings and town halls.

Trauma will continue for those residents whose homes suffered substantial damage beyond their ability to permanently repair. To date, dangerous conditions exist in the community prioritizing

stabilization over recovery. Emergency management personnel and inspections teams out in the community and shelters have witnessed many physically and mentally exhausted residents.

The financial trauma suffered by survivors, especially the economically fragile, is an acute concern. While it may be possible for the State and other resources to meet the immediate life-safety needs during the response phase, the recovery costs will far exceed State resources. Many homes will have damaged mechanical systems, such as water pumps, water heaters, and furnaces, and residents who were already struggling financially will have a very difficult time making payments for pre-existing bills, and other expenses, while trying to find resources to repair or replace their homes and other essential living items.

Voluntary Agency Assistance:

Voluntary agencies have been assisting the State of Alaska since the beginning of the disaster with direct assistance and liaison support at the SEOC. The Alaska Volunteer Organizations Active in Disasters (AKVOADs) involvement includes, but is not limited to, the Latter Day Saints Charities, World Renew, American Red Cross, Lutheran Social Services of Alaska, the Salvation Army, and others. To date these organizations have assisted with meals, sheltering, housing assistance, disaster mental health, replacement of school supplies, damage assessments, and food services. The organizations continue to work on securing funding and volunteers to assist in response and recovery.

As of December 20, 2018, the Red Cross of Alaska operated five shelters in multiple locations with 226 total overnight stays. In addition, the Red Cross of Alaska has:

- provided 1,439 meals;
- provided 2,636 snacks;
- distributed 69 cases of water;
- operated 3 fixed feeding sites;
- distributed 8 clean up kits;
- distributed 70 comfort kits; and
- supported 3 local emergency operations centers.

Other AKVOADs have provided:

- 12,527 meals;
- 457 mental health consultations; and
- school supplies for 663 individuals.

The Red Cross of Alaska has also provided assistance with staffing the SEOC, damage assessments, sheltering, feeding, collecting and distributing donations, pet assistance, coordination with partners, mental health services, and case work in the impacted communities. The organizations continue to work on securing funding and volunteers to assist in recovery.

These voluntary agencies have done an outstanding job addressing the immediate needs of affected residents. However, the frequency of these requests has increased since the earthquake. As the State identifies and validates needs through its online and hotline application processes, the voluntary agencies continue to work rapidly and utilize all available resources to meet basic needs for those whose lives have been most affected.

The community's needs have continued to grow since the date of the event as homes are deemed uninhabitable by building officials and families exhaust individual resources. As we look toward recovery activities and needs continue to increase, we will need even more support and involvement from these critical partners.

Our local voluntary organizations have a shortage of trained volunteers to spread over a portion of the state that could be compared to the size of Texas. Recent deployments to support major national hurricane, volcano, and wildfire disasters has also depleted Alaska staff. This has resulted in a chilling realization of how limited resources are to meet an overwhelming need. Additionally, the volunteer agencies have missions to which they are bound. Therefore, many of our residents may fall just above the threshold criteria for their programs.

Disruption to Normal Community Functions

This disaster has not just disrupted normal community function, it has changed the way of life for most residents in Southcentral Alaska. The number and regularity of aftershocks, almost 5,000 since the earthquake on November 30, delay the speedy transition to recovery, leaving residents and responders in an emergency mode marked by stress and uncertainty. Several emergency shelters opened within hours of the main earthquake and additional shelters opened over the next week as the need increased. Approximately 110 persons remained in shelters as of December 24, 2018.

Public Health Impacts

DHSS found that 361 people in Southcentral Alaska visited hospital emergency rooms within eight days of the earthquake for reasons related to the event. Only one of those visits resulted in hospitalization. Forty-five percent of the visits in the aftermath of the quake were for injuries, including falls, being injured by a falling object, or musculoskeletal damage like broken bones, sprains and back injuries. Nine percent of the visits were for chest pain or other cardiac ailments. Health Care Services and Mental Health constituted 14 percent of the visits, neurologic reasons 10 percent, gastrointestinal ailments seven percent, and other reasons constituted 15 percent of the visits. Some patients had multiple ailments addressed during their visits. There were no earthquake-related deaths.

Though serious life-threatening injuries and deaths did not occur, the earthquake and aftershocks have caused serious and continued physical and mental health concerns. Mental-behavioral health needs remain elevated and are expected to rise in affected areas. The MOA Department of Health and Human Services (DHHS) has been reporting high volumes of people experiencing acute mental health effects of fear, anxiety, and stress. Seven behavioral health specialists from Oregon supported the Anchorage School District for almost two weeks, providing mental health support to K through 12 students at area schools.

With regards to mental and behavioral health, these resources are significantly stretched thin with many residents unable to find psychologists and/or clinics open for business. For those clinics that are open, many have limited hours and/or two-to three-month waiting lists. New clients with earthquake-induced anxiety and other issues are competing with a 30 percent increase in current clients wanting to be seen more frequently. These anxiety attacks, including sleep problem, depression, and other problems have been worsened by many 4.0 magnitude and greater aftershocks.

Economic Impacts

The impact of the earthquake on the local economy has not yet been fully evaluated. The losses created by this disaster are not limited to homes and possession, or to the directly affected communities. Jobs and businesses are also being threatened as key industries are experiencing significant impacts from the event.

The earthquake happened at a very inopportune time. Alaska's economy has been in a recession since late 2015 following a severe drop in oil prices and a state budget deficit. MOA, MSB, and KPB were especially hit hard with thousands of job losses in many industries. However, the Anchorage Economic Development Council (AEDC) issued a three-year outlook last December that confirmed there were measureable signs of an economic turnaround, and predicted that the recession would be over by January 2019. With the impacts to public, private homes, and businesses from this earthquake, this recovery is now in question.

Compounding the economic problem, the earthquake happened within the critical period between Thanksgiving and Christmas. Many small businesses rely on a strong holiday season, which has been disrupted by commercial building damages and other adverse business impacts. By all accounts, the holiday season was off to a good start with significant personal spending on gifts, travel, and other holiday expenses. After the earthquake, this personal spending has slowed as residents reassess their finances to plan for likely home repairs and replacement of personal property and/or other essential items. Residents who have lost their homes or have been moved to emergency shelters are in worse financial shape.

Several businesses have reported having to lay off or limit the hours of employees while their stores, warehouses, and other commercial facilities are repaired. For the past two weeks, there have been television and print media reports highlighting the adverse impact of the earthquake on businesses in MOA and MSB. Visible damage to local business is commonplace throughout Anchorage and the MSB.

Some key businesses will not recover and the economic impact to residents will be felt for some time.

The impact of closed schools and relocation of students to other area schools have caused increased and/or higher than normal childcare costs, lost work for parents and guardians, and mental and behavioral health impacts. School programs focusing on daily nutritional meal service for children from low-income families was interrupted and may remain disrupted for many weeks. Normal afterschool programs, sports, and activities have been upset as displaced students integrate into another school's program mid school year.

The MSB is still recovering from a widespread ransomware cyberattack last July that crippled local government functions. The malware program affected almost all 500 of the Borough's desktop computers and 120 servers, primary telephone and email systems, and their network data backup system. The Borough estimated the costs of this attack at approximately \$2 million in uninsured losses.

Insurance

Preliminary Damage Assessments illustrate that while many residents have basic homeowner's insurance, a very low percentage (6% to 10%) of residents have specific earthquake insurance coverage on their homes. In addition, the earthquake and seismic shaking may have caused settling, loss of porosity and permeability, and other uninsurable non-visible damage to wells, septic tanks, and leach fields.

Many who are financially capable and have insurance are being told the damages from the earthquake are not an insurable loss. It is also reasonable to expect that those with the best insurance coverage are those who are the most financially resilient and can afford the repair or replacement costs on their own. Those who are financially fragile, and most in need of assistance from outside sources, are the least likely to have insurance coverage.

While detailed data is not yet available, a reasonable assumption is that while many residents may have sufficient property insurance, they typically do not have specific coverage for earthquake damages. Earthquake insurance typically costs over \$1,000 per year and contains substantial deductibles ranging from 10 to 20 percent depending on the carrier, location, and value of the home. For example, a modest \$300,000 home would have a deductible of \$30,000 - \$60,000; a substantial amount of non-covered loss for most low-income residents before insurance proceeds. Several homes were assessed at well above this amount. Home prices in Eagle River and Chugiak, one of the hardest hit areas, regularly exceed \$450,000. The deductible for these homes would range from \$45,000 - \$90,000. Home prices in the MSB and KPB range widely but are typically \$250,000 to \$400,000. Even if only minor damage was discovered, the average cost for a home inspection to rule out the necessity for an insurance claim ranges from \$250 - \$400.

Conclusion

I have determined this incident is of such severity and magnitude that effective recovery is beyond the capabilities of the State and affected local governments. Supplementary federal assistance is needed. I specifically request individual and public assistance and statewide hazard mitigation grants for eligible applicants within the Municipality of Anchorage, Matanuska-Susitna Borough, and Kenai Peninsula Borough.

I certify the State of Alaska will assume all applicable non-federal shares of costs required by the Stafford Act. The estimate for damaged infrastructure is \$48,112,398. These costs exceed the minimum statewide per capita threshold required by the Stafford Act of \$1,036,937.26, calculated by multiplying 710,231 Alaska residents (2010 Census) by the Fiscal Year 2018 per capita indicator of \$1.46.

The Honorable Donald J. Trump
Mr. Michael O'Hare
January 3, 2019
Page 15 of 15

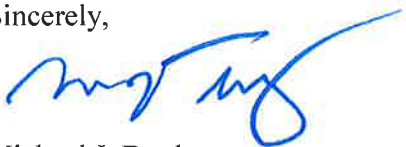
Given the devastating effects of this disaster, I request the number of federal recovery personnel be appropriate to the size and needs of each community for all provided programs so that, together, we can provide disaster assistance to the affected communities without overwhelming them.

Finally, if a federal disaster declaration for Individual Assistance is denied for one or more jurisdictions affected by this earthquake, I request an Agency Declaration from the Small Business Administration. These requests are critical to the initial recovery and are beyond our State capability.

I believe the widespread nature of this disaster, along with the severe long-term impact, compels an expedited review of this Request for Federal Assistance and timely consideration of the provided information. I therefore request you declare a Major Disaster for the State of Alaska to include the full suite of individual and public assistance, and temporary housing programs. I specifically request supplemental federal disaster assistance programs available under the Individual and Households Program, Disaster Legal Services, Disaster Unemployment Assistance, Disaster Case Management, and Crisis Counseling Program.

I have designated Bryan Fisher as the State Coordinating Officer for this request. He will coordinate with FEMA and may provide further information or justification on my behalf.

Sincerely,



Michael J. Dunleavy
Governor

Enclosures

- A: Individual Assistance
- B: Public Assistance
- C: Estimated Assistance from Other Federal Agencies
- D: Hazus Estimated Damage and Economic Losses, Pacific Disaster Center, November 30, 2018
- E: Alaska Earthquake Preliminary Virtual Assessment Report (P-VAT) Joint Report, and EERI Structural Extreme Event Reconnaissance Network (StEER) & Earthquake Engineering Research Institute (EERI), December 6, 2018.

cc: The Honorable Lisa J. Murkowski, United States Senate
The Honorable Dan Sullivan, United States Senate
The Honorable Don Young, United States House of Representatives
Mike Sutton, Director, Department of Military and Veterans' Affairs, Division of Homeland Security and Emergency Management
Bryan Fisher, State Coordinating Officer, Department of Military and Veterans' Affairs, Division of Homeland Security and Emergency Management

ENCLOSURE A TO MAJOR DISASTER REQUEST

Estimated Requirements for Individual Assistance
under the Stafford Act
based on PDA Results

Community/ Borough	Temporary Housing	Repairs	Replacement	Other Needs Assistance*	Other Programs**
MOA	\$303,855	\$7,713,848.34	\$202,398	\$481,542.55	TBD
Matanuska-Susitna Borough	\$61,851	\$1,705,793.62	\$67,466	\$70,785.76	TBD
Kenai Peninsula Borough	\$0	\$0	\$0	\$0	TBD
Total	\$365,706	\$9,419,641.96	\$269,864	\$552,328.31	TBD

*Other Needs Assistance is subject to a 75% federal/25% state cost share. Only the total estimated federal share amount is shown in this column.

**Includes Disaster Unemployment Assistance, Legal Services, and Crisis Counseling)

ENCLOSURE B TO MAJOR DISASTER REQUEST

Estimate Stafford Act Requirements for Public Assistance

Community/ Borough	Category							Total
	A	B	C	D	E	F	G	
MOA	\$20,000	\$206,270	\$2,054,494	\$0	\$27,231,673	\$1,068,183	\$391,000	\$30,971,620
Matanuska-Susitna Borough	\$0	\$1,594,770	\$1,031,191	\$0	\$13,455,000	\$213,330	\$72,000	\$16,366,291
Kenai Peninsula Borough	\$0	\$0	\$0	\$0	\$724,487	\$50,000	\$0	\$774,487
Total	\$20,000	\$1,801,040	\$3,085,685	\$0	\$41,411,160	\$1,331,513	\$463,000	\$48,112,398
Percentage	0.04%	3.74%	6.41%	0.00%	86.07%	2.77%	0.96%	100%

- A - Debris Removal
- B - Emergency Protective Measures
- C - Roads & Bridges
- D - Water Control Facilities
- E - Buildings & Equipment
- F - Utilities
- G - Other (Parks, Recreational Facilities & other items)

ENCLOSURE C TO MAJOR DISASTER REQUEST

Estimated Assistance from Other Federal Agency Programs

Community/Borough	SBA Home Loans	SBA Business Loans	FSA Loans	NRCS	FHWA Not included in Enclosure B	USACE	OTHER
MOA	TBD	TBD	TBD	TBD	\$25,000,000	TBD	TBD
Mat Su Borough	TBD	TBD	TBD	TBD	\$20,000,000	TBD	TBD
Kenai Peninsula Borough	TBD	TBD	TBD	TBD	\$5,000,000	TBD	TBD
Total	TBD	TBD	TBD	TBD	50,000,000	TBD	TBD

TBD – To be determined. Values provided where known.

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
REQUEST FOR PRESIDENTIAL DISASTER DECLARATION
MAJOR DISASTER OR EMERGENCY

OMB Control Number 1660-0009
Expires 09/30/2019

1. Request Date Dec 28, 2018

Burden Disclosure Notice

Public reporting burden for this form is estimated to average 9 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting the form. This collection of information is required to obtain a benefit. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, Paperwork Reduction Project (1660-0009). **NOTE: Do not send your completed form to this address.**

Completion of this form including applicable attachments satisfies legal requirements for emergency and major disaster declaration requests under 42 U.S.C. §§ 5170 and 5191, respectively, as implemented at 44 C.F.R. §§ 206.35 and 206.36. Failure to use this form may result in a failure to meet these requirements and/or a delay in processing the request.

2a. Name of State (as defined in Stafford Act 102, 42 U.S.C. § 5122) or Indian tribal government requesting declaration. Alaska	2b. Population (as reported by 2010 Census) or estimated population of Indian tribal government's damaged area(s). <u>710,231</u>
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3. Governor's or Tribal Chief Executive's Name Michael J. Dunleavy	4. Designation of State or Tribal Coordinating Officer upon declaration (if available) and phone number Bryan J. Fisher (907.240.6043)
---	---

5. Designation of Governor's Authorized Representative or Tribal Chief Executive Representative upon declaration (if available) and phone number
 Michael J. Sutton (907.428.7066)

6. Declaration Request For: Major Disaster (Stafford Act Sec. 401) Emergency (Stafford Act Sec. 501 (a))

7. Incident Period: Beginning Date Nov 30, 2018 End Date Nov 30, 2018 or Continuing

If requesting a "continuing" incident period, enclose an official statement from a qualified Federal Government agency acknowledged as a national authority in a specific incident field (e.g., United States Geological Survey for seismic incidents, the National Weather Service for flooding).

7b. Type of Incident (Check all that apply)

Drought Earthquake Explosion Fire Flood Hurricane Landslide Mudslide
 Severe Storm Snowstorm
 (rain, high water, wind-driven, rain, hail, lightning) (Must include Enclosure D: Historic and Current Snowfall Data) Straight-Line Winds
 Tidal Wave Tornado Tropical Depression Tropical Storm Tsunami Volcanic Eruption Winter Storm
 Other (please specify) _____

8. Description of damages (Short description of impacts of disaster on affected area and population). Include additional details in enclosed Governor's or Tribal Chief Executive's cover letter.

On November 30, 2018, a 7.0 magnitude earthquake produced strong seismic shaking that caused widespread and severe damage primarily within the Municipality of Anchorage, Matanuska-Susitna Borough, and Kenai Peninsula Borough (combined population of 436,221). The earthquake produced strong seismic shaking that caused widespread and severe damage to homes, major highways, roads, bridges, transportation infrastructure, road embankments, railroad tracks, critical utility infrastructure, public and commercial buildings, including structural collapse and resulting fires. The earthquake resulted in a State declaration of disaster emergency, and a federal emergency declaration (EM-3410-AK).

9. Description of the nature and amount of State and local or Indian tribal government resources which have been or will be committed. Include additional details in enclosed Governor's or Tribal Chief Executive's cover letter.

The State of Alaska has executed its Emergency Operations Plans and committed all available State and local resources to the response and recovery from this event. The State of Alaska will provide the full 25% non-federal cost share and will work with each affected jurisdiction to cover any expenses not included in a federal declaration.

10. Joint Preliminary Damage Assessment*

Individual Assistance Dates Performed Requested Dec 4, 2018 Start Dec 10, 2018 End Dec 15, 2018

Individual Assistance Accessibility Problems (Areas that could not be accessed, and why)
 The PDA field teams focused on areas with the highest concentration of major damage and/or destroyed homes. The PDA teams observed several areas with pronounced ground subsidence and visible fissures, with or without severe structural damage. Other areas were inaccessible, subject to restricted use, or uninhabitable due to geotechnical issues. The PDA was hampered by limited daylight hours (approximately six hours), recent snowfall accumulations of up to four feet total, very cold single-digit ambient temperatures, and extremely hazardous driving conditions. Also, several homes with reported minor damage were upgraded to major damage after interior inspections reveal failures of load-bearing walls, compromised roof beams, uneven floors, missing or collapsed walls, or other signs of catastrophic structural damage. The PDA team could not visit the Kenai Peninsula Borough due to hazardous road conditions. It is clear there are a potentially substantial number of damaged homes and businesses that were not visited by the PDA teams.

Public Assistance Dates Performed Requested Dec 4, 2018 Start Dec 17, 2018 End Dec 21, 2018

Public Assistance Accessibility Problems (Areas that could not be accessed, and why)
 Due to worsening weather conditions in the latter half of December, the PA PDA focused on potential applicants reporting \$100,000 or greater in damages. Thus, there are likely a significant number of damaged buildings and infrastructure that were not included in the PA PDA, but will likely be eligible for assistance. Similar accessibility issues as stated above, including minimal daylight hours, snow accumulation, and hazardous driving conditions necessitated a reduction in applicant visits and assessments.

11. Programs and Areas Requested

Individual Assistance N/A Individuals and Households Program Crisis Counseling Program Disaster Unemployment Assistance
 All Disaster Case Management Disaster Legal Services Small Business Administration (SBA) Disaster Assistance

For the following jurisdictions, specify programs and areas (counties, parishes, independent cities; for Indian tribal government, list tribe(s) and/or tribal area(s)) If additional space is needed, please enclose additional documentation).
 All Individual Assistance programs listed above for the Municipality of Anchorage, Matanuska-Susitna Borough, and Kenai Peninsula Borough.

For States, identify Federally-recognized Tribes in the requested counties (if applicable).
 Eklutna Native Village, Knik Tribe, Chickaloon Native Village, Native Village of Tyonek, Village of Salamatoff, Kenaitze Indian Tribe, Ninilchik Village, Seldovia Village Tribe, Native Village of Nanwalek, Native Village of Port Graham.

Please see **Enclosure A: Supplemental Information for Individual Assistance** for additional information in support of this request*.

*Not Required for Emergency Declaration Request

11. Programs and Areas Requested (Continued)

Public Assistance N/A Debris Removal (Category A) Emergency Protective Measures (Category B) Permanent Work (Categories C-G)*
 (not available for Emergency Declaration Requests)

For the following jurisdictions, specify programs and areas (counties, parishes, independent cities; for Indian tribal government, list tribe(s) and/or tribal area(s)). If additional space is needed or your request includes different categories of work for different jurisdictions; please enclose additional documentation.

All Public Assistance programs and areas for the Municipality of Anchorage, Matanuska-Susitna Borough, and Kenai Peninsula Borough.

For States, identify Federally-recognized Tribes included in the requested counties (if applicable).
 Eklutna Native Village, Knik Tribe, Chickaloon Native Village, Native Village of Tyonek, Village of Salamatoff, Kenaitze Indian Tribe, Ninilchik Village, Seldovia Village Tribe, Native Village of Nanwalek, Native Village of Port Graham.

Please see **Enclosure B: Supplemental Information for Public Assistance** for additional information in support of this request*.

Indemnification for Debris Removal Activity

I do not anticipate the need for debris removal.

I anticipate the need for debris removal, which poses an immediate threat to lives, public health and safety. Pursuant to Sections 403 and 407 of the Stafford Act, 42 U.S.C. §§ 5170b & 5173, the State or Indian tribal government agrees to indemnify and hold harmless the United States of America for any claims arising from the removal of debris or wreckage for this disaster. The State or Indian tribal government agrees that debris removal from public and private property will not occur until the landowner signs an unconditional authorization for the removal of debris.

Request for Direct Federal Assistance

I do not request direct Federal assistance at this time.

I request direct Federal assistance for work and services to save lives and protect property, and:

a. I request the following type(s) of assistance:

b. List of reasons why State and local or Indian tribal government cannot perform, or contract for, required work and services.

c. In accordance with 44 C.F.R. § 206.208, the State or Indian tribal government agrees that it will, with respect to direct Federal assistance: (1) Provide without cost to the United States all lands, easements, and rights-of-ways necessary to accomplish the approved work; (2) Hold and save the United States free from damages due to the requested work, and shall indemnify the Federal Government against any claims arising from such work; (3) Provide reimbursement to FEMA for the non-Federal share of the cost of such work in accordance with the provisions of the FEMA-State or FEMA-Tribe Agreement ; and (4) Assist the performing Federal agency in all support and local jurisdictional matters.

Request for Snow Assistance

N/A I request snow assistance.

Snow assistance for the following jurisdictions (Specify counties, independent cities or tribes and/or tribal areas).

Please see **Enclosure D: Historic and Current Snowfall Data** for additional information in support of this request*.

*Not Required for Emergency Declaration Request

11. Programs and Areas Requested (Continued)

Hazard Mitigation* Statewide **OR**

For the following specific counties, parishes, independent cities or tribes and/or tribal areas.

12. Mitigation Plan Information*

a. Mitigation Plan Expiration Date October 25, 2023 b. Type of Plan Enhanced Standard

13. Other Federal Agency Programs

I do not anticipate requirements from Other Federal Agencies I do anticipate requirements from Other Federal Agencies

Please see **Enclosure C**: Requirements for Other Federal Agency Programs for additional information in support of this request*.

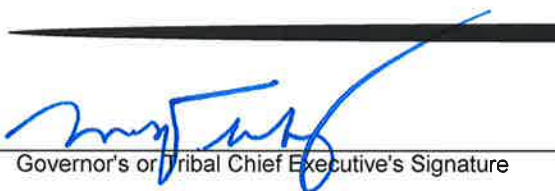
14. Findings and Certifications

I certify the following:

- a. I have determined that this incident is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local government or Indian tribal government and that supplementary federal assistance is necessary.
- b. In response to this incident, I have taken appropriate action under State or tribal law and have directed the execution of the State or Tribal Emergency Plan on Nov 30, 2018 in accordance with the Stafford Act.
- c. The State and local governments, or Indian tribal government will assume all applicable non-Federal share of costs required by the Stafford Act.

15. List of Enclosures and Supporting Documentation

- Cover Letter Enclosure A (Individual Assistance)* Enclosure B (Public Assistance)*
- Enclosure C (Requirements for Other Federal Agency Programs) Enclosure D (Historic and Current Snowfall Data)
- Additional Supporting Documentation HAZUS Estimate from Pacific Disaster Center, StEER/EERI Alaska Earthquake Prelim. Report



Governor's or Tribal Chief Executive's Signature

Dec 28, 2018

Date

If anyone except the Governor or Tribal Chief Executive signs this document, please provide the documentation that establishes that this individual has the legal authority to act on behalf of the Governor or Tribal Chief Executive.

*Not Required for Emergency Declaration Request

ENCLOSURE A TO MAJOR DISASTER REQUEST

Estimated Requirements for Individual Assistance
under the Stafford Act
based on PDA Results

Community/ Borough	Temporary Housing	Repairs	Replacement	Other Needs Assistance*	Other Programs**
MOA	\$303,855	\$7,713,848.34	\$202,398	\$481,542.55	TBD
Matanuska-Susitna Borough	\$61,851	\$1,705,793.62	\$67,466	\$70,785.76	TBD
Kenai Peninsula Borough	\$0	\$0	\$0	\$0	TBD
Total	\$365,706	\$9,419,641.96	\$269,864	\$552,328.31	TBD

*Other Needs Assistance is subject to a 75% federal/25% state cost share. Only the total estimated federal share amount is shown in this column.

**Includes Disaster Unemployment Assistance, Legal Services, and Crisis Counseling)

ENCLOSURE B TO MAJOR DISASTER REQUEST

Estimate Stafford Act Requirements for Public Assistance

Community/ Borough	Category							Total
	A	B	C	D	E	F	G	
MOA	\$20,000	\$206,270	\$2,054,494	\$0	\$27,231,673	\$1,068,183	\$391,000	\$30,971,620
Matanuska-Susitna Borough	\$0	\$1,594,770	\$1,031,191	\$0	\$13,455,000	\$213,330	\$72,000	\$16,366,291
Kenai Peninsula Borough	\$0	\$0	\$0	\$0	\$724,487	\$50,0000	\$0	\$774,487
Total	\$20,000	\$1,801,040	\$3,085,685	\$0	\$41,411,160	\$1,331,513	\$463,000	\$48,112,398
Percentage	0.04%	3.74%	6.41%	0.00%	86.07%	2.77%	0.96%	100%

A - Debris Removal

B - Emergency Protective Measures

C - Roads & Bridges

D - Water Control Facilities

E - Buildings & Equipment

F - Utilities

G - Other (Parks, Recreational Facilities & other items)

ENCLOSURE C TO MAJOR DISASTER REQUEST

Estimated Assistance from Other Federal Agency Programs

Community/Borough	SBA Home Loans	SBA Business Loans	FSA Loans	NRCS	FHWA Not included in Enclosure B	USACE	OTHER
MOA	TBD	TBD	TBD	TBD	\$25,000,000	TBD	TBD
Mat Su Borough	TBD	TBD	TBD	TBD	\$20,000,000	TBD	TBD
Kenai Peninsula Borough	TBD	TBD	TBD	TBD	\$5,000,000	TBD	TBD
Total	TBD	TBD	TBD	TBD	50,000,000	TBD	TBD

TBD – To be determined. Values provided where known.

Alaska, M7.0 Earthquake

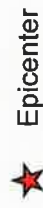
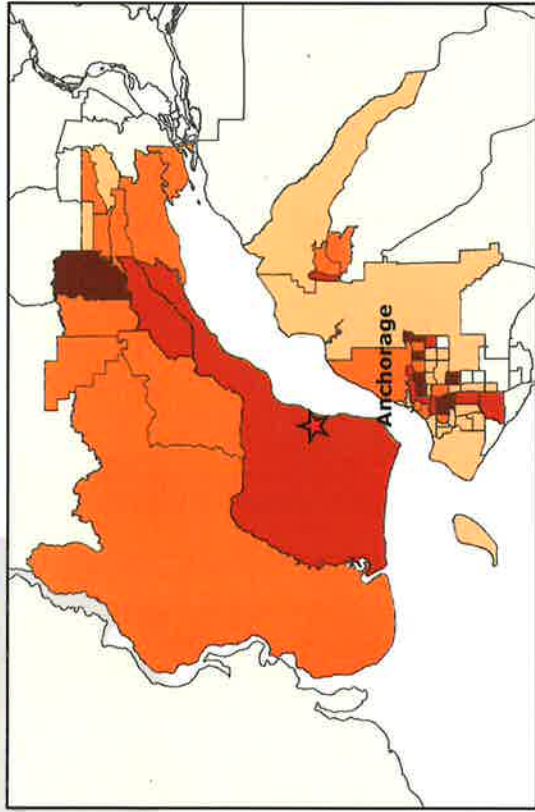
30 November 2018

Hazus: Estimated Damage and Economic Losses

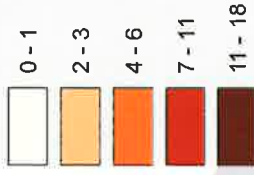
Alaska, United States

Note: Model results produced by Pacific Disaster Center (PDC) and FEMA's HAZUS program, utilizing the FEMA Hazus 4.2 model. Level 1 data. **These results are based on USGS ShakeMap v5.**

Disclaimer: The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Earthquake.

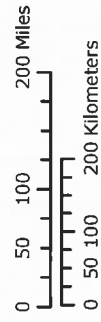


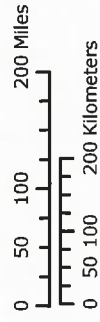
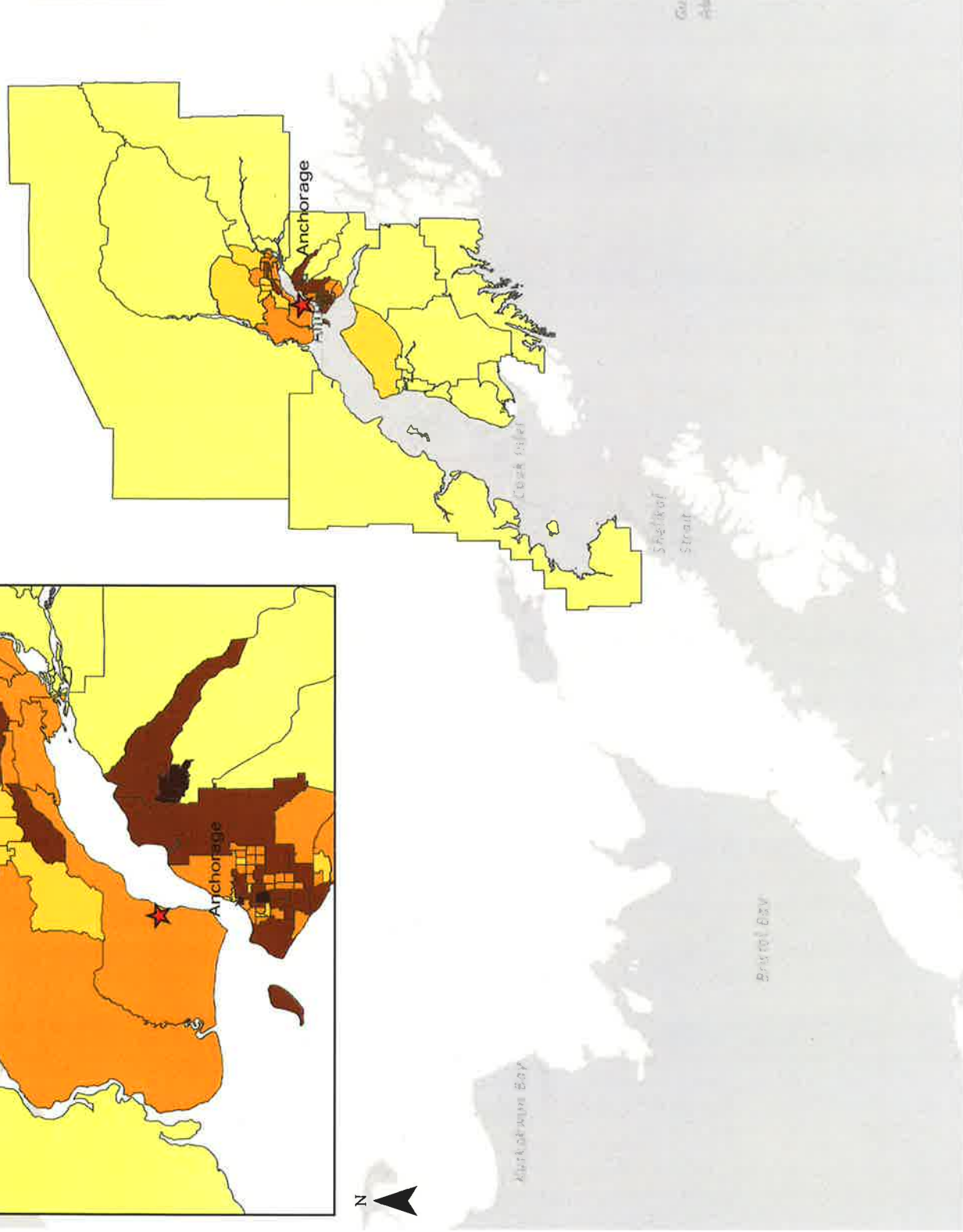
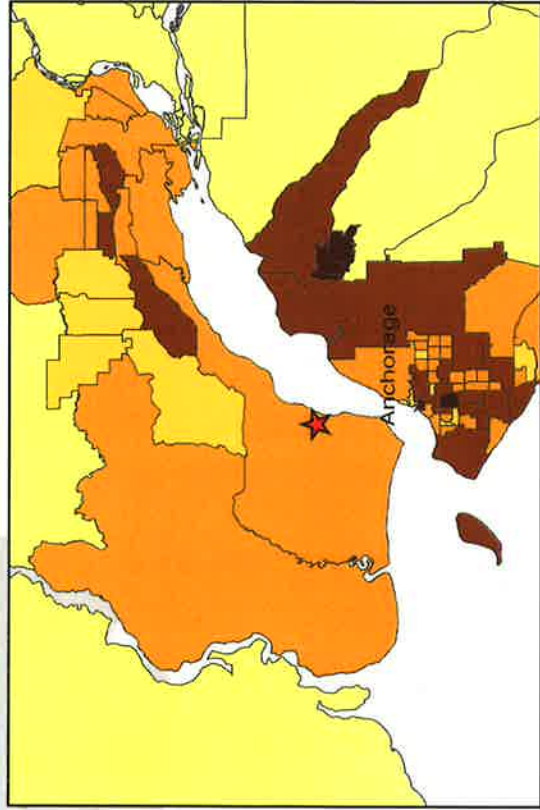
Building Damage by Count



Building Damage Count

Affected	32,000
Minor	4,600
Major	250
Destroyed	5
Total	36,855





Building Damage by Count by General Occupancy

November 30, 2018

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
Alaska						
Anchorage						
Other Residential	7,453	4,245	1,638	102	1	13,439
Religion	325	119	43	4	0	490
Education	140	50	20	2	0	213
Single Family	50,038	17,107	944	1	0	68,090
Government	175	80	41	5	0	300
Agriculture	120	42	15	2	0	179
Commercial	3,192	1,267	595	66	2	5,121
Industrial	751	300	161	19	0	1,231
Kenai Peninsula						
Single Family	24,767	140	1	0	0	24,909
Industrial	306	4	1	0	0	311
Commercial	1,150	10	2	0	0	1,162
Religion	109	1	0	0	0	110
Other Residential	3,114	92	13	0	0	3,220
Education	53	0	0	0	0	54
Government	54	1	0	0	0	55
Agriculture	56	0	0	0	0	57
Kodiak Island						

of Buildings

	None	Slight	Moderate	Extensive	Complete	Total
Agriculture	26	0	0	0	0	26
Industrial	68	0	0	0	0	68
Government	29	0	0	0	0	29
Commercial	262	0	0	0	0	262
Education	13	0	0	0	0	13
Other Residential	930	0	0	0	0	930
Single Family	3,495	0	0	0	0	3,495
Religion	30	0	0	0	0	30
Matanuska-Susitna						
Single Family	27,515	7,328	431	1	0	35,275
Commercial	737	170	67	6	0	980
Industrial	227	63	31	3	0	324
Education	43	7	2	0	0	52
Religion	78	16	4	0	0	98
Other Residential	1,781	856	441	41	1	3,119
Agriculture	34	7	2	0	0	44
Government	33	6	2	0	0	41
Total	127,104	31,911	4,455	252	5	163,727
Region Total	127,104	31,911	4,455	252	5	163,727

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Direct Economic Losses For Buildings

November 30, 2018

All values are in thousands of dollars

	Capital Stock Losses				Loss Ratio %	Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss		Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
Alaska										
Anchorage	105,231	737,046	391,425	3,651	1.92	37,959	21,958	27,142	27,984	1,352,396
Kenai Peninsula	472	5,500	3,062	61	0.06	81	47	59	70	9,353
Matanuska-Susitna	20,537	199,199	114,897	789	1.65	5,269	1,559	1,898	2,706	346,854
Kodiak Island	0	0	0	0	0.00	0	0	0	0	0
Total	126,240	941,745	509,384	4,502	0.91	43,309	23,564	29,099	30,760	1,708,603
Region Total	126,240	941,745	509,384	4,502	0.91	43,309	23,564	29,099	30,760	1,708,603

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Shelter Summary Report

November 30, 2018

	# of Displaced Households	# of People Needing Short Term Shelter
Alaska		
Anchorage	211	121
Kenai Peninsula	0	0
Kodiak Island	0	0
Matanuska-Susitna	18	11
Total	229	132
Region Total	229	132

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.