



# STATE OF ALASKA PLAN FOR DISASTER RECOVERY #4413:

2018 Cook Inlet Earthquake  
(POINT MACKENZIE EARTHQUAKE)

Substantial Amendment #1

## Abstract

The Supplemental Appropriations for Disaster Requirements (Pub. L. 116-20)  
approved June 6, 2019

**November 1, 2021**

Mike Dunleavy,  
Governor  
State of Alaska

Julie Anderson,  
Commissioner  
Department of Commerce,  
Community, and Economic  
Development

Sandra Moller,  
Director  
Division of Community and  
Regional Affairs



Substantial Amendment #1 is a partial Action Plan, which adds additional references and amends Introduction and Background on pages 5-9; Impact and Unmet Needs Assessment on pages 10-38; revises the Proposed CDBG-DR Budget on pages 39-40 and Appendix A; temporarily suspends the Public Housing, Homeowner's Reimbursement, Local Buyout, and Public Infrastructure Programs; permanently deletes the Temporary Relocation Assistance and the Manufactured Home Repair or Replacement Programs; and adds the Forest Park Optional Relocation Program on pages 64-71. Due to the severity of the Unmet (Affordable) Housing Needs within the Municipality of Anchorage and the Matanuska-Susitna Borough, the Public Infrastructure Programs within the Municipality of Anchorage and the Matanuska-Susitna Borough, and the entire Economic Revitalization Program have been deleted.

Substantial Amendment #1 proposes limited funding use of \$2.5M for the purpose of expediting one program activity, the Forest Park Optional Relocation Program, within the Municipality of Anchorage, the HUD designated "Most Impacted and Distressed (MID)" jurisdiction and \$7,171,200 for State Administration and Planning funds so the State may continue to work with the jurisdictions to identify capacity and prioritize housing and program activities. Substantial Amendment #2 will be posted by November 2021 for the remaining proposed program activities, totaling \$26,184,800.

The State of Alaska, Department of Commerce, Community, and Economic Development (DCCED), complies with Title II of the Americans with Disabilities Act of 1990. This publication is available in alternative communication formats upon request. Please contact the DCCED publication Specialist at 1-907-269-4560 or [DCCED.publications@alaska.gov](mailto:DCCED.publications@alaska.gov) to make any necessary arrangements. The Alaska Relay is 711 or 1-800-770-8973\TTY, 1- 800-770-8255\Voice.

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## I. Introduction and Background

Since January 2011, FEMA Region X has partnered with the State of Alaska to deploy Risk Mapping, Assessment, and Planning, (Risk MAP) projects with the goal of accurately and comprehensively depicting natural hazard risks throughout Alaska, including the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough.

The following information was extracted and summarized from Governor Michael J. Dunleavy, “Request for Major Disaster Declaration, January 3, 2019”, State of Alaska Letter, Available:

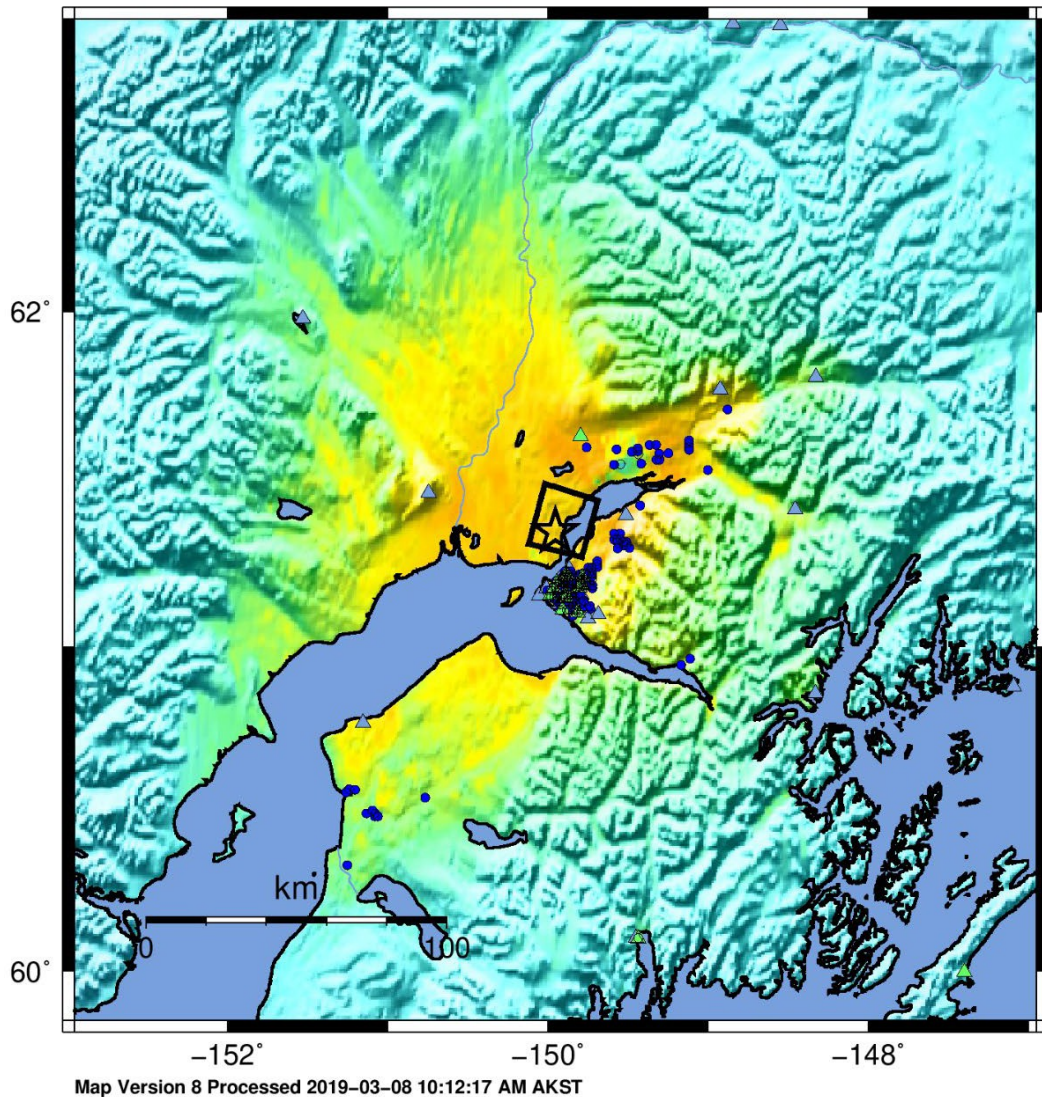
<https://gov.alaska.gov/wp-content/uploads/sites/2/Request-for-Presidential-Disaster-Declaration.pdf>. (Reference 3)

On November 30, 2018, at 8:29 am, Alaska Standard Time, a 7.1 magnitude earthquake located seven miles north of Anchorage near Point MacKenzie produced very strong seismic shaking that caused widespread and severe damage primarily within the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough. (References 4-6) The earthquake, and the subsequent aftershocks, caused 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.

There were no fatalities during the 2018 Cook Inlet Earthquake and thus far, there have been no earthquake-related fatalities during the recovery. However, there is an ongoing need to respond to the residents still living in a privately-owned mobile home park, where the community water well and potable water distribution system was further damaged during the 2018 Cook Inlet Earthquake. Lives depend upon CDBG-DR funds being approved.

In order to adequately plan and prepare for the next construction season beginning in 2022, it is imperative for this Action Plan and the Implementation Plan be reviewed and approved in an expedient manner.

AEC ShakeMap : 7 miles NW of Elmendorf AFB  
 Nov 30, 2018 08:29:29 AM AKST M 7.1 N61.35 W149.96 Depth: 46.7km ID:20419010



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	<0.02	0.1	1.4	4.7	9.6	20	41	86	>178
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Worden et al. (2012)

Figure 1 (Reference 7)

The concentration of the shaking was primarily limited to three jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough, which are represented in Figure 2. During the following two years, over 12,000 aftershocks were recorded by USGS. Significant seismic activity continues in this area as evidenced by the most recent 4.8 magnitude earthquake on April 27, 2021.



These conditions required local emergency protective measures to protect life and property, including activation 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 affected communities are located around Cook Inlet in Southcentral Alaska. The Municipality of Anchorage is the largest metropolitan area in the State of Alaska with a 2018 population of 295,365. The Matanuska-Susitna Borough is located approximately 30 miles north of Anchorage, encompasses 24,682 square miles (slightly larger than the State of West Virginia) and in 2018 had a population 105,743. The Kenai Peninsula Borough is located across the Turnagain Arm, about 40 miles south of Anchorage and in 2018 had a population of 58,471. (Reference 8) 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.

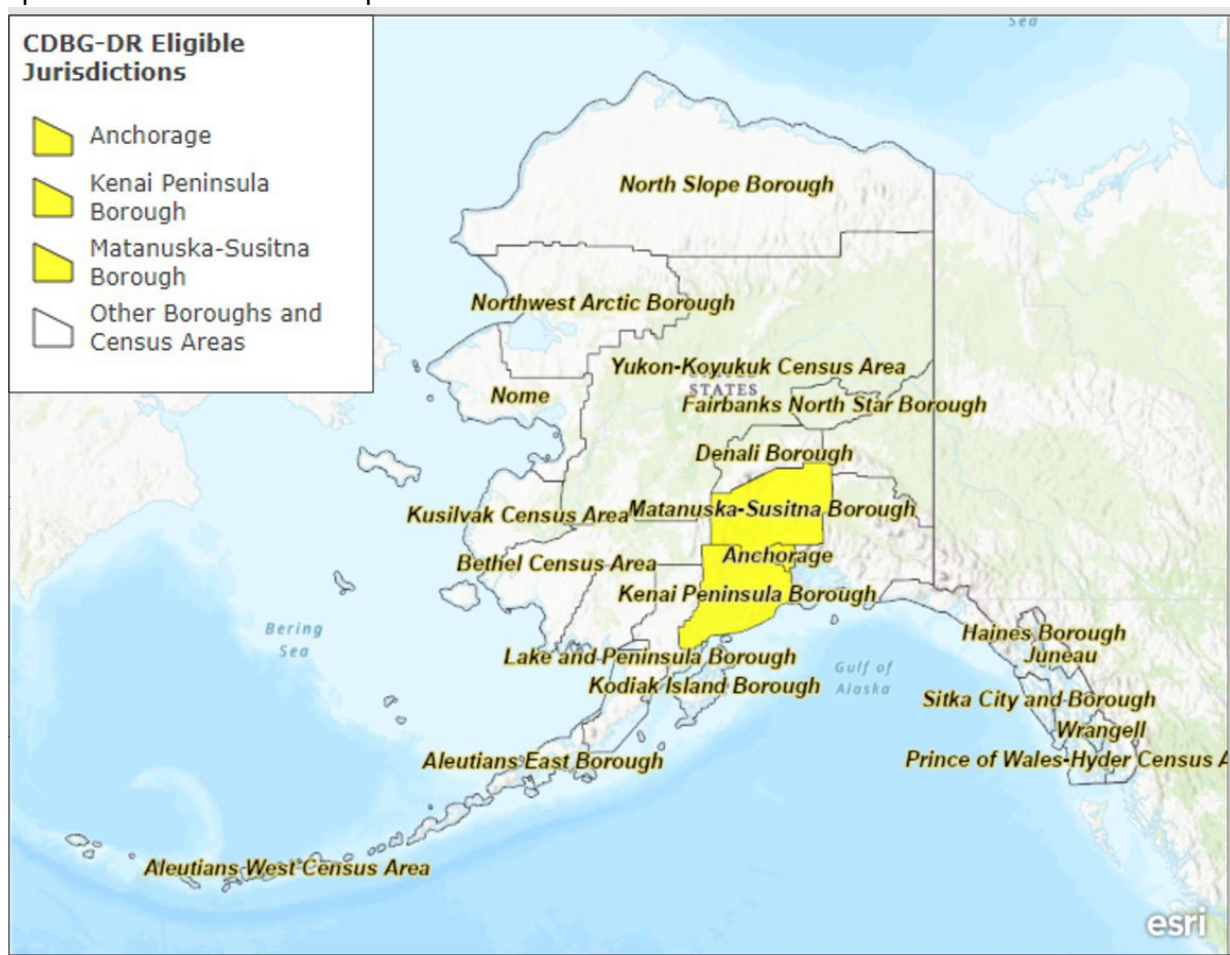


Figure 2

The National Weather Service (NWS) National Tsunami Warning Center (NTWC) issued a tsunami warning for the Cook Inlet, including the Municipality of Anchorage, the Matanuska-Susitna Borough and the southern Kenai Peninsula Borough within minutes of the earthquake.

The Municipality of Anchorage 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 Municipality of Anchorage 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 Matanuska-Susitna Borough. Over 52,000 vehicles use the Glenn Highway that connects Anchorage and the Matanuska-Susitna Borough every day, serving commuters, visitors and commercial traffic.

Immediately following the earthquake, the State of Alaska activated the Emergency Operations Plan (EOP) and staffed the State Emergency Operations Center (SEOC) to Level three (actual event). The Municipality of Anchorage and the Matanuska-Susitna Borough each activated their EOCs to coordinate the response and all three jurisdictions declared local states of emergency.

Due to the scope of the earthquake damage and associated response efforts, Governor Walker verbally declared a State Disaster Emergency for the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough 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 assistance programs, as well as, necessary administrative and disaster management expenses.

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 on November 30, 2018.

On January 3, 2019, 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, Governor Dunleavy requested a Declaration of Major Disaster for the State of Alaska to include the full suite of individual and public assistance, and temporary housing programs, 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. He specifically requested 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. Governor Dunleavy also requested an Agency Declaration from the U.S. Small Business Administration (SBA), which was critical to the initial recovery.

The Presidential declaration of a major disaster for the State of Alaska (FEMA-4413-DR) was issued on January 31, 2019, which authorized \$28,052,842.61 in Individual & Households Program; \$27,717,950.97 in Housing Assistance; \$334,891.64 for Other Needs Assistance; and \$1,144,688 for the Hazard Mitigation Grant Program. (Reference 9)



In the Federal Register notice published on January 27, 2020 at 85 FR 4681, the State of Alaska received an allocation of \$35,856,000 from the U.S. Housing and Urban Development (HUD) under Public Law 116-20 for FEMA Disaster Recovery No. 4413, the 2018 Cook Inlet Earthquake. (Reference 10) HUD identified the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough as the only Community Development Block Grant-Disaster Recovery (CDBG-DR) eligible jurisdictions, in their entirety, and identified the Municipality of Anchorage as the “most impacted and distressed” area, which will receive 80% of the funding.

The State of Alaska has a FEMA approved Hazard Mitigation Plan. (Reference 11) The Municipality of Anchorage also has a FEMA approved All Hazards Mitigation Plan, which is under revision. (Reference 12) On March 21, 2021, FEMA approved the Matanuska-Susitna Borough Hazard Mitigation Plan. (Reference 13) The Kenai Peninsula Borough finalized their Hazard Mitigation Plan, which was approved by FEMA on December 18, 2019. (Reference 14)

The State of Alaska has developed the CDBG-DR #4413, the 2018 Cook Inlet Earthquake, Action Plan as described in the Federal Register notices published on February 9, 2018 at 83 FR 5844, August 14, 2018 at 83 FR 40314, February 19, 2019 at 84 FR 4836, June 20, 2019 at 84 FR 28836 and 28848, August 14, 2020 at 85 FR 50041, and September 28, 2020 at 85 FR 60821 (References 15-21) and the guidelines set forth by the U.S. Department of Housing and Urban Development (HUD) for the Community Development Block Grant-Disaster Recovery Program. This Action Plan is in alignment with the State of Alaska Hazard Mitigation Plan 2018 prepared and maintained by the Department of Military and Veterans Affairs/Division of Homeland Security and Emergency Management (DMVA/DHS&EM).

Upon receipt of additional guidance from FEMA Region X and HUD in 2021, DCCED will amend this Action Plan.

This Action Plan is in alignment with the Alaska Housing Finance Corporation’s Consolidated Housing and Community Development Plan for the State of Alaska Five-Year Plan & Action Plan for State Fiscal Years 2021-2025 (Federal Fiscal Years 2020-2024), dated May 30, 2020, which was previously submitted to the U.S. Housing and Urban Development for the Community Development Block Grant Program. (Reference 22) The Municipality of Anchorage also has a Consolidated Housing and Community Development Plan for State Fiscal Years 2018-2022, dated October 4, 2018. The Municipality of Anchorage has five amendments to their plan. The first amendment was unsubstantial and incorporated the Housing Trust Fund, dated June 3, 2019, and the second amendment was substantial, dated January 10, 2020. The third substantial amendment incorporated the CDBG-CV1 and ESG-CV1 and CV2 funds. The fourth and fifth substantial amendments identified specific projects and reprogrammed unallocated ESG-CV2 funds. (Reference 23)

## II. General Action Plan Requirements

### A. Impact and Unmet Needs Assessment

The State of Alaska/Department of Commerce, Community, and Economic Development (DCCED) has completed the following Impact and Unmet Needs Assessment to evaluate the three core areas of recovery – housing, infrastructure, and economic revitalization and plan disaster relief, recovery, and mitigation activities within the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough.

The Needs Assessment of unmet housing needs addressed interim and permanent; owner and rental; single family (1-4 dwelling units) and multi-family (5+ dwelling units); affordable, and market rate; and housing to meet the needs of pre-earthquake homeless persons. Immediately after the 2018 Cook Inlet earthquake, the State of Alaska provided interim housing assistance. Currently, there is no need for interim housing assistance. According to FEMA IA, as of May 8, 2019, there were 5,642 housing units with \$4,110,952.80 in unmet housing need for all types of owner-occupied housing. FEMA revised this estimate to 4,572 houses with a total of \$10,258,920.82 (\$12,823,651 including 25% resiliency factor) in unmet housing need. According to FEMA IA, as of May 8, 2019, there was no remaining earthquake damage to affordable and market-rate rental units. According to the Alaska Housing Finance Corporation, Alaska's sole public housing authority, there is no remaining earthquake damage to affordable public housing. According to the Cook Inlet Housing Authority, there is no remaining earthquake damage to Indian (Alaska Native) housing. However, there remains an unmet disaster relief need for 35 households residing in Chugiak, an unmet housing need for the 1,000+ pre-earthquake homeless persons (the majority are in protected classes), and a severe shortage of affordable housing (5,000+) within the Municipality of Anchorage.

The Needs Assessment considered the various forms of assistance available to, or likely to be available to, the three CDBG-DR eligible jurisdictions for earthquake repairs, seismic and structural analysis, as well as, seismic and structural upgrades to public infrastructure. Since the 2018 Cook Inlet earthquake, the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough have been submitting requests for reimbursement for repairs to earthquake-damaged public facilities through the State of Alaska to FEMA. Most of the earthquake damage to public infrastructure within the three CDBG-DR eligible jurisdictions has been addressed either through FEMA, the State of Alaska, or other sources.

Based on the information, as of May 8, 2019, provided by FEMA, the State of Alaska produced estimates of Serious Unmet Housing Need, Serious Unmet Local Infrastructure Need, and Serious Unmet Business Need by estimating the portion of need likely to be addressed by insurance proceeds, other federal assistance, or any other funding source by using the most recent available data. DCCED has the data set from the DMVA/DHS&EM (Department of Military and Veteran Affairs/Division of Homeland Security and Emergency Management for the State of Alaska's Individual and Family Grant Program and Temporary Housing Program), FEMA, and the SBA. DCCED has not contacted any of the applicants for the FEMA Individual Assistance Program and the SBA Disaster Home Loan Program to determine if there is still an unmet housing need within the three CDBG-DR eligible jurisdictions.

The Needs Assessment considered whether public services are necessary to complement activities intended to address housing. Temporary Housing, Housing Counseling, Information and Referral Services, Legal Services, Transportation Services, and Case Management Services may be necessary for the households eligible for the Forest Park Optional Relocation Program. DCCED has translated disaster/earthquake relief and recovery information into Spanish and Hmong for the Forest Park residents. DCCED may continue to translate disaster recovery information into the necessary foreign languages for the residents with Limited English Proficiency, as well as, the American Sign Language and Braille, as needed. DCCED addressed how these services are to be made accessible to individuals with wide-ranging disabilities including mobility, sensory, developmental, emotional, and other impairments by working with the Municipality of Anchorage/Office of Emergency Management & the Anchorage Health Department, as well as with local Social Service Providers, such as The Salvation Army, NeighborWorks Alaska, and Rural Alaska Community Action Program.

DCCED described how the natural hazard mitigation planning activities will benefit the HUD-identified “most impacted and distressed” area, the Municipality of Anchorage, by recommending non-structural hazard mitigation activities and disaster preparedness activities. DCCED also recommends the adoption of the “Post-Earthquake Recommendations For Mitigation” prepared by FEMA Region X. (Appendix B).

DCCED described the impact of the 2018 Cook Inlet Earthquake on housing, local infrastructure, and the local economy, within the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough, using the most recent available data.

This Needs Assessment considered the costs of incorporating mitigation and resiliency measures to protect against future earthquakes, and the associated natural hazards such as, avalanches, landslides, ground failure, tsunamis, and flooding where applicable and other hazards.

The DCCED understands that as additional information becomes available or is updated, this Needs Assessment will be amended.

1. [Housing](#)
  - a. [Pre-Earthquake Housing](#)

Prior to the 2018 Cook Inlet Earthquake, Alaska housing challenges included an aging housing stock, a growing senior population, high housing costs and overcrowding. The Alaska Housing Finance Corporation completed the “Alaska Housing Assessment, Statewide Housing Summary” in January of 2018. (Reference 24) This assessment highlighted challenges related to housing, affordability, energy use and structural conditions from a statewide, regional and community perspective. The primary needs outlined in the report were the housing gap, affordable housing, senior housing and retrofits. It also forecasted future housing need based on estimated population changes, including aging Alaskans. In the Cook Inlet Region, Inc (CIRI) area, which encompasses the Municipality of Anchorage, the Matanuska-Susitna Borough and

the Kenai Peninsula Borough, there was an estimated housing gap of 25,781 housing units by 2025.

In February 2015, Susan Fison, Fison and Associates, prepared an “Analysis of Impediments to Fair Housing Choice” for the Municipality of Anchorage. (Reference 26) On April 11, 2017, the Municipality of Anchorage published “Assessment of Fair Housing Plan for the HUD Housing and Community Development Consolidated Plan 2018-2022. (Reference 27) This Assessment of Fair Housing cited the following contributing factors to fair housing issues within the Municipality of Anchorage:

1. Availability of affordable and accessible units in a range of sizes
2. Lack of access to opportunity due to high housing costs
3. Displacement of residents due to economic pressures
4. Land use and zoning laws
5. Loss of affordable housing
6. Lack of assistance for housing accessibility modification
7. Sources of income discrimination
8. Availability, type, frequency, and reliability of public transportation
9. Community opposition
10. Lack of local private fair housing outreach and enforcement

**b. Post-Earthquake Damage Assessment & Vulnerable Populations Damage Assessment**

The extensive damage to residential homes in the impacted area of the disaster resulted in almost 300 uninhabitable homes due to major damage or destruction. Alaska 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 with severe wind chills. Since the 2018 Cook Inlet Earthquake, there have been three winters, and a fourth winter is here. The extremely cold temperatures and the heavy snow load have only exacerbated the earthquake damage.

According to the Earthquake Engineering Research Institute Earthquake Reconnaissance Report M7.1 Anchorage Earthquake on Nov 30, 2018 (Reference 2), the observed damage in the Northern Communities, especially Eagle River (12 miles north of Anchorage) was more extensive than in Anchorage. Lack of building code enforcement in the Northern Communities is the primary contributing factor to the heavier damage.

Based on the immediate assessments, the FEMA IA data (as of May 8, 2020), the majority of the unmet housing need (82.8% of count) was for single-family houses and duplexes. Mobile homes made up 6.0% of the units, condominiums made up 6.5% of the units, townhouses made up 3.2% of the units, and all other made up roughly 1% of the count. The total estimated unmet housing need was \$4,110,952.80. The FEMA Individual Assistance for Home Repair which helped with essential repairs to ensure homes were safe, sanitary, and functional, was limited to \$34,000 per applicant.

Table 1

FEMA Unmet Need by Residence Type 05082020		
Type of Dwelling	CountOfRegistration ID	SumOfUnmet Need
Apartment	74	31,813.75
Condo	368	114,992.78
House/Duplex	4,672	3,626,751.24
Military Housing	1	133.02
Mobile Home	339	247,211.64
Other	5	3,715.08
Townhouse	180	85,010.35
Travel Trailer	3	1,324.94

Total: 5,642 \$4,110,952.80

Based on the re-inspections of real property, the FEMA IA data (as of May 8, 2020) reported 4,572 houses with a total of \$10,258,920.82 in unmet housing need. Presumably, the cost-to repair exceeded the maximum FEMA IA amount of \$34,000.

Table 2

FEMA Unmet Need by Residence Type 05082020		
Type of Dwelling	CountOfRegistration ID	SumOfReal Property (RP) Unmet Need
Apartment	22	\$114,506.89
Condo	304	\$59,059.02
House/Duplex	3,805	\$9,735,612.03
Mobile Home	273	\$213,197.78
Other	5	\$3,673.51
Townhouse	161	\$131,922.17
Travel Trailer	2	\$949.42
<b>Total</b>	<b>4,572</b>	<b>\$10,258,920.82</b>



This home on Dome Circle in Eagle River, Alaska partially collapsed on November 30, 2018. The occupant was able to escape unharmed. (Matt Tunseth, Anchorage Daily news)

Figures 3 through 5, show where the concentration of damage within the three CDBG-DR eligible jurisdictions.

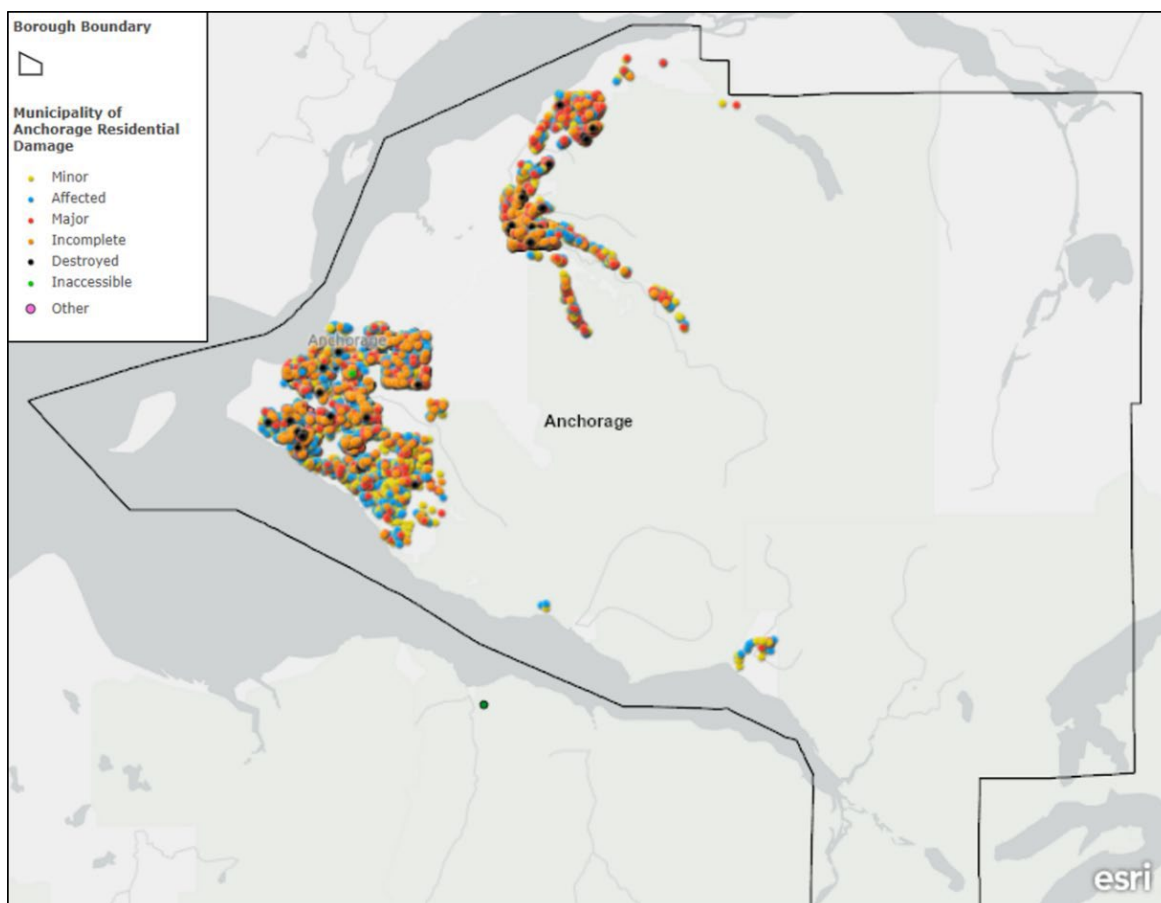


Figure 3, Municipality of Anchorage



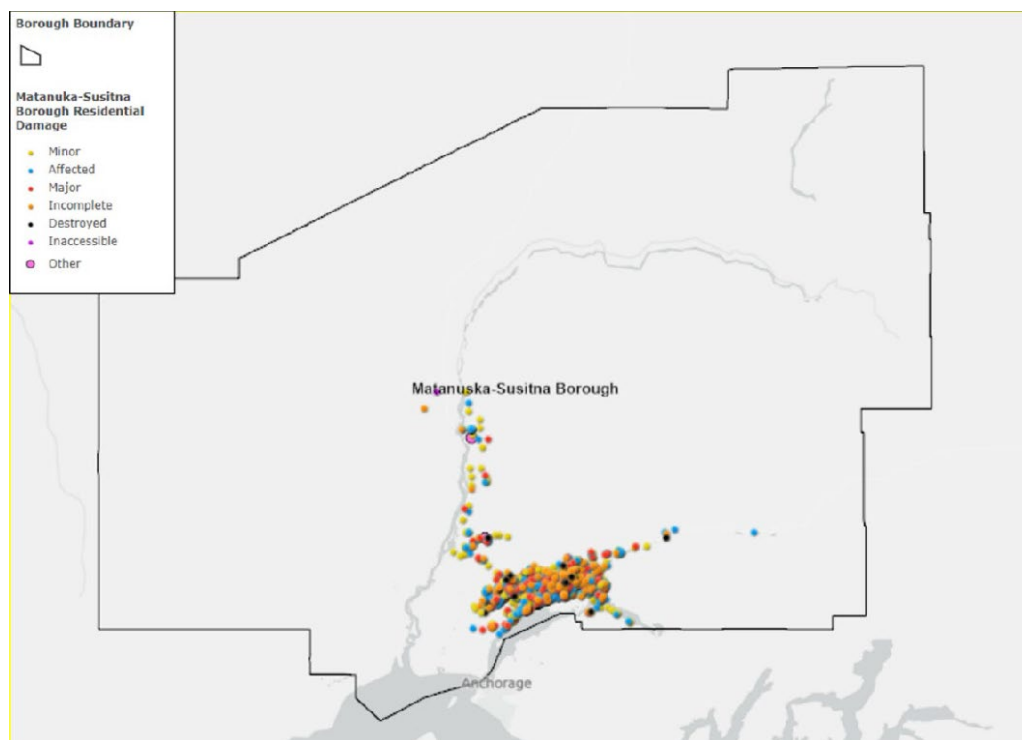


Figure 4, Matanuska-Susitna Borough

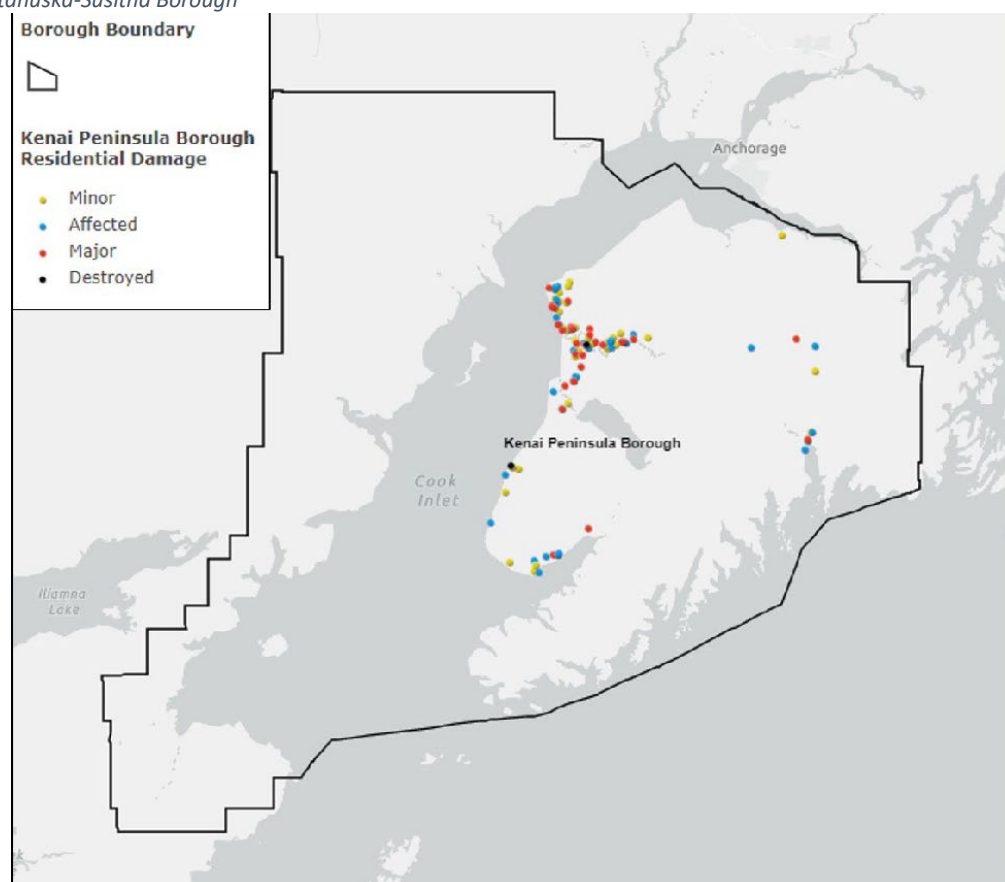


Figure 5, Kenai Peninsula Borough

## **1. Unmet Disaster/Earthquake Relief Housing Needs**

Prior to the 2018 Cook Inlet Earthquake, the Forest Park Mobile Home Park, a privately owned mobile home park located in the Birchwood/Chugiak Disaster Recovery Area (Appendix C – Birchwood/Chugiak Disaster Recovery Area Affirmatively Furthering Fair Housing Data), more specifically in the South Chugiak Disaster Recovery Area (Census Tract: 000102; Block Group: 4), within the Municipality of Anchorage, was served by a community water well. Following Prior to the earthquake, the State of Alaska/Department of Environmental Conservation (DEC) issued a “boil water” notice due to the possibility of water contamination from broken public water distribution pipes, which remains in effect today. According to a December 9, 2020 letter from the Municipality of Anchorage Building Safety Division Director, the public water distribution system was further damaged during the 2018 Cook Inlet earthquake. The west well house twisted approximately 5 degrees, tilted, and developed a large leak, which required repair. The east well house had broken pipes inside of it that required repair in December 2018. Several mobile homes shook off their foundations, sustaining damage, and cracked the pipes connecting them to the water distribution and wastewater removal systems. These mobile homes are the primary, and only residence, for these households. Most of these mobile homes were constructed prior to June 15, 1976 and do not have HUD certification labels and do not meet HUD’s “decent, safe, and sanitary” requirements nor HUD’s Housing Quality Standards. (According to the Municipality of Anchorage Assessor, these mobile homes are considered personal property, not real property.) On August 31, 2020, the previous mobile home park owner informed the residents that Forest Park Mobile Home Park would no longer be used as a mobile home park and that all residents would need to relocate prior to May 31, 2021. On October 27, 2020, the Director, Building Safety Division, Development Services Department, Municipality of Anchorage, determined that the lack of water made these mobile homes dangerous buildings in accordance with Anchorage Municipal Code 23.70.702.1 and mailed a Notice of Violation to the previous owner. The previous mobile home park owner has made some temporary repairs to the water distribution system. Currently, there is no potable/public water supply available to this mobile home park. In late October 2020, the Municipality of Anchorage hired a contractor to install a temporary above ground 3,000-gallon water storage tank and another contractor to fill the storage tank with potable water up to six times per day. The residents then filled 15-gallon containers, which were generously donated by a faith-based non-profit organization, and hauled the water to their mobile homes by sled. The septic system/on-site wastewater system has also failed. The COVID-19 Public Health Emergency only exacerbates this urgent, dire, unsafe, and unsanitary situation for these 35 Low to Moderate-Income households. Several households qualify as being in a protected class based on race, color, national origin, religion, sex, familial status, and or disability. Therefore, DCCED has proposed the Disaster/Earthquake Relief and Recovery Program for Forest Park with an Optional Relocation Assistance Program citing Slums and Blight under Section 105(a)(4), and Low-Moderate-Income Housing under Sections 105(a)(11) and 105(a)(24) of the Housing and Community Development Act of 1974, as the National Objectives in this Action Plan.

## **2. Unmet Disaster/Earthquake Recovery Housing Needs**

According to FEMA, there were 4,572 housing units with a total of \$10,258,920.82 (\$12,823,651 including 25% resiliency factor) in unmet housing need of repairs. As of August 2020, according to the Director of the Building Safety Division, Development Services Department, Municipality of Anchorage, there were less than 20 houses, primarily in Eagle River and Chugiak, which were still

considered severely damaged and required re-inspection, and/or repair. The Matanuska-Susitna Borough estimates there are numerous houses still requiring some repair. There may be some houses requiring additional repair in the Kenai Peninsula Borough. In Substantial Amendment #2, DCCED may propose either a Homeowner Reimbursement Program, a Home Repair Program, or both program activities for homeowners.

### **3. Unmet Disaster/Earthquake Mitigation Housing Needs**

Using the Municipality of Anchorage (MOA) All-Hazards Mitigation Plan Update (Reference 12), the Anchorage Bowl Seismic Hazard Zone Map accessible at [https://www.muni.org/Departments/OCPD/Planning/Planning%20Maps/Anch\\_Bowl\\_Seismic\\_8x11.pdf](https://www.muni.org/Departments/OCPD/Planning/Planning%20Maps/Anch_Bowl_Seismic_8x11.pdf), and the FEMA Floodplain Maps accessible at <https://anchoragestormwater.com>, DCCED identified the Census Tracts most likely to have been impacted and distressed within the Municipality of Anchorage, the HUD designated “Most Impacted and Distressed” jurisdiction from the 2018 Cook Inlet earthquake. (The Anchorage Bowl Seismic Hazard Zone Map does not include any of the Northern Communities of Eagle River, Chugiak, Birchwood, Peters Creek, Thunderbird Falls and Eklutna nor any of the Southern Communities of Indian, Rainbow Creek, Bird Creek, Girdwood, and Portage. There are no Seismic Hazard Zone Maps for the Matanuska-Susitna Borough and the Kenai Peninsula Borough.) Then, using the HUD AFFH database, DCCED applied the CDBG-DR Action Plan and Fair Housing and Equal Opportunity (FHEO) requirements to each Census Tract/Block Group in each Micro-Disaster Risk Reduction Area (DRRA) where there are three overlapping Areas of Mitigation Interest/Natural Hazards (Seismic Hazard Zones 4 or 5, High Ground Failure Susceptibility or Very High Ground Failure Susceptibility; the Bootlegger Cove Special Landslide Hazard Area; and a Special Floodplain Hazard Area) and the surrounding Disaster Recovery Area. (Appendix C-Birchwood/Chugiak Disaster Recovery Area Affirmatively Furthering Fair Housing is an example.) These Micro-Disaster Risk Reduction Areas are at the highest risk of loss of life and property during the next earthquake. In Substantial Amendment #2, DCCED may identify these micro-Disaster Risk Reduction Areas and propose a Local Buyout Program.

### **4. Vulnerable Populations and People Experiencing Homelessness**

The following information was extracted and summarized from Governor Michael J. Dunleavy, “Request for Major Disaster Declaration, January 3, 2019”, State of Alaska Letter. The Preliminary Damage Assessments suggested that a large percentage of those surveyed in the area may be considered low income. This indicated that the homes most affected were likely owned by those with the least ability to recover on their own. Many of the affected residents were elderly or have special needs that preclude them from taking the necessary recovery actions. Poverty rates were near the State and/or national average, but applications for assistance revealed many residents lacked the capabilities and resources to recover without outside assistance.

Over a month after the 2018 Cook Inlet Earthquake, there were 111 residents being sheltered in temporary facilities or hotels; as their homes were uninhabitable, and they lacked access to other housing resources. Transient housing was needed to provide safe shelter for hundreds of residents. Numerous families also stayed with relatives, friends, or in hotels. These forms of temporary housing are historically short-lived, and many of these families required alternate housing assistance.

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

## 5. Summary Data of Vulnerable Populations

Although the percentage of Alaskans living below the poverty level is less than the National Average, the difference is miniscule. The percentage of older Alaskans is less than the National Average due to out-migration for retirement. However, the percentage of people with disabilities is greater than the National Average, perhaps due to the high number of military veterans living in Alaska. The descendants of the first people living in Alaska continue to live throughout Alaska. Therefore, the percentage of American Indians & Alaska Natives is higher than the National Average.

Table 3

	Percent of Persons Below Poverty Level	Median Household Income, 2018 dollars	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	10.8%	\$76,715	10.6%	15.1%	12%	6.4%
Municipality of Anchorage	9.2%	\$83,280	9.9%	7.4%	11.1%	4.9%
Matanuska - Susitna Borough	10.3%	\$75,905	10.4%	5.6%	13.2%	6.5%
Kenai Peninsula Borough	12%	\$66,684	14.2%	6.7%	15.2%	No Data

\*U.S. Bureau of Census American Community Survey, 2013-2018.

\*\*U.S. Bureau of Labor Statistics (Oct 2018 data) at [https://www.bls.gov/regions/west/summary/blsummary\\_anchorage.pdf](https://www.bls.gov/regions/west/summary/blsummary_anchorage.pdf)

### c. Current Housing

According to the Alaska Housing Finance Corporation's Consolidated Housing and Community Development Plan for the State of Alaska Five-Year Plan & Action Plan for State Fiscal Years 2021-2025 (Federal Fiscal Years 2020-2024), dated May 30, 2020, (Reference 17 22), the two biggest housing related issues moving forward into the next five years are in-state migration from rural areas to urban areas and the growth in the senior population. Affordable housing is still a primary need across the State of Alaska and in the Municipality of Anchorage. Homelessness remains an important concern, as well, for both the State of Alaska and the Municipality of Anchorage. Appropriate and affordable housing must be in place for the Municipality of Anchorage to assist individuals and families with preventing and ending homelessness. Finally, the availability of housing accessible for persons with a disability remains a barrier for many households.

On June 8, 2021, the Alaska Housing Finance Corporation (AHFC) reported that according to the Alaska Multiple Listing Service (MLS), the average sales price of a single-family home in Anchorage rose to \$397,000. Average sales prices in the Matanuska-Susitna Borough and the Kenai Peninsula Borough rose nearly 10% in 2020. (Reference 28)

The following market-based rental information was extracted from the Alaska Economic Trends, August 2021. (Reference 29)

Table 4

Jurisdiction	Percent of Rental Units	Vacancy Rates	Average Adjusted Rent (2 Bedroom)	Average Adjusted Rent (3 Bedroom)
Municipality of Anchorage	39.1%	5.7%	\$1,140	\$2,058
Matanuska-Susitna Borough	23.1%	4.9%	\$1,050	\$1,668
Kenai Peninsula Borough	26.7%	10.6%	\$1,009	\$1,518

The table listed below is the applicable Final FY2022 Alaska Fair Market Rent Summaries for each of the three CDBG-DR eligible jurisdictions.

Table 5

**FY2022 Alaska FMR Local Area Summary**

Name of Jurisdiction	Efficiency	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom	FMR Percentile
Anchorage, AK HUD Metro FMR Area	\$877	\$948	\$1,248	\$1,773	\$2,136	40
Matanuska-Susitna Borough, AK HUD Metro FMR Area	\$744	\$789	\$1,035	\$1,470	\$1,772	40
Kenai Peninsula Borough	\$815	\$820	\$1,072	\$1,507	\$1,662	40

\*\*\*[www.huduser.gov/portal/datasets/fmr/fmrs/FY2022\\_code/2022summary](http://www.huduser.gov/portal/datasets/fmr/fmrs/FY2022_code/2022summary).

Within the Municipality of Anchorage, the Median Family Income (MFI) is \$104,300. Listed below are HUD's 2021 Low Income limits (80% of the MFI):

Table 6

Family Size:	1	2	3	4
Maximum Income:	\$58,480	\$66,800	\$75,120	\$83,440
Family Size:	5	6	7	8
Maximum Income:	\$90,160	\$96,800	\$103,520	\$110,160

\*\*\*[www.hud.gov](http://www.hud.gov) FY2021 Income Limits Documentation System.

Within the Matanuska-Susitna Borough, the Median Family Income is \$91,600. Listed below are HUD's 2020 Low Income limits (80% of the MFI):

Table 7

Family Size:	1	2	3	4
Maximum Income:	\$51,360	\$58,640	\$66,000	\$73,280
Family Size:	5	6	7	8
Maximum Income:	\$79,200	\$85,040	\$90,880	\$96,800

\*\*\*www.hud.gov FY2021 Income Limits Documentation System.

Within the Kenai Peninsula Borough, the Median Family Income is \$92,100. Listed below are HUD's 2020 Low Income limits (80% of the MFI):

Table 8

Family Size:	1	2	3	4
Maximum Income:	\$51,600	\$58,960	\$66,320	\$73,680
Family Size:	5	6	7	8
Maximum Income:	\$79,600	\$85,520	\$91,440	\$97,280

\*\*\*www.HUD.gov FY2021 Income Limits Documentation System.

\*\*\*www.huduser.gov/portal/datasets/fmr/fmrs/FY2021\_code/2021state\_summary.odn.

#### d. Public/HUD-Assisted Housing

The following information was extracted and summarized from the Municipality of Anchorage Housing and Community Development Plan with Amendments, dated January 10, 2020. (Reference 23) The Alaska Housing Finance Corporation (AHFC) is the public housing agency for the State of Alaska and the Municipality of Anchorage. It is a self-supporting corporation with a mission to provide Alaskans with access to safe, quality, affordable housing. They provide a variety of affordable housing programs and tools, including the operation of public housing, housing choice vouchers, and multifamily project-based assistance. They also finance housing developments through the Low-Income Housing Tax Credit program, tax-exempt multifamily loans, and the distribution of Federal and State housing grants. In addition, a variety of home loan programs for low- and moderate-income residents are offered by the Corporation. (In 2018 and 2019, AHFC repaired all earthquake related damage to their public housing units. In 2021, on behalf of DCCED, AHFC surveyed HUD-Assisted Housing Property Managers within the three CDBG-DR eligible jurisdictions and determined there was no unmet Public/HUD-Assisted Housing needs from the 2018 Cook Inlet earthquake.)

AHFC promotes self-sufficiency and well-being for people in the State of Alaska and in the Municipality of Anchorage by providing:

- After-school programs for children in public housing developments;
- Jumpstart – a program that offers family self-sufficiency and educational resources;
- Service coordinators at senior/disabled housing locations to provide tenants with counseling and access to community resources;



- Meals on Wheels program at elderly/disabled buildings;
- Educational scholarships;
- Summer camp scholarships for children in the Housing Choice Voucher program and residing in Public Housing units;
- Set-aside vouchers for families under the following programs:
  - o Veterans Affairs Supportive Housing (178 vouchers in Anchorage)
  - o Empowering Choice Housing Program (families displaced due to domestic violence, 83 vouchers in Anchorage);
  - o Moving Home Program (families transitioning into housing from homelessness or institutional settings; must be eligible to receive services and apply through their community-based service organization to the State of Alaska Department of Health and Social Services, Division of Behavioral Services; 70 vouchers in Anchorage);
  - o Returning Home Program targeting probationers/parolees through a partnership with the State of Alaska Department of Corrections (30 coupons in Anchorage);
  - o Making A Home Program targeted to youth aging out of foster care through a partnership with the State of Alaska Office of Children's Services (15 coupons in Anchorage);

In Anchorage, AHFC operates:

- 490 Public Housing Program units, of which 120 serve elderly/disabled populations exclusively
- 137 Section 8 Multifamily Housing Program units, of which 120 serve elderly/disabled populations exclusively
- 52 affordable housing units which accept individuals with vouchers
- 2,435 Housing Choice Vouchers
- 145 project-based voucher units (1248 East 9<sup>th</sup> Ave, Alpine Terrace, Loussac Place, Main Tree Apartments, Susitna Square, and Ridgeline Terrace)

In Anchorage, AHFC operates the following programs under a partnership agreement:

- 70 Section 8 Moderate Rehabilitation Program single-room occupancy units serving individuals who qualify as homeless under the McKinney-Vento Act
- The equivalent of 46 project-based vouchers for persons at Karluk Manor, a Housing First development targeting chronically homeless individuals with substance abuse and alcohol addictions
- The equivalent of 25, a sponsored-based assistance program for homeless youths at the Dena'ina House.

In the Matanuska Susitna Borough, AHFC operates:

- 32 Public Housing Program units, in Palmer, which serve elderly/disabled populations exclusively
- Housing Choice Vouchers

In the Kenai Peninsula Borough, AHFC operates:

- Public Housing Program units, in Seward, which serve elderly populations exclusively
- Housing Choice Vouchers available in Homer and Soldotna.

As of March 25, 2020, there were 2,570 families on the waiting list for AHFC Public Housing. At the same time, there were 2,577 families in Anchorage, 346 families in the Matanuska-Susitna Borough, and 399 families in the Kenai Peninsula Borough, on the Housing Choice Voucher waiting list. As of March 25, 2020, there were 661 seniors/disabled persons in Anchorage and 86 seniors in the Matanuska-Susitna Borough on the AHFC Public Housing-Senior Waiting List.

The Anchorage Housing Choice Voucher waiting list has gone to a lottery system, and periodically, the waiting list opens to applicants for a month. Those applicants are then worked for the next 2-3 years, until the waiting list is nearly exhausted, at which point another lottery is held. The lottery process has streamlined the application process and provided a more efficient and effective way for applicants to manage their housing needs. Most qualified applicants receive assistance in less than 2.5 years.

Since June 15, 2020, the Alaska Housing Finance Corporation has implemented the Alaska Housing Relief Program, to prevent homelessness, a special hardship process to provide immediate rental relief for families affected by income loss due to COVID-19. This program was initially funded by the State of Alaska, and then, with \$242 million from the federal COVID omnibus relief package, which provides up to 12 months of financial assistance. To date, this program has received nearly 40,000 applications. (Reference 30)

#### **e. Indian (Alaska Native) Housing**

The Cook Inlet (Indian/Alaska Native) Housing Authority (CIHA) was established in 1974 to provide affordable elder (senior) rental housing in the Cook Inlet (Alaska Native) region. The cost to build housing in the region was (and remains) extremely expensive. CIHA stepped up to the challenge and, over time, found the resources needed to grow the number of rental apartments for seniors. By the end of CIHA's second decade, they had 267 units available to seniors throughout east Anchorage, Kenai, Ninilchik, and Seldovia. In 1996, the U.S. Department of Housing and Urban Development reorganized the system of federal housing assistance for Native Americans by creating the Indian Housing Block Grant (IHBG) through the Native American Housing and Self Determination Act (NAHASDA), which allowed more flexibility for local decision making, creating opportunities for CIHA to change its business model.

Over the next few years, Cook Inlet Housing responded to community needs and began expanding its rental housing portfolio. Because its limited portfolio only served senior households, CIHA

couldn't offer homes to families and individuals, so they were turned away. CIHA knew that had to change. Anchorage needed more affordable housing for all people. In 2002, CIHA opened their first family rental housing development, Strawberry Village Cottages, in south Anchorage. That began their journey of searching out and securing innovative funding methods to address the demand for affordable housing. That move to leveraging mixed sources of funding allowed CIHA to take a bold step. With Fair Housing laws as their guiding force, CIHA began to provide housing opportunities to all eligible low- and moderate-income people, regardless of race, in their service area, which encompasses the three CDBG-DR eligible jurisdictions, the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough. This was a milestone for CIHA that made it possible to help grow communities around Southcentral Alaska.

CIHA's efforts over the past forty years have turned CIHA from a housing developer to a community developer. CIHA's role as a catalyst for housing development and neighborhood revitalization puts CIHA at the front and center of issues ranging from homelessness and affordability to infrastructure and regulatory barriers. More information about the Cook Inlet Housing Authority is accessible at <https://www.cookinlethousing.org>.

## 2. Public Infrastructure

### a. Post-Earthquake Damage Assessment

Immediately following the earthquake, a joint Public Assistance Preliminary Damage Assessment (PA PDA) was conducted to estimate the cost of recovery. The PA PDA was conducted by local, State, and FEMA staff in the Municipality of Anchorage and the Matanuska- Susitna Borough between December 17 - 21, 2018. A subsequent PA PDA in the Kenai Peninsula Borough 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 were 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.

At the time of assessment, the PA PDA validated the following public assistance damages:

- Category A (Debris Removal) \_\_\_\_\_ \$20,000. (0.04%)
- Category B (Emergency Protective Measures) \_\_\_\_\_ \$1,801,040. (3.74%)
- Category C (Roads & Bridges) \_\_\_\_\_ \$3,085,685. (6.41 %)
- Category D (Water Control Facilities) \_\_\_\_\_ 0. (0.00%)
- Category E (Buildings & Equipment) \_\_\_\_\_ \$41,411,160. (86.07%)
- Category F (Utilities) \_\_\_\_\_ \$50,000. (2.77%)
- Category G (Other, Parks, Recreational Facilities, Fish Hatcheries) \_\_\_ \$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 had 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

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\$1,885,991.21.

Based on preliminary damage assessments, the State of Alaska determined the total estimated eligible expenses associated with the 2018 Cook Inlet Earthquake was \$48,112,398.

b. [FEMA Public Assistance](#)

Alaska's Division of Homeland Security and Emergency Management has managed the FEMA Public Assistance (PA) funds related to the 2018 Cook Inlet Earthquake. These funds include a 75% federal cost share. The PA unmet need is calculated from the 25% state share plus a 25% resiliency factor on the unmet need.

The table below indicates an unmet need of just under \$13 million for public facilities, including resiliency factors. Two-thirds of the unmet need is for Buildings and Equipment (34 percent) and Roads and Bridges (32 percent). Utilities (16 percent) and Emergency Protective Measures (12 percent) comprise most of the remaining PA unmet need.

Table 9

**Estimated Total Cost and Need by Public Assistance (PA) Category**

Category	Approved Amount	25% State Share	25% Resiliency Factor	Unmet Need
A - Debris Removal	\$1,015,049	\$253,762	\$63,441	\$317,203
B - Emergency Protective Measures	\$4,914,207	\$1,228,552	\$307,138	\$1,535,690
C - Roads and Bridges	\$13,438,444	\$3,359,611	\$839,903	\$4,199,514
E - Buildings and Equipment	\$13,996,187	\$3,499,047	\$874,762	\$4,373,808
F - Utilities	\$6,675,073	\$1,668,768	\$417,192	\$2,085,960
G - Parks, Recreation, and Other	\$959,204	\$239,801	\$59,950	\$299,751
Z - Direct Administrative Costs	\$397,674	\$99,418	\$24,855	\$124,273
<b>Total</b>	<b>\$41,395,838</b>	<b>\$10,348,959</b>	<b>\$2,587,240</b>	<b>\$12,936,199</b>

This estimate was based on information gathered through May 2019.



Vine Road near Houston, Alaska in the Matanuska-Susitna Borough

### c. Current FEMA Public Assistance

According to the DR-4413 FEMA Emmie/Portal, as of September 10, 2020, the Best Available Cost is over \$174 million for public infrastructure, which includes resiliency factors. This is nearly four times greater than the original estimated need for Public Assistance. The remaining PA unmet need is in Category E – Buildings [including public schools] and Equipment (69 percent), and Category G – Parks, Recreational, and Other (4 percent).

Table 10

#### Current Best Available Cost by Public Assistance (PA) Category

Category	FEMA Obligated	CRC Gross Cost	Best Available Cost
A - Debris Removal	\$1,000,725	\$1,001,926	\$63,441
B - Emergency Protective Measures	\$5,211,162	\$15,684,385	\$307,138
C - Roads and Bridges	\$14,061,203	\$16,316,544	\$839,903
D - Water Control Facilities	\$0	\$404,550	\$404,550
E - Buildings and Equipment	\$15,630,892	\$75,541,017	\$121,745,704
F - Utilities	\$8,109,728	\$8,340,736	\$8,946,045
G - Parks, Recreation, and Other	\$2,171,389	\$7,569,967	\$7,640,967
<b>Total</b>	<b>\$46,185,098</b>	<b>\$124,859,125</b>	<b>\$174,392,888</b>

This estimate was based on information from the FEMA Emmie/Portal Damage Amounts through September 2020. FEMA Obligated is the amount obligated towards approved projects; CRC Gross Cost is estimated costs for projects with project scoping and cost estimates; and Best Available Cost is initial estimated costs for repair of all projects.

Table 11

#### Current Best Available Cost by Public Assistance (PA) Category

Category	FEMA Obligated	CRC Gross Cost	Best Available Cost
A - Debris Removal	\$1,000,725	\$1,001,926	\$1,001,313
B - Emergency Protective Measures	\$14,718,655	\$15,761,346	\$14,773,620
C - Roads and Bridges	\$18,552,886	\$22,083,900	\$22,412,400
D - Water Control Facilities	\$34,852	\$34,852	\$34,852
E - Buildings and Equipment	\$63,053,731	\$99,393,342	\$85,170,407
F - Utilities	\$9,985,924	\$9,962,972	\$10,318,281
G - Parks, Recreation, and Other	\$7,419,480	\$7,356,480	\$7,419,480
<b>Total</b>	<b>\$114,766,253</b>	<b>\$155,594,818</b>	<b>\$141,130,353</b>

This estimate was based on information from the FEMA Emmie/Portal Damage Amounts through June 2021.

In Substantial Amendment #2, DCCED may propose a Local Public Infrastructure Program for an expansion of the Kenai Peninsula Borough's All Hazard Warning System.

### 3. Economy

#### a. Pre-Earthquake Economic Forecast

The following information was extracted from the 2018 Anchorage Economic Development Corporation (AEDC) Economic Forecast Report. (Reference 31) Consistent with AEDC's January 2017 forecast, Anchorage employment dipped 1.4 percent in 2017, a decline of about 2,100 jobs. In terms of employment, 2017 was a repeat performance of 2016, with oil and gas, construction, professional services, and state government all experiencing job loss. Once again, healthcare was the shining star, adding 800 jobs, continuing a decade of uninterrupted growth.

AEDC anticipated further employment decline in 2018, though fewer losses than experienced in 2016 and 2017. Overall, the economy was expected to shed another 1,000 jobs (0.7 percent) in 2018. Much of that decline was expected in the support sector, as the multiplier effects of previous years' losses rippled through the economy. While job losses were anticipated in retail and in the leisure and hospitality sector, the oil and gas and construction industries were expected to show strength compared to 2016 and 2017. Healthcare sector growth was expected to continue into 2018.

Beyond 2018, AEDC predicted a return to growth. Increasing natural resource values, a robust visitor industry, and other forces noted below boded well for Alaska. With Anchorage accounting for more than half of Alaska's total GDP of \$50 billion, what's good for Alaska was good for Anchorage, and vice versa. While AEDC believed 2018 was going to mark the bottom of the recession, without a long-term solution to Alaska's budget deficit, full recovery was going to remain elusive. The absence of State budget and taxation certainty promised to unnecessarily sideline investment.

#### b. Post-Earthquake Economic Forecast

The following information was extracted from the 2019 Anchorage Economic Development Corporation Economic Forecast Report. (Reference 32) AEDC predicted Anchorage would lose another 1,000 jobs in 2018, mainly in the support sector, as the multiplier effects of previous years' losses rippled through the economy. The final accounting of Anchorage employment in 2018 would likely place the loss at about 1,200 jobs, including 600 jobs in the retail sector.

Anchorage also saw further losses in the professional and business services sector (down 600 jobs) and government (down about 500 jobs). Yet again health care was there to ease the pain, adding another 500 jobs to a remarkable period of growth that totaled 3,000 new jobs over the past five years and more than 5,000 new jobs over the past ten years. There was also good news from the construction sector, which turned a corner in 2018, adding jobs for the first time since 2015, mainly due to the 2018 Cook Inlet Earthquake. The sector showed a 3 percent uptick (about 200 jobs) in employment in 2018.

The loss of 1,200 jobs in 2018 was not good news, but it was an improvement from 2017, when Anchorage lost 2,100 jobs, and from 2016, when the local economy shed 2,900 jobs. The trajectory of employment was in the right direction and 2019 was expected to reflect continuing improvement. As described in the AEDC forecast, further decline was likely in some sectors, but



another strong year for the visitor industry, still more health care-related growth, a bump in construction employment, and other forces should have tipped the scales into positive territory, if only slightly.

AEDC expected Anchorage employment to trend up slightly in 2019, with a net increase of 300 jobs. While this employment forecast reflected some optimism for 2019, the state's \$1.6 billion budget deficit loomed large. The AEDC employment forecast began with an overview of a few key indicators, including population, unemployment rate, and rate of inflation. Then the 2019 employment outlook was described for each key sector of the local economy. The forecast concluded with a few big-picture thoughts about the outlook for Anchorage's economy.

The Earthquake Engineering Research Institute Reconnaissance Report, Chapter 11, Appendix A: Business Resilience Survey (Reference 2) documents the survey team's findings. The team surveyed 56 unique businesses (a relatively small sample size) in Anchorage and Eagle River. The vast majority of businesses (over 80%) reopened within a week of the earthquake. EERI concluded that, overall, businesses in Anchorage were quite resilient to the impacts of the earthquake. Therefore, DCCED does not intend to propose an economic revitalization program.

#### c. Current Economic Forecast

The following information was extracted from the 2021 3-Year Economic Outlook prepared by the Anchorage Economic Development Corporation (AEDC). (Reference 34). As AEDC looks ahead, recovery from the pandemic's devastating economic impacts remains its principal concern. Anchorage has recovered 40% of the jobs lost last year, important progress but still leaving the economy more than 10,000 jobs behind pre-pandemic levels.

As of August 2021, COVID cases in Alaska and across the country were again on the rise. Concerns about a fall surge of infections were growing. The economy will not return to any degree of normalcy until the virus no longer significantly constrains how Anchorage does business. That can only happen when a substantial majority of residents are vaccinated. Everyone can do their part by getting vaccinated and encouraging others to do the same.

Anchorage residents have to remind themselves that federal stimulus and other extraordinary government supports that have helped households, businesses, non-profits, and governments through the pandemic will not go on forever. Supplemental unemployment insurance payments have ended, no further Economic Impact Payments to individuals are expected, nor Paycheck Protection Program (PPP) opportunities. Also, the moratorium on evictions has ended and the suspension of loan payments on federal student loans ends in September.

Economic forces within Anchorage's control also cloud the future. Yet another year without a sustainable state fiscal plan will continue to weigh on investor confidence in Alaska and Anchorage's own confidence that Anchorage can maintain essential public services.

As noted previously in this forecast, the mismatch between labor supply and demand is a key challenge. This has been an underlying issue in Anchorage for many years, though the challenge was mainly in professional services and highly skilled trade occupations. Today the challenge is spread across most sectors of the economy. AEDC expects to see more people returning to work as the need for wage income returns. But it may take years for labor supply and demand to return to a pre-pandemic balance. Importantly, Anchorage needs to turn the ebbing tide of population. The

more attractive Anchorage can make Anchorage as a place to live, work, and eventually retire, the better off Anchorage will be.

As Anchorage works to recover from COVID and wrestle with other challenges facing the economy, it is easy to lose sight of the bright spots in the economy and the significant untapped opportunities that may lie ahead.

As growth in international travel and trade has made the world a smaller place, Anchorage's advantages become more evident with each passing year. With ANC within 9.5 hours of 90% of the world's industrial economies, the airport is certain to continue expanding its role as one of the world's top air cargo hubs. Anchorage is Alaska's marine freight gateway, accounting for 80% of all containerized freight traffic into Southcentral and serving 90% of Alaska's population. More than half of the jet fuel used at ANC moves through Anchorage's Port of Alaska.

Geography also gives Alaska its strategic national defense value. The military plays a key role in Anchorage's economy and the economy of Alaska overall. Persistent (if not rising) political tensions with China and Russia are only increasing Alaska's national defense value. Here too climate change is enhancing Alaska's geopolitical value. Alaska's essential role in protecting the nation's interests in Arctic waters is clear and growing.

The visitor industry, hit hard by the pandemic, will have a strong rebound over the next couple years. In fact, independent visitor travel in 2021 is exceeding expectations, reflecting pent-up demand from last year's nearly non-existent season. The 2022 cruise season, if it unfolds as expected, will bring record numbers of cruisers to Alaska.

Projected increases in North Slope oil production over the next few years promise a measure of stability if not growth in Alaska's oil industry. Climate change and efforts to reduce carbon emissions present challenges and opportunities for Alaska. Oil production is a pillar of Alaska's economy. It will remain so for the foreseeable future, but meanwhile Alaska must aggressively explore new opportunities to diversify its economy in existing and new lines of business that offer opportunities for significant growth in the coming decade and beyond. Globally, greater reliance on natural gas will play a role in reducing carbon emissions. In that regard, Alaska's vast natural gas resources remain a tantalizing yet illusive opportunity.

With all the uncertainty, challenges, and opportunity in front of us, AEDC remains committed to providing the research, investor support, and leadership needed to keep our city on a path to economic prosperity.

The following information was extracted from the Anchorage Employment Report: August 2021 prepared by the Anchorage Economic Development Corporation (AEDC). (Reference 35) Job numbers for the month of July show an increase of 5,900 jobs up from July of 2020. AEDC is seeing job growth slow as Anchorage moves closer to the fall and winter seasons. Almost all sectors saw positive growth with the exception of oil and gas, manufacturing, information, state education and other services.

The number of single-family homes sold year-to-date has increased by 12%. The average sales price so far in 2021 has risen by 11% to \$423,487. Single-family home listings decreased by 57% compared to the same period in 2020, suggesting that the housing market is falling deeper into a seller's market.

This month's data reflects the changes to come as a result of COVID-19 recovery efforts in addition to a thawing national economy. AEDC has seen a remarkable rebound in over the course of the summer and is hoping to see further economic improvements as a result of federal infrastructure funds.

#### 4. Post-Earthquake Financial Assistance for Home-Owners & Business-Owners

After the 2018 Cook Inlet Earthquake, there were various forms of financial assistance available for individuals, families, home-owners, and business-owners.

##### a. Home Insurance

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

Many residents who were financially capable and had insurance were told the damages from the earthquake were not an insurable loss. Those residents with the best insurance coverage were the most financially resilient and could afford the repair or replacement costs on their own. Those residents who were financially fragile, and most in need of assistance from outside sources, were the least likely to have insurance coverage.

While detailed data is still incomplete, a reasonable assumption is that while many residents may have had sufficient property insurance, they typically did 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% 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 to moderate income residents before insurance proceeds. Even if only minor damage was discovered, the average cost for a home inspection to rule out the necessity for an insurance claim ranged from \$250 -\$400.

##### b. FEMA Individual Assistance

Individual Assistance (IA) data received from FEMA on May 8, 2020 was used to quantify all housing applicants affected by the 2018 Cook Inlet Earthquake. More than 10,000 applications were received. Over 8,000 applicants were determined to have a FEMA Verified Loss (FVL) of more than \$0, either upon initial inspection or following an agent adjustment.

Fifty-seven percent of the applicants determined to have an FVL of more than \$0 still have an unmet need of more than \$0. According to the FEMA data set, only owner-occupied units account for all the remaining unmet housing need.

Table 12

**Total FEMA Individual Assistance (IA) Applications**

<b>Occupancy Type</b>	<b>Total Applications</b>	<b>FVL Over \$0</b>	<b>Unmet Need Over \$0</b>
Owner	9,992	7,760	4,571
Renter	457	158	0
Not Specified	63	1	0
<b>Total</b>	<b>10,512</b>	<b>7,919</b>	<b>4,572</b>

The following tables provide a breakout of remaining unmet need for owner-occupied units. While 41% of owner-occupied units with a FEMA Verified Loss have been sufficiently assisted, only six percent of owners whose homes received severe damage have received enough funding to meet identified needs. For example, if FEMA gave an estimate for a roof repair and if the homeowner could find a licensed, insured, and bonded roofing contractor willing to provide a roof repair bid, the amount was almost always greater than the FEMA IA amount. In these instances, the homeowner may not have had sufficient additional funds to have the roof repaired. Due to heavy snow load during the past three winters, an unrepaired roof could result in a roof collapse.

Table 13

**FEMA Individual Assistance (IA) Owner-Occupied Units with Unmet Need**

<b>Damage Category</b>	<b>Range</b>	<b>Owner Occupied Units with FVL &gt; \$0</b>	<b>Owner Occupied Units with Unmet Need &gt; \$0</b>	<b>Percent FVL &gt; \$0 with Unmet Need &gt; \$0</b>
Severe	\$45,525 and up	215	214	99%
Major-High	\$41,776 - \$45,524	45	45	100%
Major-Low	\$27,265 - \$41,775	167	142	85%
Minor	\$1 - \$27,264	7,333	4,171	57%
<b>Total</b>		<b>7,760</b>	<b>4,572</b>	<b>59%</b>

Within the Municipality of Anchorage, approximately 75% of the earthquake damage occurred to the northeast in the Eklutna, Birchwood, Peter's Creek, Chugiak, and Eagle River communities, which were closest to the epicenter.

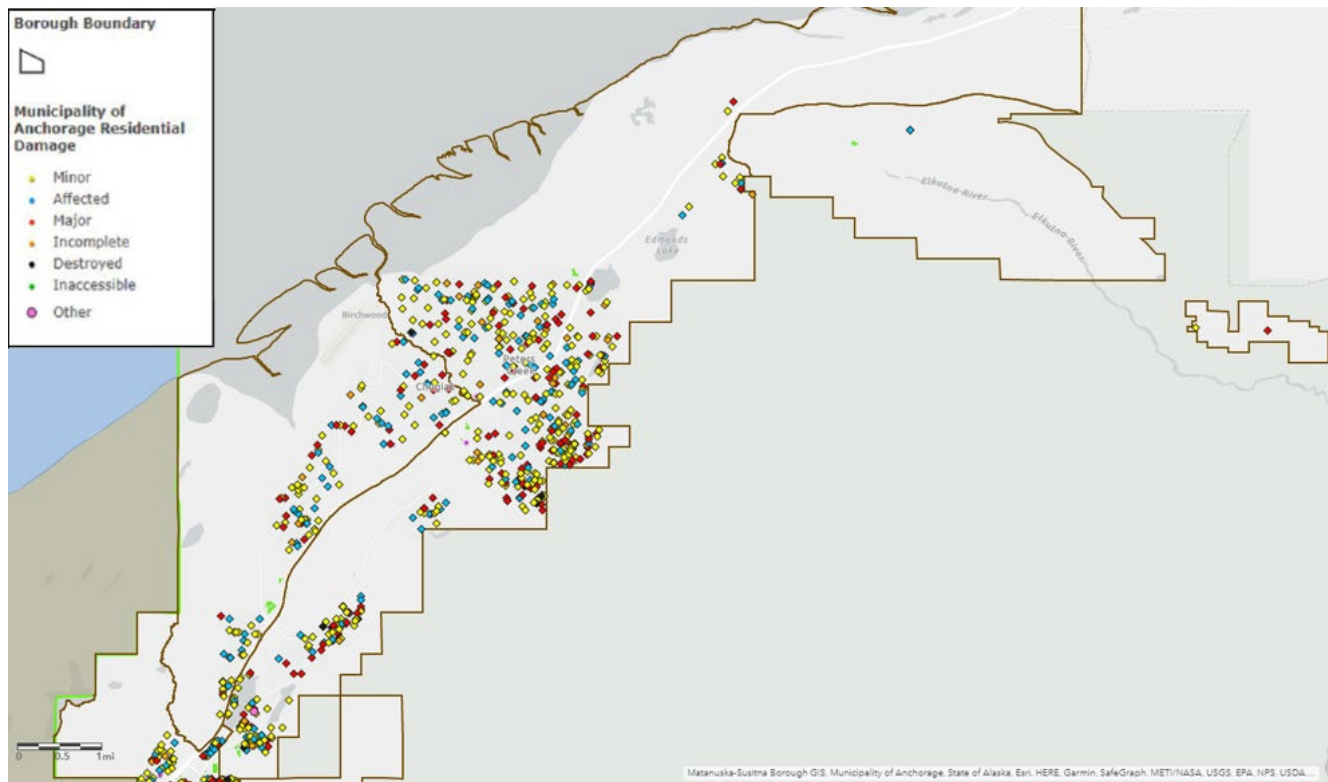


Figure 6, FEMA Damage Assessment Map of Birchwood/Chugiak, AK

Birchwood/Chugiak is a community bordered by Joint Base Elmendorf-Richardson, Eklutna Native Land, Cook Inlet, and the Chugach State Park. (Appendix C – Birchwood/Chugiak Disaster Recovery Area)

Overall, the remaining unmet need of IA applicants, including resiliency costs, totals \$12.8 million. Based on the difference between the FEMA estimate for Public Infrastructure Unmet Need and the FEMA Actual Cost to Repair, this amount may quadruple for housing. Also, there was a general consensus among home-owners and contractors that FEMA was unfamiliar with foundation repair costs. Houses that were severely damaged are responsible for three-quarters (77%) of the remaining IA unmet need. The majority of the severely damaged houses may not be suitable for rehabilitation and/or reconstruction. The Actual Resiliency Factor is estimated to be much higher than 25% based on the forecasted cost of construction materials and labor for the next construction season in 2022. Houses built prior to 1997 may not be suitable for rehabilitation. Therefore, many of these home-owners may be eligible for the Local Buyout or Acquisition Program, depending on the location of the property. Also, the Municipality of Anchorage (MOA) Building Department inspected and tagged over 5,000 damaged properties, which were not fully incorporated into the FEMA data set. “Red-tagged” buildings are considered unsafe/uninhabitable. “Yellow-tagged” buildings are considered limited entry/restricted use. “Green-tagged” buildings are considered safe/habitable. In August 2020, the MOA provided DCCED with a list of 19 “Red-Tagged” Buildings which may be eligible for the one of the Housing Programs.

Table 14

**FEMA Individual Assistance (IA) Remaining Unmet Need**

Damage Category	Range	Owner Unmet Need	25% Resiliency Factor	Unmet Need + Resiliency
Severe	\$45,525 and up	\$7,107,713	\$1,776,928	\$8,884,641
Major-High	\$41,776 - \$45,524	\$316,480	\$79,200	\$395,680
Major-Low	\$27,265 - \$41,775	\$517,860	\$129,465	\$647,325
Minor-Low	\$1 - \$27,264	\$2,316,869	\$579,217	\$2,896,086
<b>Total</b>		<b>\$10,258,921</b>	<b>\$2,564,730</b>	<b>\$12,823,651</b>

Nearly 80% of the remaining IA unmet need (\$10.2 million) is in the Municipality of Anchorage.

The Matanuska-Susitna Borough has an IA unmet need of \$2.5 million, while the Kenai Peninsula Borough has \$225 thousand. These amounts appear to be unusually low, many homeowners may not have reported their earthquake damage to the State of Alaska, FEMA or the SBA.

Table 15

**FEMA Individual Assistance (IA) Remaining Unmet Need by Jurisdiction**

Jurisdiction	Applicants with Unmet Need	Owner Unmet Need	25% Resiliency Factor	Unmet Need + Resiliency
Municipality of Anchorage	3,565	\$8,100,024	\$2,025,006	\$10,125,030
Matanuska-Susitna Borough	946	\$1,978,262	\$494,566	\$2,472,828
Kenai Peninsula Borough	60	\$180,635	\$45,159	\$225,793
<b>Total</b>	<b>4,572</b>	<b>\$10,258,921</b>	<b>\$2,564,730</b>	<b>\$12,823,651</b>

HUD requirements specify that the State of Alaska must expend a minimum of 70% to benefit LMI populations. Using self-reported applicant data, 30% of the applicants with a remaining IA unmet need are in LMI populations. Twenty-one percent of the remaining identified IA unmet need can be attributed to LMI populations.

Table 16

**FEMA Individual Assistance (IA) Unmet Need by Income Category**

Income Category	Count	Unmet Need	25% Resiliency Factor	Unmet Need + Resiliency	Percent Count	Percent Need
0-30%	371	\$633,065	\$158,266	\$791,331	8%	6%
31-50%	374	\$664,710	\$166,177	\$830,887	8%	6%
51-80%	654	\$922,174	\$230,544	\$1,152,718	14%	9%
Not LMI	2,848	\$6,999,443	\$1,749,861	\$8,749,304	62%	68%
Not Reported	325	\$1,039,530	\$259,882	\$1,299,412	7%	10%
<b>Total</b>	<b>4,572</b>	<b>\$10,258,921</b>	<b>\$2,564,730</b>	<b>\$12,823,651</b>	<b>100%</b>	<b>100%</b>

#### c. Small Business Administration (SBA) Disaster Home Loans

One source of relief for home-owners whose properties suffered damage during the 2018 Cook Inlet Earthquake was the Small Business Administration's (SBA) Disaster Home Loans (DHL) program. These loans provided bridge relief for home-owners whose insurance did not fully cover damages suffered during a declared disaster.

Home-owners were eligible to borrow up to \$200,000 to repair or replace their primary residence. Either home-owners or renters were eligible to borrow up to \$40,000 to replace damaged or destroyed personal property. Interest rates for these loans have been issued at either two percent or four percent.

Loans totaling \$64.2 million have been approved by the SBA. Nearly 80% (\$50.5 million, 79%) of the total loan amounts have been used to repair properties in the Municipality of Anchorage. Twenty one percent (\$13.3 million) have been used to repair properties in the Matanuska-Susitna Borough. Less than one percent (\$0.4 million) of loan funds were dedicated to properties in the Kenai Peninsula Borough.

The Total Verified Loss (TVL) identified by the DHL program was \$117.2 million. Subtracting the loans issued from the TVL leaves an identified unmet need of \$53 million. After factoring in 25% resiliency costs, the total remaining DHL unmet need is \$66.2 million.

Table 17

**All Approved Homes Loans (including cancelled and withdrawn)**

Jurisdiction	Number of Loans	Total Verified Loss	Loan Amount	Unmet Need	25% Resiliency Factor	Need + Resiliency
Municipality of Anchorage	1,805	\$91,662,450	\$50,498,200	\$41,164,250	\$10,291,063	\$51,455,313
Matanuska-Susitna Borough	505	\$24,820,412	\$13,336,733	\$11,483,679	\$2,870,920	\$14,354,599
Kenai Peninsula Borough	24	\$738,612	\$393,800	\$344,812	\$86,203	\$431,015
<b>Total</b>	<b>2,334</b>	<b>\$117,221,474</b>	<b>\$64,228,733</b>	<b>\$52,992,741</b>	<b>\$13,248,185</b>	<b>\$66,240,926</b>

Federal Emergency Management Administration. February 21, 2019. "FACT SHEET: Applying for Disaster Assistance After the Alaska Earthquake, Release Number: FS 001."

#### d. DHS&EM Individual and Family Grants

The Individual and Family Grant (IFG) program is operated by Alaska's Division of Homeland Security and Emergency Management (DHS&EM). IFG program funds are only issued after individuals have applied for FEMA and SBA funding. IFG funds are generally used to help repair and replace disaster-related damages to owner-occupied properties, essential personal property, and/or primary transportation.

To date, over \$860 thousand has been paid out either upon acceptance of the initial application or upon appeal. The IFG remaining unmet need, including resiliency costs, totals nearly \$260 thousand. Overall, 82% of the IFG unmet need is within the Municipality of Anchorage and the remaining 18% within the Matanuska-Susitna Borough.



Table 18

**Individual and Family Grant (IFG) Unmet Need by Jurisdiction**

Jurisdiction	Amount Requested	Amount Paid	Unmet Need	25% Resiliency Factor	Unmet Need + Resiliency
Municipality of Anchorage	\$838,844	\$669,107	\$169,737	\$42,434	\$212,172
Matanuska-Susitna Borough	\$227,843	\$191,337	\$36,506	\$9,127	\$45,633
<b>Total</b>	<b>\$1,066,687</b>	<b>\$860,444</b>	<b>\$206,243</b>	<b>\$51,561</b>	<b>\$257,805</b>

**e. Commercial Property Insurance**

The Division of Insurance (DOI), located within DCCED, surveyed commercial property insurers regarding claims filed in response to the 2018 Cook Inlet Earthquake. DOI reports that 71% of commercial property insurers completed its survey. While the results of this survey cannot be used to extrapolate values of non-respondents, what is known is still of value.

Statewide, commercial insurers reported processing 346 claims. Three-quarters (76%) of the claims were for property damage in the Municipality of Anchorage, 14% were for damage in the Matanuska-Susitna Borough, and 11% were for damage in other parts of the state. There were no commercial property insurance claims reported in the Kenai Peninsula Borough.

Of the 346 claims, 79 % (273 claims) were closed without payment, likely reflective of the high deductibles typical of earthquake insurance premiums. Of the remainder, 13 % (44 claims) were closed with payment, and eight percent (29 claims) remain open. Notably, 35 % of claims outside the declared disaster area are still open, as compared to five percent of the claims in the Municipality of Anchorage and six percent of the claims in the Matanuska- Susitna Borough.

Table 19

**Commercial Earthquake Policy Status**

Jurisdiction	Policies in force	Claims Reported	Closed with Payment	Closed Without Payment	Open
Municipality of Anchorage	7,420	262	33	216	13
Matanuska-Susitna Borough	2,288	47	6	38	3
Kenai Peninsula Borough	2,202	0	0	0	0
All Other	6,888	37	5	19	13
<b>Total</b>	<b>18,798</b>	<b>346</b>	<b>44</b>	<b>273</b>	<b>29</b>

There has been a total payout of \$34 million for the 44 claims that were reported as closed with payment. There is an additional \$7.8 million in Case Reserves set aside for the 29 open claims. Case Reserves are defined as a reflection of the best estimate of future amounts payable for an open claim. While the majority of claims were for damage in the Municipality of Anchorage, the largest individual paid claim (\$15 million) and the largest Case Reserve for an open claim (\$6.5 million) were for damage in the Matanuska-Susitna Borough. These two claims account for over half (52 percent) of all incurred damage reported as paid claims or Case Reserves.

Table 20

### Commercial Earthquake Policy Losses and Case Reserves

Jurisdiction	Closed with Payment	Paid Losses	Open	Case Reserves
Municipality of Anchorage	33	\$17,087,554	13	\$1,004,886
Matanuska-Susitna Borough	6	\$15,267,662	3	\$6,500,000.00
Kenai Peninsula Borough	0	\$0.00	0	\$0.00
All Other	5	\$1,599,911	13	\$284,558.00
<b>Total</b>	<b>44</b>	<b>\$33,955,127</b>	<b>29</b>	<b>\$7,789,444</b>

Again, these figures are not a complete reflection of commercial property insurance claims relating to the 2018 Cook Inlet Earthquake, just the 71% of insurers who responded to the DOI survey. Because the individual outliers make up such a high percentage of the overall damage, there is no responsible means for extrapolating this data into a statewide estimate.

#### f. Small Business Administration (SBA) Business Disaster Loans

The SBA offered Business Physical Disaster Loans (BPD) and Economic Injury Disaster Loans (EIDL). Funds of up to \$2 million were available upon request to repair or replace damaged or destroyed real estate, machinery and equipment, inventory, and other business assets. Funds were also available to help with the cost of improvements to protect, prevent, or minimize the same type of disaster damage in the future. Small businesses and many private nonprofit organizations were also eligible for funds to help meet working capital needs caused by the 2018 Cook Inlet Earthquake, regardless of property damage. <sup>1</sup>

The SBA has approved \$14.2 million in BPD and EIDL funds to cover an unmet need of \$22 million. The remaining unmet need is \$8 million. <sup>2</sup> Factoring in resiliency costs of 25%, the total SBA BPD and EIDL unmet need is identified as roughly \$9.8 million.

The majority (95%) of the unmet BPD/EIDL need is in the Municipality of Anchorage. With the remaining unmet need (5%) in the Matanuska-Susitna Borough. There is less than \$10,000 in unmet need in the Kenai Peninsula Borough.

Table 21

### All Approved SBA BPD/EIDL Loan Amounts (including cancelled and withdrawn)

Jurisdiction	Number of Loans	Verified Loss	Loan Amount	Unmet Need <sup>3</sup>	25% Resiliency Factor	Need + Resiliency
Municipality of Anchorage	178	\$19,449,953	\$12,002,900	\$7,629,488	\$1,907,372	\$9,536,860
Matanuska-Susitna Borough	34	\$1,492,783	\$1,122,800	\$370,163	\$92,541	\$462,704
Kenai Peninsula Borough	7	\$1,062,519	\$1,079,600	\$7,996	\$1,999	\$9,995
<b>Totals</b>	<b>219</b>	<b>\$22,005,255</b>	<b>\$14,205,300</b>	<b>\$8,007,647</b>	<b>\$2,001,912</b>	<b>\$10,009,559</b>

<sup>1</sup> Small Business Administration. January 31, 2019. "SBA Stands Ready to Assist Alaska Businesses and Residents Affected by the Earthquake, Release Number: AK 15859-01."

<sup>2</sup> Unmet Need does not precisely equal Verified Loss minus Loan Amount. The reason for this is that when more money was loaned than losses incurred in a given category, a negative need was identified. These negative needs occurred in the cancelled loans category in the Matanuska-Susitna Borough and the approved (not cancelled or withdrawn) category in the Kenai Peninsula Borough. Since actual need cannot be less than zero, these values were reset to \$0.

g. **Non-Profits & Faith-Based Organizations**

While the federal agencies of FEMA and SBA provided the highest amount of funding to both residential home-owners and public facilities to address damage after the earthquake, several non-profit and faith-based organizations also mobilized to provide support to individuals and facilities. The following table shows the type of assistance and amount as supplied from non-profit agencies.

Table 22

**Non-Profits & Faith-Based Organizations**

Organization	Assistance Type	Amount of Funding
Rasmuson Foundation	Public	\$162,200
Lutheran Social Services	Individual	\$35,000
Anchorage and Eagle River Earthquake Recovery Group	Public and Individual	\$90,000
Total		\$287,200

5. **Summary of Unmet Needs and Allocation of Funds & Proposed Budgets**

Despite having some data, DCCED cannot precisely estimate the remaining unmet needs due to the length of time since the 2018 Cook Inlet Earthquake, the impact of the COVID-19 Public Health Emergency, and the physical condition of each damaged property. DCCED knows the number of houses and the amount of funds received through FEMA and SBA for housing repairs. However, the amounts paid to homeowners for repairs through insurance or other sources of funding are unknown. When DCCED begins implementing the proposed programs in this Action Plan, DCCED will be diligent in its efforts to ensure that there is no duplication of benefits when determining the calculation of a homeowner's unmet need by requiring the property owner to provide a Comprehensive Loss Underwriting Exchange (C.L.U.E) Report. DCCED will target LMI households with the greatest unmet housing needs, in the LMI areas with the greatest unmet need. When additional funds are allocated by the U.S. Department of Housing and Urban Development, DCCED will amend this Action Plan to target more Low-Moderate Income neighborhoods.

DCCED, in conjunction with the three CDBG-DR eligible jurisdictions, will continue to identify and prioritize the unmet housing needs for inclusion in Substantial Amendment #2.

A summary of the State of Alaska unmet need is identified in the table below.

Table 21

Summary of Unmet Needs and Allocation of Funds				
Category	Unmet Needs	% of Unmet Needs	State Program Allocation Amount	% of State Program Allocation
Housing FEMA IA Data Forest Park Program	\$12,823,651 \$2,500,000	35.76% 6.97%	TBD \$2,500,000	TBD 6.97%
State Administration & Planning*	\$1,792,800 \$5,378,400	5% 15%	\$1,792,800 \$5,378,400	5% 15%
Total	\$9,671,200	26.97%	\$9,671,200	26.97%

\*5% is allowed for State of Alaska Grant Administration & 15% is allowed for State of Alaska Planning

DCCED reviewed the necessary costs and anticipated budget line items to serve the needs of the Forest Park residents and determined that the amount allocated in this Action Plan may be sufficient for all costs related to the sub-recipient, NeighborWorks Alaska, and any vendor bids and proposals.

As required, the Needs Assessment was completed to identify long-term needs and priorities for CDBG-DR funding allocated for the 2018 Cook Inlet Earthquake Disaster Recovery. The Needs Assessment considered a comprehensive set of data sources from the DMVA/DHS&EM, FEMA, SBA, and other sources. The State of Alaska expects to amend the Needs Assessment as additional information becomes available.

The State of Alaska CDBG-DR Proposed Budget is identified in the table below and in Appendix A.

Table 22

CDBG-DR Proposed Budget		
State Programs		
Housing*		
	Forest Park Optional Relocation Program	\$2,500,000
	State Administration & Planning	\$7,171,200
Total		\$9,671,200

\*A minimum of \$28,685,000 must be expended for disaster relief, recovery, and mitigation within the Municipality of Anchorage.

Method of Distribution. DCCED does not intend to allocate funds directly to grantees. Instead, DCCED intends to use Cost Reimbursable Agreements with Sub-recipients.

Pre-Agreements. The provisions of 24 CFR 570.489(b) and 570.200 (h) permits a state to reimburse itself for otherwise allowable costs incurred by itself or its subrecipients on or after the incident of

the covered disaster (November 30, 2018). The provisions at 24 CFR 570.200(h) and 570.489(b) apply to grantees reimbursing costs incurred by itself or its subrecipients prior to the execution of a grant agreement with HUD. This includes but is not limited to activities supporting program development, action plan development and stakeholder involvement support and other qualifying eligible costs incurred in response to an eligible disaster covered under Public Law 116-20. DCCED incurred pre-agreement costs and will seek reimbursement for these costs that are reasonable and allowable under this regulation. These include the cost for salary, fringe benefits, and direct operating costs for each employee based on their individual percentage of time spent on the planning of the CDBG-DR program.

Upon approval from the U.S. Department of Housing and Urban Development Anchorage Field Office, DCCED will enter into Subrecipient Agreement with NeighborWorks Alaska for the Forest Park Optional Relocation Program.

CDBG-DR pre-award costs incurred by DCCED and its subrecipients are eligible for reimbursement to the extent they would have been allowable after the award, subject to:

1. Inclusion in the Action Plan;
2. Compliance with environmental review requirements;
3. The activity for which payment is being made must comply with all other applicable statutory and regulatory provisions, including qualification as a CDBG-DR assisted activity.

DCCED, consistent with HUD Notice CPD-15-07, may also charge to its CDBG-DR grant the pre-application costs of home-owners, business-owners, and other qualifying entities for eligible costs they have incurred in response to the events covered by the disaster declaration with these conditions:

1. May only charge the costs for rehabilitation, demolition, and reconstruction of single family, multifamily, and nonresidential buildings, including commercial properties, owned by private individuals and entities and incurred before the owner applies for CDBG-DR assistance;
2. For rehabilitation and reconstruction costs, DCCED may only charge costs for activities completed within the same footprint of the damaged structure, sidewalk, driveway, parking lot, or other developed area;
3. Costs must be adequately documented;
4. DCCED must review the Action Plan to determine whether an Amendment will be required (including eligible beneficiaries);
5. DCCED must complete a duplication of benefits check before providing assistance;
6. DCCED must ensure that the expenses are necessary expenses of recovery;
7. Expense eligibility date begins on the date of the disaster, i.e. November 30, 2018;
8. Expenses can only be reimbursed if the individual or entity incurred the expenses within one year after the date of the disaster, i.e. November 29, 2019, and before the date on which they applied for CDBG-DR assistance, but extension of the one-year term may be granted by HUD on a case-by-case basis. (Since the Federal Register Notice was published more than one year after the disaster, HUD needs to grant this extension to all applicants.)

The requirements meet 2 CFR 200.309 authorized pre-award cost guidance.

## 6. Rehabilitation/Reconstruction of Public Housing, Affordable Housing and other forms of HUD-Assisted Housing

DCCED, in conjunction with a to be selected partner, will identify and address the rehabilitation and reconstruction of the following types of housing affected by the 2018 Cook Inlet Earthquake: public housing (including administrative offices), HUD-assisted housing, affordable housing, McKinney-Vento Homeless Assistance Act funded shelters and housing for the homeless, including emergency shelters and transitional and permanent housing for the homeless; and private market units receiving project-based assistance, or with tenants that participate in the Section 8 Housing Choice Voucher Program.

In Substantial Amendment #2, DCCED may propose the HUD-Assisted Housing Program to evaluate all HUD-Assisted housing within the Disaster Recovery Areas. This may include Seismic Studies, Seismic/Structural Analysis, and Seismic/Structural Retrofits, or Replacement of Low-Income Housing Tax Credit (LIHTC) projects. This program may include New Construction of HUD-Assisted Housing within the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough and the Kenai Peninsula Borough. New Construction will emphasize high quality, durability, energy efficiency, sustainability, and mold resistance. DCCED also intends to propose the Cook Inlet Housing Authority (CIHA)-Affordable Housing Program, within the Municipality of Anchorage, in particular, for the construction of the Spenard East development, a Low-Income Housing Tax Credit (LIHTC) project, with 48 units in Phase I and 38 units in Phase II and the CIHA/Providence Anchorage Medical Center Permanent Supportive Housing development with 50 units.

All proposed projects will undergo Affirmatively Furthering Fair Housing (AFFH) review before approval. Such review will include assessments of (1) a proposed project's area demography, (2) socioeconomic characteristics, (3) housing configuration and needs, (4) educational, transportation, and health care opportunities, (5) environmental hazards or concerns, and (6) all other factors material to the AFFH determination. Applications should show that projects are likely to lessen area racial, ethnic, and low-income concentrations, and/or promote affordable housing in low-poverty, nonminority areas in response to natural hazard-related impacts.

## 7. Housing for Vulnerable Populations

DCCED, in conjunction with homeless service providers within the three CDBG-DR eligible jurisdictions, will promote housing for vulnerable populations, including a description of activities that will address the following: the transitional housing, permanent supportive housing, and permanent housing needs of individuals and families with children (especially those with incomes below 30% of the area median) that were homeless and/or became homeless after the 2018 Cook Inlet Earthquake; the special needs of persons who were not homeless but required supportive housing prior to the 2018 Cook Inlet Earthquake (e.g., elderly, persons with disabilities, persons with alcohol/drug addictions, persons with HIV/AIDS and their families, and public housing residents, as identified in 24 CFR 91.315(e)).

In Substantial Amendment #2, DCCED may propose a program to benefit persons experiencing homelessness within the Disaster Recovery Areas.

## 8. Minimizing Displacement and Ensuring Accessibility

DCCED will make every effort to minimize temporary and permanent displacement of persons due to the delivery of the HUD's CDBG-DR program it administers. DCCED has agreed to follow the plan described in the DCCED Residential Anti-Displacement and Relocation Assistance Plan. DCCED will continue to minimize adverse impacts on persons of low-and-moderate income resulting from acquisition, rehabilitation, and/or demolition activities assisted with funds provided under Title 1 of the Housing and Community Development (HCD) of 1974, as amended, as described in 24CFR 570.606 (b-g).

Furthermore, DCCED, will provide comprehensive training to its subrecipients to adopt the State's Residential Anti-Displacement and Relocation Assistance plan, which complies with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (42 U.S.C. 4601 et seq.) ["URA"], for any household, regardless of income which is involuntarily and permanently displaced.

The Uniform Relocation Assistance and Real Property Acquisition Act (URA), is a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes and businesses. The URA's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects.

- 49 CFR Part 24 is the government-wide regulation that implements the URA.
- HUD Handbook 1378 provides HUD policy and guidance on implementing the URA and 49 CFR Part 24 for HUD funded programs and projects.

As part of condition of compliance with programs subject to URA, DCCED will:

- Provide uniform, fair and equitable treatment of person whose real property is acquired or who are displaced in connection with federally funded projects as well.
- To ensure relocation assistance is provided to displaced persons to lessen the emotional and financial impact of displacement
- To ensure that no individual or family is displaced unless decent, safe and sanitary (DSS) housing is available within the displaced person's financial means
- To help improve the housing conditions of displaced persons living in substandard housing
- To encourage and expedite acquisition by agreement and without coercion.

In practice, when a tenant is displaced by a CDBG-DR activity, relocation case managers are assigned to both owners and tenants work with applicants to coordinate activities and communicate updates in real time concerning when to expect to move out of their residences, assist the displaced individuals with securing temporary housing arrangements, and all other aspects of moving belongings. One of the case manager's primary goals is to minimize the time that the tenant/owner will be impacted by coordinating the construction calendar in real time and during construction, keeping the displaced individual updated on the construction progress and communicating an expected timeline for construction completion and eventual move in.



DCCED's Local Buyout Program is voluntary and DCCED will not utilize the power of eminent domain. While DCCED has no direct authority to perform eminent domain, it could request the Division of Administration to execute eminent domain on its behalf. Although DCCED does not intend to use the State's eminent domain authority, DCCED will follow the four-part criteria required of eminent domain under 49 CFR 24.101(b)(1) (i-iv) when presenting buyout as an option for buyout program applicants.

Under the reasonable accommodation policy, case managers shall assess the specific needs of each program beneficiary and determine if a Section 504/ADA modification is required based on the unique facts and circumstances presented by the applicant. To ensure accessibility for applicants, DCCED has adopted a Section 504/Americans with Disabilities Act (ADA) policy which ensures the full right to reasonable accommodations by all program participants and accommodations under the State's reasonable accommodation policy. No otherwise qualified individual with disabilities shall solely by reason of his or her disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded with CDBG-DR funds provided by DCCED. Under the reasonable accommodation policy, case managers shall assess the specific needs of each program applicant and beneficiary to determine whether physical design modifications, existing physical feature modifications, or program modifications are needed for the CDBG-DR funded program to ensure accessibility to persons with a disability. See, for example, 24 C.F.R. § 8.33, 100.203, and 100.204 of HUD's regulations.

To the maximum extent feasible, alterations made to existing non-housing facilities shall be made to ensure that such facilities are readily accessible to and usable by individuals with disabilities. Any new non-housing facilities constructed by DCCED shall be designed and constructed to be readily accessible to and usable by persons with disabilities.

New housing developed with or existing housing altered with CDBG-DR funds will comply with the Uniform Federal Accessibility Standards (UFAS) found at 24 CFR Part 40. DCCED will utilize the UFAS Accessibility Checklist as a minimum standard for structures with five or more units to assist in the compliance of Section 504 of the Rehabilitation Act. The checklist will be used when reviewing the design of all newly constructed residential structures (other than residential structures that do not receive federal financial assistance). The Fair Housing Act (including the seven-basic design and construction requirements set in the Fair Housing Act) also applies to buildings with four or more units. New housing developed with CDBG-DR funds will also comply with Titles II and III of the Americans with Disabilities Act, as applicable.

DCCED also complies with the Americans with Disability Act, which prohibits discrimination in employment based upon disability. DCCED complies with Title II of the ADA in its implementation of other non-housing projects, such as infrastructure, to include accessibility features at all improved sites such as curb ramps, sloped areas at intersections, and the removal of any barriers to entry for those with disabilities.

All public facilities that are federally assisted shall also exceed the minimum threshold for Section 504/ADA compliance. Multifamily and other housing development programs will also be required to have the minimum numbers of mobility units and hearing/vision units in a range of bedroom sizes in accordance with Section 504/ADA requirements. Along with single family programs, the

affordable housing rental programs will be required to have an architect's/engineer's signature on a form stating that the designed unit meets Section 504/ADA compliance. Failure to deliver the appropriately constructed Section 504/ADA compliant unit(s) will result in the construction firm not being paid and in breach of contract until the deficiencies are corrected.

Alaska qualifies as a safe harbor state in that over five percent of its population speaks another primary language outside of English in the home. DCCED is cognizant of these demographics and offers printed material of vital documents and will provide other language translation services as needed.

## 9. Maximum Assistance & Reasonable Cost Assurance

The maximum assistance for the Home-owner's Reimbursement Program and the Home Repair Program will be capped at the same amount for the SBA Disaster Home Loan, which was \$200,000. The maximum assistance for the Local Buyout and Acquisition Programs will be indexed to the Federal Housing Administration (FHA) Loan limits for 1-4 dwelling units.

Table 23

Name of Jurisdiction	1-Family	2-Family	3-Family	4-Family	Median Sale Price
Anchorage, AK HUD Metro FMR Area	\$417,450	\$534,400	\$645,950	\$802,800	\$363,000
Matanuska-Susitna Borough, AK HUD Metro FMR Area	\$417,450	\$534,400	\$645,950	\$802,800	\$363,000
Kenai Peninsula Borough	\$356,362	\$456,275	\$551,500	\$685,400	\$240,000

\*<https://entp.hud.gov/idapp/html/hicost1.cfm>.

To ensure consistency, as well as, necessary and reasonable cost assurance, DCCED may require HUD 203(k) inspections on all housing units. DCCED may require Peer Reviews by licensed, registered engineering firms for all housing and public infrastructure projects. DCCED may require the use of RS Means data and the FEMA Benefit Cost Analysis Process (Reference 42) used by the State of Alaska for the FEMA Hazard Mitigation Grant Program to determine whether a project is cost effective.

## 10. Planning and Coordination

Since January 2011, FEMA Region X has partnered with the State of Alaska to deploy Risk Mapping, Assessment, and Planning (Risk MAP) projects with the goal of accurately and comprehensively depicting natural hazard risks throughout Alaska, including the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough.

On September 24-26, 2019, the Earthquake Engineering Research Institute and the Alaska Earthquake Center with support from the National Earthquake Hazards Reduction Program through the National Science Foundation and the U.S. Geological Survey hosted a Symposium on the 2018 M7.1 Anchorage Earthquake. This symposium highlighted the research that had occurred and stimulated new investigations and collaborations. The symposium covered seismology, geology, ground motion, structural and geotechnical engineering, lifelines, public health, emergency management and response, tsunami monitoring and modeling, school safety and public policy. The

goal of the symposium was to document the consequences of the earthquake and the results from a broad range of post-earthquake investigations; identify important lessons learned; formulate an agenda for future research in earthquake science and engineering; and inform possible changes to public policy for earthquake safety.

In July 2021, the Earthquake Engineering Research Institute (EERI) published the EERI Reconnaissance Report: M7.1 Anchorage Earthquake on Nov. 30, 2018, which formally documented their observations of the 2018 Cook Inlet Earthquake. (Reference 2) This report is a multidisciplinary seismological and engineering report that presents the following:

- Chapter 1, Introduction and Overview
- Chapter 2, Seismology, Ground Motions, and Aftershocks
- Chapter 3, Geotechnical Impacts (including Residential Structures)
- Chapter 4, Reconnaissance Team Overview
- Chapter 5, Nonstructural and Equipment Damage in Buildings
- Chapter 6, Performance of Schools
- Chapter 7, Performance of Hospitals and Health Care Facilities
- Chapter 8, Impact on Transportation Systems (Public Infrastructure)
- Chapter 9, Lifelines and Utilities (Public Infrastructure)
- Chapter 10, FEMA Post-Earthquake Recommendations for Mitigation (Appendix B.)
- Chapter 11, Conclusions, Lessons, and Risk Mitigation Recommendations
- Chapter 11, Appendix A: Business Resilience Survey

The 2018 Cook Inlet earthquake was the most studied and researched earthquake/seismic event in recent history. Immediately after the 2018 Cook Inlet earthquake, the United States Geological Survey (USGS) conducted field studies and researched ground failure throughout the Municipality of Anchorage and the Matanuska-Susitna Borough. (Reference 4) USGS is continuing to conduct ground failure research within the Municipality of Anchorage and the Matanuska-Susitna Borough in 2021 and 2022.

The Geotechnical Extreme Event Reconnaissance Association also published their research based on observations from the 2018 Cook Inlet Earthquake. (Reference 5) The 30 November 2018 M7.1 Anchorage Earthquake was also reported in the Seismological Research Letters. (Reference 6)

In Substantial Amendment #2, DCCED may propose natural hazard mitigation planning activities that may benefit the HUD-identified “most impacted and distressed” area, the Municipality of Anchorage, by recommending the integration of the hazard mitigation planning activities into the Municipal Land Use Planning and Zoning Ordinances. This may include a Local Buyout Program for the micro-Disaster Risk Reduction Areas; restricting new development/re-development in Seismic Hazard Zones 4 and 5 (High Ground Failure Susceptibility and Very High Ground Failure Susceptibility), as well as, the Bootlegger Cove Special Landslide Hazard Area; and adopting the 2021 building codes. This planning effort may also update the Chester Creek Watershed Plan, and create the Fish Creek Watershed Plan, the Hood Creek Watershed Plan and the Fire Creek Watershed Plan, as well as, address the construction or rehabilitation of storm water management systems. DCCED also recommends the adoption of the “Post-Earthquake Recommendations For Mitigation” prepared by FEMA Region X (Appendix B).

The State of Alaska's earthquake recovery projects will be developed in a manner that considers an integrated approach to address long-term recovery and restoration of housing in the most impacted and distressed area, the Municipality of Anchorage.

DCCED will continue to work with state and local jurisdictions to provide guidance on promoting sound short- and long-term recovery plans in the affected areas by coordinating available resources to help in the recovery and restoration of damaged communities. Disaster recovery presents affected communities with unique opportunities to examine a wide range of issues such as drainage and flood control, housing quality and availability, road and rail networks, environmental issues, and the adequacy of existing infrastructure. DCCED will support long-term plans put in place by local and regional jurisdictions that promote sound, sustainable, long-term recovery planning informed by a post-disaster evaluation of hazard risks due to earthquakes, avalanches, landslides, ground failure, tsunamis, and flooding where applicable, especially land-use decisions that reflect responsible floodplain management in Seismic Hazard Zones 4 and 5, High Ground Failure Susceptibility and Very High Ground Failure Susceptibility.

DCCED will coordinate as much as possible with local and regional planning efforts to ensure consistency, to promote community-level and/or regional jurisdictions post- earthquake disaster recovery and mitigation, and to leverage those efforts. As detailed later in this Action Plan, DCCED will utilize partnerships with vendors (term which shall include, but not limited to, governmental entities, non-profit and for profit firms, entities, and organizations) to further coordinate planning, studies and data analysis.

#### 11. Floodplains, Wetlands, Coastal/Riverine Bluffs, Landslides, & Seismic Hazard Zones 4 & 5

DCCED does not intend to rebuild any structures located in an area delineated as a flood hazard area or equivalent in FEMA's data source identified in 24 CFR 55.2(b)(1) nor on a coastal/riverine bluff and in a Seismic Hazard Zones 4 or 5 (High Ground Failure Susceptibility and Very High Ground Failure Susceptibility). All structures, as defined under 44 CFR 59.1, designed principally for residential use and located in the 100-year (or 1 percent annual chance) floodplain or on a coastal/riverine bluff and in a Seismic Hazard Zone 4 or 5 may be eligible for the Local Buyout Program. This is a voluntary program. Upon acquisition, DCCED, or a designated partner, will plan for de-construction and/or demolition, remediation, as necessary, re-vegetation, and salmon habitat restoration, if adjacent to a salmon stream. Prior to de-construction and/or demolition, DCCED, or a designated partner, may arrange for Tier I or II Environmental Reviews to be conducted by a professional engineering firm licensed and registered in the State of Alaska. Upon completion of the project, DCCED, or a designated partner, will transfer the property to the local jurisdiction, or homeowners' association, designated as "greenspace", in perpetuity.

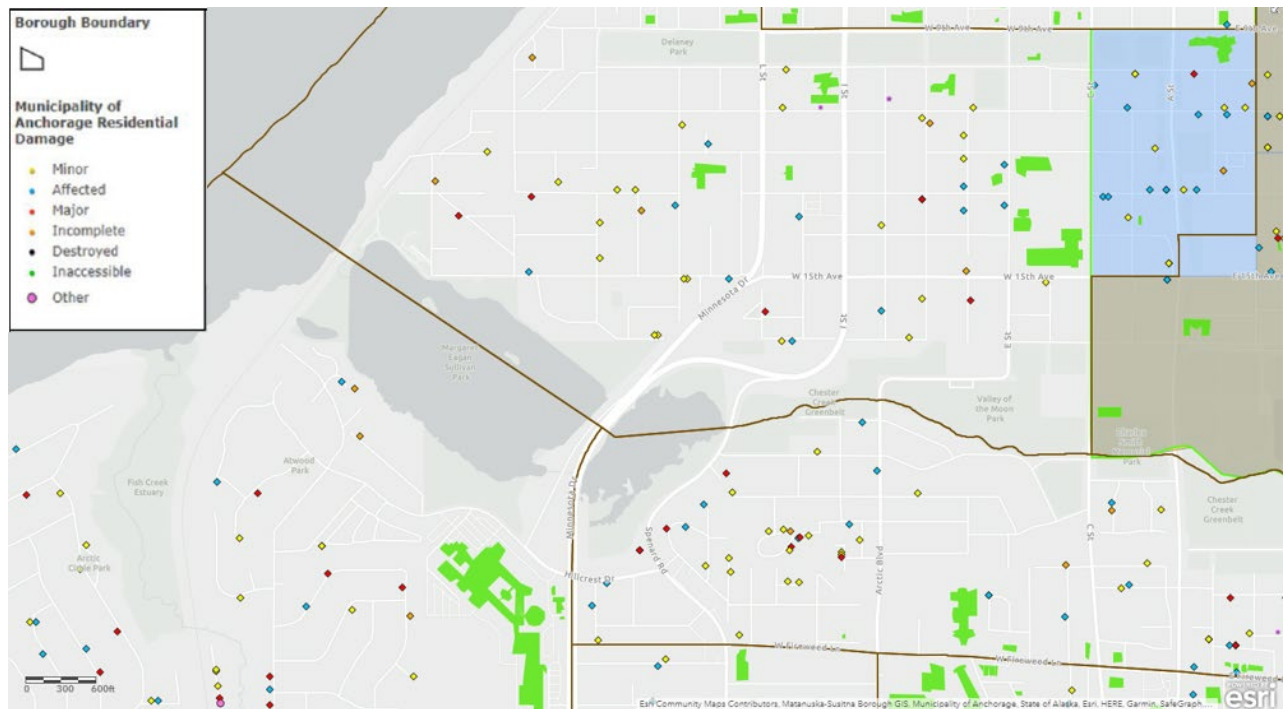


Figure 7, Chester Creek Greenbelt, including the Westchester Lagoon

For example, there are some older neighborhoods located adjacent to the Chester Creek Greenbelt, which is owned by the Municipality of Anchorage. These particular neighborhoods are located in a triple natural hazard area with a floodplain, a landslide area, and in a Seismic Hazard Zone 4 or 5. There is both a shallow landslide risk area and a deep translational landslide risk area (Bootlegger Cove Special Landslide Hazard Area), which encompasses Government Hill, Downtown Anchorage, Chester Creek, and Turnagain Heights.



# Anchorage Bowl

## Seismic

**Map Legend:**

- ZONE 5 - (Very High Ground Failure Susceptibility)
- ZONE 4 - (High Ground Failure Susceptibility)
- ZONE 3 - (Moderate Ground Failure Susceptibility)
- ZONE 2 - (Moderately-Low Ground Failure Susceptibility)
- ZONE 1 - (Lowest Ground Failure Susceptibility)

**Map Information:**

Map Prepared By:  
GIS Services  
Data, Project & Presentation Division  
Information Technology Department  
Municipality of Anchorage  
December, 2006

**Scale:** 1 inch = 1 mile

**North Arrow:** Indicated by a star symbol.

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## 12. Protection of People and Property/Non-Structural Hazard Mitigation and Preparedness Activities

DCCED has worked closely with the Department of Military and Veterans Affairs (DMVA/Division of Homeland Security & Emergency Management (DHS & EM) on the development and maintenance of the State of Alaska Hazard Mitigation Plan 2018. (Referenced 11) One of the Earthquake Action Items is to encourage non-structural mitigation activities. DCCED has identified several micro-Disaster Risk Reduction Areas within the Municipality of Anchorage where there are three overlapping Areas of Mitigation Interest/Natural Hazards (Seismic Hazard Zones 4 or 5, High Ground Failure Susceptibility or Very High Ground Failure Susceptibility; the Bootlegger Cove Special Landslide Hazard Area; and Special Floodplain Hazard Areas). These Micro-Disaster Risk Reduction Areas are at the highest risk of loss of life and property during the next earthquake.

DCCED has encouraged the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough and the Kenai Peninsula Borough to restrict new development/re-development in Areas of Mitigation Interest/Natural Hazards (Seismic Hazard Zones 4 or 5, High Ground Failure Susceptibility or Very High Ground Failure Susceptibility; the Bootlegger Cove Special Landslide Hazard Area; and Special Floodplain Hazard Areas).

Another State of Alaska Earthquake Action Item is to encourage disaster preparedness activities. Therefore, in the Forest Park Optional Relocation Program, each household will be provided with handouts on Disaster Preparedness and Disaster Supply Kits as recommended on the Municipality of Anchorage Office of Emergency Management website:

<http://www.muni.org/Departments/OEM/Prepared/Pages/default.aspx>. and additional information from the State of Alaska Division of Homeland Security & Emergency Management website: [www.ak-prepared.com](http://www.ak-prepared.com) and the Federal Emergency Management Agency website: [www.ready.gov](http://www.ready.gov).

## 13. Public Infrastructure Activities

DCCED will require subrecipients (the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough) to mitigate hazard risks due to earthquakes, avalanches, landslides, ground failure, tsunamis, and flooding where applicable, into their rebuilding activities of public infrastructure. DCCED's goal is to ensure better coordination of projects between jurisdictions to address recovery and mitigation more holistically.

DCCED may require subrecipients to use the FEMA Benefit Cost Analysis Process to determine whether a public infrastructure project is cost effective when selecting CDBG-DR eligible projects. (Reference -41) Each public infrastructure activity must demonstrate how it will contribute to the long-term recovery and restoration of housing, primarily serving a Low-Moderate Income neighborhood.

DCCED will seek to ensure that public infrastructure activities will avoid disproportionate impact on vulnerable communities and will create, to the extent practical, opportunities to address economic inequities facing local communities.



All proposed projects will undergo Affirmatively Furthering Fair Housing (AFFH) review before approval. Such review will include assessments of (1) a proposed project's area demography, (2) socioeconomic characteristics, (3) housing configuration and needs, (4) educational, transportation, and health care opportunities, (5) environmental hazards or concerns, and (6) all other factors material to the AFFH determination. Applications should show that projects are likely to lessen area racial, ethnic, and low-income concentrations, and/or promote affordable housing in low-poverty, nonminority areas in response to natural hazard-related impacts.

DCCED will coordinate with federal, state, local, private, and nonprofit sources to assist subrecipients to align investments with other planned state or local capital improvements and public infrastructure development efforts. DCCED will also work with subrecipients to foster the potential for additional infrastructure funding from multiple sources, including existing state and local capital improvement projects in planning and the potential for private investment.

In Substantial Amendment #2, DCCED may propose a Local Public Infrastructure Program for an expansion of the Kenai Peninsula Borough's All Hazard/Tsunami Warning System, which will emphasize adaptable and reliable technologies to guard against premature obsolescence.

#### 14. Resilience to Natural Hazards

DCCED has worked closely with the Department of Military and Veterans Affairs (DMVA)/Division of Homeland Security & Emergency Management (DHS&EM) on the development and maintenance of the State of Alaska Hazard Mitigation Plan 2018. (Reference 11) Chapter 9, Mitigation Strategy, addresses resiliency. The Municipality of Anchorage has a FEMA approved All Hazards Mitigation Plan. (Reference 12) Chapter 5, Mitigation Strategy, addresses resiliency. The Matanuska-Susitna Borough received approval from FEMA on their Hazard Mitigation Plan on March 21, 2021. (Reference 13) The Kenai Peninsula Borough received FEMA approval on their Hazard Mitigation Plan on December 18, 2019. (Reference 14) As required by FEMA, each of these plans address mitigation measures and resilience to natural hazards within their jurisdiction.

For example, the State of Alaska has the following Earthquake Action Items:

- Continue the State Hazard Mitigation Advisory Commission;
- Encourage communities to adopt the most current International Building Codes (IBC);
- Require all State facilities be designed and constructed IAW current IBC;
- Require and enforce IBC seismic codes in all construction projects receiving State and/or Federal funds.
- Encourage all communities to adopt current IBC for residential construction.
- Continue earthquake safety education and preparedness in Alaska's schools.
- Encourage non-structural mitigation and preparedness activities.

#### 15. Disaster Recovery and Response Plan

DCCED consulted with the Department of Military and Veterans Affairs (DMVA)/Division of Homeland Security & Emergency Management (DHS&EM) on the development of this Action Plan. DCCED will encourage the three jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough to develop a comprehensive disaster recovery and response plan for the 2018 Cook Inlet Earthquake that addresses long-term recovery within

their jurisdiction. The DMVA is administering the FEMA Hazard Mitigation Program, which addresses the pre-and post-disaster hazard mitigation from natural hazards. The Matanuska-Susitna Borough has developed an Earthquake Mitigation Plan similar to the State of Alaska Earthquake Mitigation Plan.

In December 2017, FEMA published the final Risk Report for the Kenai Peninsula Borough (Reference 37), which included the following:

- \$400M in exposed value due to a M9.2 earthquake, similar to the Great Alaska Earthquake of 1964.
- 338 improved parcels (\$87M in exposed value) in Special Flood Hazard Areas.
- 166 improved parcels (\$36M in exposed value) in coastal erosion areas between the Kasilof River and Ninilchik River.
- 220 improved parcels in tsunami inundation areas.

## 16. Leveraging Funds

DCCED will encourage subrecipients to leverage CDBG-DR funds with funding provided by other federal, state, local, private, and non-profit sources to fully utilize the limited CDBG-DR funds. DCCED will report on leverage funds in the DRGR system. DCCED also intends to collaborate with local governments, local long-term recovery groups, local non-profit organizations, and vulnerable populations advocacy groups. The CDBG-DR Public Infrastructure funds may be used for matching requirements, share, or contribution for any other Federal program when used to carry out an eligible CDBG-DR activity. This includes programs or activities administered by FEMA or USACE.

No disaster recovery assistance will be considered with respect to any part of a disaster loss that is reimbursable by the Federal Emergency Management Agency (FEMA), the Army Corps of Engineers (USACE), insurance, or another source due in part to the restrictions against duplication of benefits outlined in this Action Plan. An activity underway prior to the Presidential Disaster Declaration will not qualify unless the disaster directly impacted said project.

By law, (codified in the HCD Act as a note to 105(a)), the amount of CDBG-DR funds that may be contributed to a USACE project is \$250,000 or less.

In Substantial Amendment #2, DCCED may describe how the State will leverage CDBG-DR funds with funding from other Federal, State, and local, private, and non-profit sources.

## 17. Construction Standards

### a. Building Codes

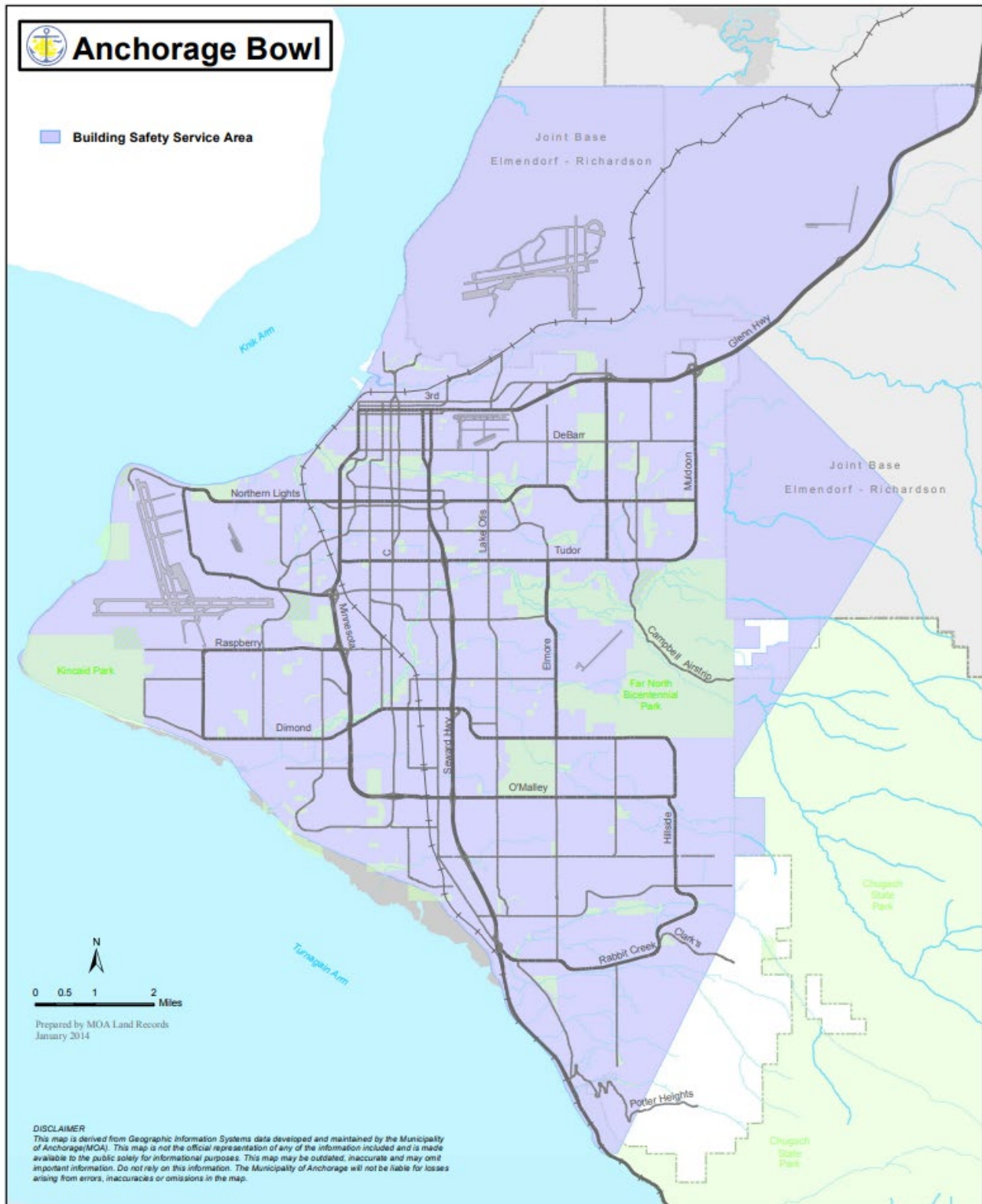
The State of Alaska has not adopted statewide residential building codes. The Matanuska-Susitna Borough and the Kenai Peninsula Borough have not adopted residential building codes. On October 27, 2020, the Municipality of Anchorage adopted the following: 2018 International Building Code; 2018 International Mechanical Code; 2018 Uniform Plumbing Code; 2017 National Electrical Code; 2018 International Fire Code; 2018 International Energy Conservation Code; 2018 International Existing Building Code; 2018 Abatement of Dangerous Buildings Code; 2016 ANSI/ASME A17.1 Safety Code for Elevators and Escalators; 2017 ANSI/ASME A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts; 2018 International Residential Code; 1997 Relocatable Ancillary Buildings; 1997 Mobile Aircraft Shelters; 2018 Grading, Excavation, Fill and Landscaping; and 2018

International Fuel Gas Code.

The Municipality of Anchorage has adopted and amended Appendix E in the 2018 International Building Code regulating manufactured homes. (AMC Chapter 23.85.AE101.1-AE604.1) These manufactured home standards require every manufactured home installed within the Municipality of Anchorage to be certified for the “North Zone” (40 pounds per square foot) for snow load and heat loss “Comfort Zone 3” in accordance with HUD standards. Additionally, the Municipality of Anchorage has installation requirements for the following: gas and plumbing service; utility service; footings and foundations; underfloor clearances-ventilation and access; skirting and permanent perimeter enclosures; and ground anchors.

The Municipality of Anchorage only enforces building codes for new construction and major renovations through building plan reviews and on-site building inspections within the Anchorage Building Safety Service Area, excluding the Northern Communities of Eagle River, Chugiak, Birchwood, Peters Creek, Thunderbird Falls, and Eklutna, and the Southern Communities of Indian, Rainbow Creek, Bird Creek, Girdwood, and Portage. Therefore, compliance with current building codes outside of the Anchorage Building Safety Service Area is unknown.

DCCED will require a one-year warranty period post-construction, which includes a formal notification that is provided to homeowners on a periodic basis.



## b. Green Building Standards

DCCED acknowledges the emphasis in the Notice to institute green building design, specifically when executing new construction or replacement of substantially damaged residential buildings and will follow the guidance located in 84 FR 4844 concerning green building design. Rather than be limited by a single green building design technique, DCCED will require that new construction meet

the best fit for new construction from many possible approaches. For all new or replaced residential buildings, the project scope will incorporate Green Building materials to the extent feasible according to specific project scope. Materials must meet established industry-recognized standard that have achieved certification under at least one of the following programs:

- ENERGY STAR (Certified Homes).
- Enterprise Green Communities.
- LEED (New Construction, Homes, Midrise, Existing Buildings Operations and Maintenance, or Neighborhood Development).
- ICC-700 National Green Building Standard,
- EPA Indoor AirPlus (ENERGY STAR a prerequisite).
- Any other equivalent comprehensive green building program.

For each project subject to the above, the specific green building technique or approach used will be recorded. DCCED, in conjunction with designated partners, will implement and monitor construction results to ensure the safety of residents and the quality of homes assisted through the program. All new housing created in whole or in part with CDBG-DR funds will comply with current HUD Housing Quality Standards (HQS). Rehabilitation of non-substantially damaged structures must comply with the HUD CPD Green Building Retrofit Checklist available at <https://www.hudexchange.info/resource/3684/guidance-on-the-cpdgreen-building-checklist/>, to the extent that the items on the checklist are applicable to the rehabilitation. DCCED will consult FEMA P-798, Natural Hazards and Sustainability for Residential Buildings, to align green building practices with the increased sustainability and resiliency.

DCCED will monitor contractor compliance through the review and approval of monthly project performance reports, financial status reports, and documented requests for reimbursement throughout the contract period. DCCED will utilize the HUD-provided contract reporting template to upload to the Disaster Recovery Grant Reporting (DRGR) System on a quarterly basis: <https://www.hudexchange.info/resource/3898/contractreporting-template/>.

#### c. Quality Construction Standards

DCCED will require on-site inspections to verify damage. Current State of Alaska Building Energy Efficiency Standards (BEES), a minimum of a 5 Star Rating, will be required. Site inspections will be required on all projects to ensure quality and compliance with applicable zoning and building codes. The current building codes adopted and enforced by the Municipality of Anchorage meet current seismic standards, especially the building codes for the Turnagain Neighborhood, the site of the 1964 earthquake landslide. The Matanuska-Susitna Borough is in the process of adopting similar building codes. DCCED will encourage the Kenai Peninsula Borough to establish and enforce local building codes throughout their jurisdiction to mitigate natural hazard risks.

#### d. General Contractors Standards

DCCED has partially set aside the CDBG-DR program for the State of Alaska Disadvantaged Business Enterprise. DCCED will require subrecipients to have established procedures and standards for the request for qualifications to ensure full and open competition. All subrecipients are required to follow federal procurement and contract requirements outlined in 2 CFR 200.318 – 200.326.

## **B. Projects and Activities**

### **1. Overview**

DCCED will adapt the policies and procedures used for the DCCED Community Development Block Grant (CDBG) program for the Community Development Block Grant-Disaster Recovery (CDBG-DR) program.

As required by the Federal Register, Vol. 85, No. 17, Monday, January 27, 2020, the DCCED must describe the method of distribution of funds and the descriptions of specific programs and/or activities. DCCED consulted with the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough, as well as, the Department of Military & Veterans Affairs, the Alaska Housing Finance Corporation, and the Anchorage Economic Development Corporation.

This Action Plan outlines the following: the subrecipients; criteria for eligibility; the methodology used to reimburse those subrecipients; activities for which funding may be used; and program requirements, including non-duplication of benefits. The Action Plan also defines how the uses of this allocation address necessary expenses related to disaster relief, mitigation, long-term recovery and restoration of housing.

### **2. Basis for Allocations**

DCCED does not intend to make any direct allocations/distribution of funds to any CDBG-DR eligible jurisdiction. DCCED will reimburse each of the three jurisdictions for properly documented and eligible activity costs related to launch of approved Action Plan program activities. (Appendix A, CDBG-DR Budget)

DCCED anticipates developing Subrecipient Agreements with the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough and the Kenai Peninsula Borough, as well as, the Cook Inlet Housing Authority, NeighborWorks Alaska and the Rural Alaska Community Action Program, Inc. (RurAL CAP) serving program needs within the three jurisdictions.

### **3. DCCED Use of Funds**

DCCED intends to implement the Forest Park-Optional Relocation Assistance Program through NeighborWorks Alaska. In Substantial Amendment #2, the DCCED intends to propose the remaining programs and activities for the CDBG-DR grant program.

#### **a. Forest Park Optional Relocation Assistance Program**

The Forest Park Optional Relocation Assistance Program is designed to assist the residents of a mobile home park that requires a comprehensive, community-wide solution to disaster/earthquake relief and recovery. DCCED has identified the residents of the Forest Park Mobile Home Park to participate in the Program based on the following criteria: (1) the lack of potable water, a violation of Anchorage Municipal Code 23.70.702.1, (2) the unspecified Seismic Hazard Zone, (3) the level of damage sustained during the 2018 Cook Inlet Earthquake and the subsequent 12,000 aftershocks, (4) the seasonal flooding from a tributary to Fire Creek, a salmon habitat stream, (5) the concentration of Low to Moderate-Income residents, (6) the concentration of residents with

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Limited English Proficiency (Hmong and Spanish), (7) the planned closure of this mobile home park, and (8) the interest from the community and Elected Officials from the State of Alaska and the Municipality of Anchorage.

In late October 2020, an ad-hoc planning team was assembled consisting of representatives from DCCED, the Municipality of Anchorage Office of Emergency Management, the Municipality of Anchorage Building Safety Division, the Anchorage Health Department, the Alaska Legal Services Corporation, the Rural Alaska Community Action Program (RurAL CAP), the Salvation Army, and other faith-based non-profit organizations. Since late October 2020, the Municipality of Anchorage has arranged for the delivery and storage of potable water to Forest Park. The Municipality of Anchorage also provided residents with free shower passes to use at the Harry J. McDonald Memorial Center, a sports facility in nearby Eagle River, and free passes to the Anchorage Regional Landfill. Most of these mobile homes were constructed prior to June 15, 1976 and do not have HUD certification labels and do not meet HUD's "decent, safe, and sanitary" requirements nor HUD's Housing Quality Standards. On November 18, 2020 and on March 30, 2021, the Municipality of Anchorage hosted virtual Town Hall Meetings with a Hmong Interpreter to inform the residents of the immediate disaster relief efforts and the long-term recovery options available to them. Since late November 2020, the Salvation Army has conducted client outreach services/case management to the Forest Park households.

Beginning June 1, 2021, the Salvation Army started coordinating and transferring the case management files to NeighborWorks Alaska, who will implement the Forest Park Optional Relocation Program (Manufactured Housing Unit [MHU] Relocation Reimbursement Program, Housing Assistance Program, Down Payment Assistance Program for a New Type I/II Manufactured Housing Unit (MHU), Homeownership Assistance Program, Fixed Residential Moving Costs) through a Subrecipient Agreement with DCCED. NeighborWorks Alaska has operated similar Tenant Based Rental Assistance Programs, as well as, Down Payment Assistance Programs and has HUD-approved Housing Specialists on staff. NeighborWorks Alaska will implement the activities described in this section and may provide Temporary Housing; Housing Counseling Information and Referral Services; Information and Referrals for Legal Services; Transportation Services; and Case Management Services to the Forest Park residents for up to 24 months per household enrolled in the program. NeighborWorks Alaska intends to counsel and guide each household through the disaster recovery programs to search, find, and choose an appropriate interim and long-term housing solution suitable for the individual needs of each household. NeighborWorks Alaska intends to provide FEMA-approved Disaster Preparedness handouts and educate each household on Disaster Preparedness.

**Eligible Activity Type:** Sections 105(a)(4), 105(a)(11), and 105(a)(24) of the Housing and Community Development Act of 1974.

**National Objective:** Low to Moderate Income Housing.

**Geographic Eligibility:** Disaster-declared, 2018 Cook Inlet Earthquake, CDBG-DR eligible jurisdiction, Municipality of Anchorage, Forest Park Mobile Home Park, 16533 Old Glenn Highway, Chugiak, AK 99567.



**Eligible Applicants:** Eligible households whose manufactured housing unit/mobile home (which is their primary, and only residence) was earthquake-impacted/damaged from the 2018 Cook Inlet Earthquake and is/was physically located in the Forest Park Mobile Home Park within the South Chugiak Disaster Recovery Area (Census Tract: 000102; Block Group Code: 4) and whose family size and income are less than 80% of the Area Median Income (AMI). NeighborWorks Alaska intends to review Lease Agreements and utility statements in effect prior to October 27, 2020, to verify program eligibility. NeighborWorks Alaska intends to use the Part 5 method to determine and verify annual household income. This Program is **voluntary**.

## **1. Manufactured Housing Unit (MHU) Relocation Reimbursement**

**Program Description:** This activity meets the National Objective of Low-Moderate Income Housing, as described in 24 CFR 570.483(b)(3) and is an eligible activity under Section 105(a)(11) of the Housing and Community Development Act of 1974. This activity will be implemented by NeighborWorks Alaska. The Forest Park Manufactured Housing Unit (MHU) Relocation Reimbursement Program provides for the reimbursement of expenses to eligible Forest Park households for the manufactured housing unit relocation, leveling, skirting, and re-connection to all public utilities to lots within the Municipality of Anchorage or the Matanuska-Susitna Borough. The manufactured housing unit must meet HUD certification requirements, i.e. must have a HUD certification label. The new lot must meet HUD Environmental Review requirements.

**Estimated Outcome:** This activity may provide long-term housing recovery for 2 households.

**Estimated Budget:** \$100,000.

**Requirements:** Prior to approval for funding, eligible Forest Park households should have the following:

- A copy of their current Municipality of Anchorage Department of Finance Mobile Home Tax Certificate.
- Clear title to the manufactured housing unit/mobile home, i.e. no liens against the personal property.
- A Lot Lease Agreement for a lot within the Municipality of Anchorage or the Matanuska-Susitna Borough and outside of Areas of Mitigation Interest/Natural Hazards (i.e. Seismic Hazard Zones 4 and 5; High Ground Failure Susceptibility and Very High Ground Failure Susceptibility; the Bootlegger Cove Special Landslide Hazard Area; and any Special Floodplain Hazard Areas) and outside of areas determined to be non-compliant with HUD Environmental Review requirements, such as areas determined to be “Incompatible for Residential Land Use” or “Residential Land Use with Conditions” in the Joint Base Elmendorf-Richardson Air Installations Compatible Use Zone Study. (Reference 38)
- A Lot Lease Agreement for a lot that preferably has access to public water, public sewer, electricity, natural gas, solid waste service, broadband communications, playground, and is within a ½ mile of public transportation.

**Relocation Reimbursement:** As allowed in 86 FR 40227, effective 8/26/2021, “An occupant will be paid on an actual cost basis for moving his or her mobile home from the displacement.” In addition, a reasonable payment for the occupant for packing and securing property for the move.” Provided for eligible Forest Park households requiring reimbursement for the manufactured housing unit relocation, leveling, skirting, and re-connection to all public utilities from Forest Park Mobile Home Park to their new lot within the Municipality of Anchorage or the Matanuska-Susitna Borough. Total relocation assistance cannot exceed 50% of the 2021 MOA Assessed Value of their manufactured housing unit.

**Lot Rental Reimbursement:** As allowed in 86 FR 40227, effective 8/26/2021, “An occupant will be paid on an actual cost basis for moving his or her mobile home from the displacement.” Provided for eligible Forest Park households whose manufactured housing unit will be re-located to their new lot within the Municipality of Anchorage or the Matanuska-Susitna Borough and outside of Areas of Mitigation Interest, and outside of areas that are non-compliant with HUD Environmental Review requirements, lease payments for their new lot from the time the lot lease agreement has been signed until the time when the Municipality of Anchorage, Building Safety Division or the Matanuska-Susitna Borough Building Code Official conducts a successful final inspection of their manufactured housing unit. Total lot assistance not to exceed 2 months or \$1,000.

**Alternative Program Description:** If the eligible Forest Park household’s manufactured housing unit/mobile home does not meet the Program’s requirements or cannot be safely relocated within the Municipality of Anchorage or the Matanuska-Susitna Borough, then the Forest Park household may be eligible to receive one or more of the benefits outlined below, but not more than \$50,000. This Program is **voluntary**.

**Eligible Activity Type:** Housing Assistance, Down Payment Assistance for the purchase of a new Manufactured Housing Unit, or Homeownership Assistance as described in Sections 105(a)(11) and 105(a)(24) of the Housing and Community Development Act of 1974.

## **2. Housing Assistance**

This activity meets the National Objective of Low-Moderate Income Housing, as described in 24 CFR 570.483(b)(3) and is an eligible activity under Section 105(a)(11) of the Housing and Community Development Act of 1974. The activity will provide eligible Forest Park households with up to 24 months of housing assistance. This will be based on fair market rent multiplied by 24 months. The following are the FY2022 Anchorage, AK HUD Metro Fair Market Rents (with utilities): Efficiency: \$877; 1-Bedroom \$948; 2- bedroom \$1,248; 3-bedroom \$1,773, and 4-Bedroom \$2,136. The following are the FY2022 Matanuska-Susitna Borough, AK HUD Metro Fair Market Rents (with utilities): Efficiency: \$744; 1-Bedroom \$789; 2- bedroom \$1,035; 3-bedroom \$1,470, and 4-Bedroom \$1,772.

**Estimated Outcome:** This activity may provide long-term housing recovery for all 35 households.

**Estimated Budget:** \$1,000,000.

**Requirements:** Prior to approval for funding, eligible Forest Park households should have the following:

- A copy of their current Municipality of Anchorage Department of Finance Mobile Home Tax Certificate.
- Clear title to the manufactured housing unit/mobile home, i.e. no liens against the personal property.
- A completed application, with sufficient documentation to verify household income, to the NeighborWorks Alaska (formerly Anchorage Neighborhood Housing Services, Inc.) Housing Assistance Program.
- A Lease Agreement for a comparable housing unit, i.e. apartment, Four Seasons apartment home (MHU), condominium, townhouse, single-family house, duplex, triplex, or fourplex, that is:
  1. Suitable for the household size and composition.
  2. Located within the Municipality of Anchorage or the Matanuska-Susitna Borough and outside of Areas of Mitigation Interest (i.e. Seismic Hazard Zones 4 and 5; High Ground Failure Susceptibility and Very High Ground Failure Susceptibility; the Bootlegger Cove Special Landslide Hazard Area; the Lower Fire Lake Dam Inundation Area; and any Special Floodplain Hazard Areas) and outside of areas determined to be non-compliant with HUD Environmental Review requirements, such as areas determined to be “Incompatible for Residential Land Use” or “Residential Land Use with Conditions” in the Joint Base Elmendorf-Richardson Air Installations Compatible Use Zone Study. (Reference 38)
  3. Was constructed after 1997, when modern seismic building codes were adopted, and meets HUD’s definition of “decent, safe, sanitary, and in good repair”. Exceptions may be granted for comparable housing units constructed after January 1, 1980.
  4. Preferably has access to public water, public sewer, electricity, natural gas, solid waste service, broadband communications, playground, and is within a ½ mile of public transportation.
- Proof of Renter’s Insurance, including Earthquake Hazard Insurance (Optional).
- Executed all required grant agreements, intake documents, and subrogation commitments.

### **3. Down Payment Assistance for a New Type I/II Manufactured Housing Unit**

This activity meets the National Objective of Low-Moderate Income Housing, as described in 24 CFR 570.483(b)(3) and is an eligible activity under Section 105(a)(24) of the Housing and Community Development Act of 1974. The activity intends to allow eligible, credit qualified, Forest Park households to use up to \$50,000 for a down payment for the purchase of a New Type I/II Manufactured Housing Unit located in a mobile home park within the Municipality of Anchorage or the Matanuska-Susitna Borough. The new lot must meet HUD Environmental Review requirements. The Loan Amount cannot exceed the Maximum Alaska Housing Finance Corporation (AHFC) Mortgage Limit for a New Type I/II Manufactured Housing Unit located in a mobile home park. When a household identifies a new Type I/II manufactured housing unit and an AHFC approved Federal Deposit Insurance Corporation (FDIC) insured lender is willing to provide a mortgage for the purchase of the identified manufactured housing unit, the Program will provide up to \$50,000 at

closing through a licensed title company. A home inspection performed by a qualified firm and an appraisal may be required prior to closing. This Program is **voluntary**.

**Estimated Outcome:** This activity may provide long-term housing recovery for 30 households.

**Estimated Budget:** \$600,000.

Requirements: Prior to approval for funding, eligible Forest Park households should have the following:

- A HomeChoice Certificate, a 6-hour class for prospective homebuyers, offered online by the Alaska Housing Finance Corporation (AHFC).
- A completed application, with sufficient documentation to verify household income, to the NeighborWorks Alaska (formerly Anchorage Neighborhood Housing Services, Inc.) Down Payment Assistance Program and apply for a manufactured housing unit loan through one of the following AHFC approved lenders: Academy Mortgage, First National Bank Alaska, or Guild Mortgage.
- A Lot Lease Agreement for a lot within the Municipality of Anchorage or the Matanuska-Susitna Borough and outside of Areas of Mitigation Interest (i.e. Seismic Hazard Zones 4 and 5; High Ground Failure Susceptibility and Very High Ground Failure Susceptibility; the Bootlegger Cove Special Landslide Hazard Area; and any Special Floodplain Hazard Areas) and outside of areas determined to be non-compliant with HUD Environmental Review requirements, such as areas determined to be “Incompatible for Residential Land Use” or “Residential Land Use with Conditions” in the Joint Base Elmendorf-Richardson Air Installations Compatible Use Zone Study. (Reference 38)
- A Purchase Sales Agreement/Contract for a new Type I/II Manufactured Housing Unit suitable for the household size and composition.
- A Purchase Sales Agreement/Contract for a new Type I/II Manufactured Housing Unit which was constructed and installed after November 30, 2018, the date of the declared disaster, the 2018 Cook Inlet Earthquake; and meets the following requirements:
  1. Preferably, has access to public water, public sewer, electricity, natural gas, solid waste service, broadband communications, playground, and is within a ½ mile of public transportation.
  2. Meets current Municipality of Anchorage Building Codes for manufactured home standards, i.e. must be certified for the “North Zone” (40 pounds per square foot) for snow load and heat loss “Comfort Zone 3” in accordance with HUD standards.
  3. Must meet current Municipality of Anchorage installation requirements for the following: gas and plumbing service; utility service; footings and foundations; underfloor clearances-ventilation and access; skirting and permanent perimeter enclosures; and ground anchors.
  4. In the Matanuska-Susitna Borough, must meet HUD Wind Zone, Snow Load, and Roof Load Certification Requirements appropriate for the Matanuska-Susitna Borough.
  5. Must emphasize high quality, durability, energy efficiency, sustainability, and mold resistance.

- Proof of Homeowner's Insurance, including Earthquake Hazard Insurance.
- Executed all required grant agreements, intake documents, and subrogation commitments.

#### **4. Homeownership assistance:**

This activity meets the National Objective of Low-Moderate Income Housing, as described in 24 CFR 570.483(b)(3) and is an eligible activity under Section 105(a)(24) of the Housing and Community Development Act of 1974. The activity intends to allow eligible, credit-qualified, Forest Park households to use up to \$50,000 for down payment assistance for the purchase of a traditional "stick built" single family house, condominium, or townhouse. The Purchase Price cannot exceed the Maximum Federal Housing Administration (FHA) Mortgage Limit for a Single-Family House within the Municipality of Anchorage or the Matanuska-Susitna Borough, which is \$417,450. When a household identifies a new home and an Alaska Housing Finance Corporation (AHFC) approved Federal Deposit Insurance Corporation (FDIC) insured lender is willing to provide a mortgage for the purchase of the identified home, the Program will provide up to \$50,000 at closing through a licensed title company. A home inspection performed by a qualified firm and an appraisal may be required prior to closing. This Program is **voluntary**.

**Estimated Outcome:** This activity may provide long-term housing recovery for 5 households.

**Estimated Budget:** \$250,000.

**Requirements:** Prior to approval for funding, eligible Forest Park households should have the following:

- A HomeChoice Certificate, a 6-hour class for prospective homebuyers, offered online by the Alaska Housing Finance Corporation (AHFC).
- A completed application, with sufficient documentation to verify household income, for the NeighborWorks Alaska (formerly Anchorage Neighborhood Housing Services, Inc.) Down Payment Assistance Program and apply for a home loan through one of the following AHFC approved lenders: Academy Mortgage, First National Bank Alaska, or Guild Mortgage.
- A Purchase Sales Agreement for a new housing unit, i.e. condominium, townhouse, or a single-family house, that meets the following requirements:
  1. Suitable for the household size and composition.
  2. Located within the Municipality of Anchorage or the Matanuska-Susitna Borough and outside of Areas of Mitigation Interest (i.e. Seismic Hazard Zones 4 and 5; High Ground Failure Susceptibility and Very High Ground Failure Susceptibility; the Bootlegger Cove Special Landslide Hazard Area; the Lower Fire Lake Dam Inundation Area; and any Special Floodplain Hazard Areas) and outside of areas determined to be non-compliant with HUD Environmental Review requirements, such as areas determined to be "Incompatible for Residential Land Use" or "Residential Land Use with Conditions" in the Joint Base Elmendorf-Richardson Air Installations Compatible Use Zone Study. (Reference 38)
  3. Was constructed (including the foundation) after November 30, 2018, the date of the

declared disaster, the 2018 Cook Inlet Earthquake;

4. Preferably, has access to public water, public sewer, electricity, natural gas, solid waste service, broadband communications, playground, and is within a ½ mile of public transportation.

5. Exceeds the minimum Alaska Building Energy Efficiency Standards (BEES), which is 5 Star Plus Rating with access to Natural Gas.

6. Meets the current Municipality of Anchorage Building Codes or current Matanuska-Susitna Borough Building Codes.

7. Must emphasize high quality, durability, energy efficiency, sustainability, and mold resistance.

- Proof of Homeowner's Insurance, including Earthquake Hazard Insurance.
- Executed all required grant agreements, intake documents, and subrogation commitments.

#### **5. Fixed Residential Moving Costs:**

As allowed in 86 FR 40227, effective 8/26/2021, NeighborWorks Alaska will determine the number of rooms in each manufactured housing unit/mobile home and calculate the amount of a fixed payment for moving expenses available for each households.

**Estimated Outcome:** 35 households

**Estimated Budget:** \$50,000.

#### **6. Clearance and Demolition:**

This activity meets the National Objective of addressing slums or blight on a spot basis, as described in 24 CFR 570.483(c)(2) and is an eligible activity under Section 105(a)(4) of the Housing and Community Development Act of 1974. In the Notice of Violation, dated October 27, 2020, the Building Code Enforcement Official from the Municipality of Anchorage "determined that all mobile homes meet the Dangerous Building definition #15 - Whenever a building or structure, used or intended to be used for dwelling purposes, because of inadequate maintenance, dilapidation, decay, damage, faulty construction or arrangement, inadequate light, air, or sanitation facilities, or otherwise, is determined by the code official to be unsanitary, unfit for human occupancy or in such a condition it is likely to cause sickness or disease." A designated partner may implement the Clearance and Demolition Phase of the Forest Park Optional Relocation Program through a Subrecipient Agreement with DCCED. The activity may clear and demolish all 35 earthquake-impacted/damaged manufactured housing units/mobile homes and mitigate any potential environmental liability of the tenants. This is a Program direct cost. The clearance and demolition activity must be environmentally cleared prior to any work taking place on the site.

**Estimated Outcome:** 35 mobile homes.

**Estimated Budget:** \$500,000.

#### a. Administration and Planning Funds

DCCED will retain the full five percent allocated for administration costs and the 15% for planning associated with the CDBG-DR allocation for purposes of oversight, management, and reporting. State administrative costs including subrecipient administration costs will not exceed five (5) percent, \$1,792,800. Pursuant to 24 CFR§58.34(a)(3), except for applicable requirements of 24 CFR §58.6, administrative and management activities are exempt activities under this Action Plan. Once contracted, DCCED will allow the drawdown of pre-agreement costs associated with eligible disaster recovery activities dating back to the date of the disaster (November 30, 2018) for subrecipients and DCCED with appropriate documentation.

### III. Citizen Participation – State Action Plan

The primary goal of this Action Plan is to provide Alaskans with definitive opportunities to involve themselves in the three core areas of recovery – housing, infrastructure, and economic revitalization and participate in the planning process within the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula Borough.

DCCED Citizen Participation Plan for the 2018 Cook Inlet Earthquake is based on the requirements outlined in the Federal Register notice published on February 9, 2018 at 83 FR 5844.

According to the Federal Register notice published on August 14, 2018 at 83 FR 40314, “To permit a more streamlined process, and ensure disaster recovery grants are awarded in a timely manner, provisions of 42 U.S.C. 5304(a)(2) and (3), 42 U.S.C. 12707, 24 CFR 570.486, 24 CFR 1003.604, and 24 CFR 91.115(b) and (c), with respect to citizen participation requirements, are waived and replaced by the requirements below. The streamlined requirements do not mandate public hearings but do require the grantee to provide a reasonable opportunity (at least 30 days) for citizen comment and ongoing citizen access to information about the use of grant funds.”

The most current version of the State of Alaska Department of Commerce, Community, and Economic Development Citizen Participation Plan for the 2018 Cook Inlet Earthquake will be placed on the official DCCED website at

<https://www.commerce.alaska.gov/web/DCCED/GrantsSection/CDBG-DR>.

The State of Alaska Action Plan for the 2018 Cook Inlet Earthquake identifies the earthquake related physical damage to housing and the unmet needs in the three core areas of recovery. The Action Plan outlines the eligible use of CDBG-DR funds and specific programs that will be allowable by DCCED.

#### A. Publication

Before DCCED adopts the Action Plan for this grant or any substantial amendment to this grant, DCCED will publish the proposed plan or amendment on the DCCED’s main website at \_

<https://www.commerce.alaska.gov/web/DCCED/GrantsSection/CDBG-DR>.

DCCED and/or subrecipients will notify affected citizens through electronic mailings, press releases, statements by public officials, media advertisements, public service announcements, newsletters, contacts with neighborhood organizations, and/or through social media. DCCED may allow other means as necessary.



DCCED will ensure that all citizens have equal access to information about the programs, including persons with disabilities and limited English proficiency (LEP). DCCED will ensure that program information is available in the appropriate languages for the three CDBG-DR eligible jurisdictions.

The State of Alaska, Department of Commerce, Community, and Economic Development (DCCED), complies with Title II of the Americans with Disabilities Act of 1990. This publication is available in alternative communication formats upon request. Please contact the DCCED publication Specialist at 1- 907-269-4560 or [DCCED.publications@alaska.gov](mailto:DCCED.publications@alaska.gov) to make any necessary arrangements. The Alaska Relay is 711 or 1-800-770-8973\TTY, 1- 800-770-8255\Voice.

After publication of the Action Plan or Substantial Amendment, DCCED will provide a reasonable opportunity of at least 30 days and have a method(s) for receiving comments.

DCCED will take comments via USPS mail, fax, email, or through the DCCED's website: Department of Commerce, Community & Economic Development Division of Community & Regional Affairs

550 West 7th Ave., Ste 1650

Anchorage, AK 99501

Fax: 907-269-4563

Email: [cdbgdr@alaska.gov](mailto:cdbgdr@alaska.gov)

Online Form: <https://www.commerce.alaska.gov/web/DCCED/GrantsSection/CDBG-DR>.

## **B. Consideration of Public Comments**

DCCED will consider all written comments regarding the Action Plan or any substantial amendment. A summary of the comments and DCCED's response to each will be located in the Appendix Section and will be submitted to HUD with the Action Plan or substantial amendment.

There were no Public Comments received during the 30-day Public Comment Period, which began October 13, 2020 and ended on November 13, 2020.

## **C. Citizen Complaints**

The Alaska State Ombudsman investigates citizen complaints about administrative acts of state agencies and determines remedies. The Alaska State Ombudsman promotes fair and efficient government through objective inquiry and well-reasoned recommendations for meaningful, measurable improvement. The Office of the Ombudsman was established by the Alaska Legislature in 1975 and is governed by Alaska Statutes 24.55.010-340. The Ombudsman investigates to determine whether an agency's actions were unlawful, unreasonable, unfair, arbitrary, erroneous, or inefficient. The Ombudsman will recommend a way to resolve the complaint and/or prevent future complaints. Confidential complaints may be filed at <https://ak-ombuds.i-sight.com/portal> or in writing on a complaint form, mailed to Alaska Ombudsman, 1500 West Benson Blvd., Anchorage, AK 99503, via email to [ombudsman@akleg.gov](mailto:ombudsman@akleg.gov) or by telephone at 907-269-5290

## **D. Substantial Amendment**

As additional information and funding becomes available through the grant administration process, amendments to this Action Plan are expected. Prior to adopting any substantial amendment to this Action Plan, DCCED will publish the proposed plan or amendment on the DCCED's official website and will afford citizens, affected local jurisdictions, and other interested parties a reasonable

opportunity to examine the plan or amendment's contents. At a minimum, the following modifications will constitute a substantial amendment:

- A change in program benefit or eligibility criteria;
- The allocation or reallocation of more than \$3.856 million (10% of the total budget); or
- The addition or deletion of an activity.

There were three Public Comments received during the 30-day Public Comment Period, which began June 22, 2021 and ended July 21, 2021. (Appendix D) The Public Comment Period was extended through July 30, 2021 with a Public Hearing conducted from 9:00 am -10:00 am on Friday, July 30, 2021, with no additional public comments.

#### E. Non-Substantial Amendment

The State of Alaska will notify HUD when it makes any plan amendment that is not substantial. HUD will be notified at least five (5) business days before the amendment becomes effective. HUD will acknowledge receipt of the notification of non-substantial amendments via email within five (5) business days.

#### F. Community Consultation

The Disaster Assistance Section of the Division of Homeland Security and Emergency Management accepted more than 13,800 applications for the State of Alaska Individual and Family Grant Program and the Temporary Housing Program to provide emergency sheltering, hotel stays and rental assistance. Applications were accepted from November 30, 2018 through February 28, 2019. DCCED has access to the data collected from these applications.

On January 31, 2019, a federal disaster declaration was approved for the Municipality of Anchorage, Matanuska-Susitna Borough and the Kenai Peninsula Borough. The Federal Emergency Management Agency accepted disaster assistance applications from more than 10,500 individuals and households in those jurisdictions through May 31, 2019. DCCED has access to the data collected from these applications.

Additionally, the U.S. Small Business Administration accepted low-interest disaster loan applications from 1,772 homeowners and renters, as well as, 112 businesses. DCCED has access to the data collected from these applications.

Those sources include; individuals, state agencies, local jurisdictions, non-profit organizations, and the private sector.

Since February 2020, DCCED has conducted numerous virtual meetings, telephone calls, e-mail exchanges with the applicable stakeholders within the three CDBG-DR eligible jurisdictions; the Municipality of Anchorage; the Matanuska-Susitna Borough; and the Kenai Peninsula Borough. The Commissioner of the Department of Commerce, Community, and Economic Development and the Director of the Division of Community and Regional Affairs have responded to numerous requests for information from Elected Officials from the three CDBG-DR eligible jurisdictions. DCCED will continue to consult with stakeholders at all levels.

## G. Public Website

DCCED will maintain a public website that provides information accounting for how all grant funds are used and managed/administered, including: links to all Action Plans; Action Plan Amendments; CDBG-DR program policies and procedures; performance reports; citizen participation requirements; and activity/program information for activities described in its Action Plan, including details of all contracts and ongoing procurement policies. DCCED will make the following items available at [https://www.commerce.alaska.gov/web/DCCED/GrantsSection/CDBG- DR](https://www.commerce.alaska.gov/web/DCCED/GrantsSection/CDBG-DR).

- (1) The Action Plan (including all amendments); each Quarterly Performance Report (QPR) as created using the Disaster Recovery Grant Reporting (DRGR) system;
- (2) Procurement, policies, and procedures;
- (3) Executed CDBG-DR contracts;
- (4) Status of services or goods currently being procured by DCCED (e.g. phase of procurement, requirements for proposals, etc.)

In addition to the specific items listed above, the DCCED will maintain a comprehensive website regarding all disaster recovery activities assisted with these funds.

This includes reporting information on the official DCCED website at [https://www.commerce.alaska.gov/web/DCCED/GrantsSection/CDBG- DR](https://www.commerce.alaska.gov/web/DCCED/GrantsSection/CDBG-DR). The website will be updated on a timely manner to reflect the most up-to-date information about the use of these funds and any changes in policies and procedures, as necessary. At a minimum, DCCED will make monthly updates.

## H. Waivers

The Appropriations Act authorizes the Secretary of HUD to waive or specify alternative requirements for any provision of any statute or regulation that the Secretary administers in connection with the obligation by the Secretary, or use by the recipient, of these funds and guarantees, except for requirements related to fair housing, nondiscrimination, labor standards, and the environment (including requirements concerning lead-based paint), upon: (1) A request by the grantee explaining why such a waiver is required to facilitate the use of such funds or guarantees; and (2) a finding by the Secretary that such a waiver would not be inconsistent with the overall purpose of HCDA. Regulatory waiver authority is also provided by 24 CFR 5.110, 91.600, and 570.5.

As allowed in the Federal Register notice published on August 14, 2020 at 85 FR 50041, the State of Alaska requested a 75-day extension for the submission of the State of Alaska Action Plan for the Community Development Block Grant-Disaster Recovery (CDBG-DR) Grant Program for the 2018 Cook Inlet Earthquake on August 24, 2020. On September 3, 2020, the U.S. Housing and Urban Development Anchorage Field Office approved the request, extending the submission due date to November 16, 2020.

## IV. References

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5. Geotechnical Extreme Events Reconnaissance Association, "Geotechnical Engineering Reconnaissance of the November 30, 2018 M7.9 Anchorage, Alaska Earthquake, Version 2.1", January 2, 2019. Available: [http://www.geerassociation.org/administrator/components/com\\_geer\\_reports/geerfiles/Version2.1\\_Alaska.pdf](http://www.geerassociation.org/administrator/components/com_geer_reports/geerfiles/Version2.1_Alaska.pdf) Accessed: 9/20/2021.
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9. "Federal Register, Vol. 84, No. 32, Friday, February 15, 2019", National Archives and Records Administration, Available: [Federal Register :: Alaska; Major Disaster and Related Determinations](#) Accessed: 9/20/2021
10. "Allocations, Common Application, Waivers, and Alternative Requirements for Disaster Community Development Block Grant Disaster Recovery Grantees [Docket No. FR-6182-N-01]", Vol. 85, Federal Register Notice, No. 17, January 27, 2020, pages 4681-4690, National Archives and Records Administration, Available: <https://www.govinfo.gov/content/pkg/FR-2020-01-27/pdf/2020-01204.pdf> Accessed: 9/20/2021.
11. "State of Alaska Hazard Mitigation Plan, October 28, 2018", State of Alaska, Department of Military and Veterans Affairs, Division of Homeland Security & Emergency Management, Planning Section, Available: <https://ready.alaska.gov/Plans/Documents/MPChapters/>. Accessed: 9/20/2021.

12. "All Hazards Mitigation Plan Update, Anchorage, Alaska", Municipality of Anchorage, Alaska, Available:  
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13. "Matanuska-Susitna Borough Hazard Mitigation Plan Update, August 2020. Available:  
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## V. Appendix A - Budget

State of Alaska CDBG-DR 2018 Cook Inlet Earthquake Total Allocation Budget Estimate							
Programs		HUD Most Impacted Area (80%) Municipality of Anchorage	State Most Impacted Areas (20%) Matanuska -Susitna & Kenai Peninsula Boroughs	LMI Amount (70%) of Total Allocation	Total	% of Total Allocation by Program	Total
State Programs							
State Housing	Disaster Relief/Recovery-NeighborWorks-Optional Relocation Program-Forest Park	\$2,500,000			\$2,500,000		80.00% \$28,684,800
	CIHA Affordable Housing Program						
	HUD-Assisted Housing Program						
	Homeowner Reimbursement Program						
	Local Buyout/Acquisition Program						
	Land Use Planning for Housing						
	<b>Housing Assistance Total</b>	<b>\$2,500,000</b>	<b>\$0</b>	<b>\$1,750,000</b>	<b>\$2,500,000</b>	<b>80.00%</b>	
State Infrastructure and Economic Revitalization	Category C (Roads & Bridges)						
	Category D (Water Control Facilities)						
	Category E (Buildings & Equipment)						
	Category F (Utilities)						
	Category G (Other, Parks, Recreational Facilities, Fish Hatcheries)						
	<b>Local Infrastructure Program Total</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0.00%</b>	
	<b>Economic Development/Revitalization</b>			<b>N/A</b>			
State Planning and Administration	State Planning	\$4,302,720	\$441,440	\$1,075,680	\$5,378,400	15.00%	20.00% \$7,171,200
	State Administration	\$1,434,440	\$358,360	\$1,254,960	\$1,792,800	5.00%	
<b>State Allocation Subtotal</b>							
<b>Grand Total Allocation</b>		<b>\$8,237,160</b>	<b>\$799,800</b>	<b>\$4,080,640</b>	<b>\$9,671,200</b>	<b>100%</b>	<b>\$35,856,000</b>

Revised by Anita Baker on 6/15/2021

(70% of \$35,856,000)

No less than \$28,685,000 (80%) must be expended for disaster relief, mitigation, and recovery in MOA.

No less than \$25,099,200 (70%) must be expended for disaster relief, mitigation, and recovery of LMI households and LMI areas.

In the future, additional funds may be reallocated, and/or requested and allocated.

## Appendix B – FEMA Region X Post-Earthquake Recommendations For Mitigation

### 10 POST-EARTHQUAKE RECOMMENDATIONS FOR MITIGATION\*

**By: Amanda Siok**

*Earthquake Program Manager, Federal Emergency Management Agency, Region 10*

#### 10.1 Overview

On November 30, 2018, an Mw7.1 earthquake struck the west side of the Cook Inlet. While the state of Alaska fared this event extremely well, this earthquake was not representative of “the Big One.” Experienced shaking duration and intensity from the Cook Inlet earthquake was below the design level for modern buildings. Damages sustained, and weaknesses identified by this earthquake, demonstrate opportunities for improvement at all levels of government; we will learn from this event and continue to support and build a more resilient Alaska.

The following recommendations evolved from post-event findings, discussions, and meetings among state, federal, and local stakeholders. Together, they provide a framework designed to achieve agency coordination and cooperation. The success of these actions will require a cooperative effort among federal, state, tribal, and local agencies. These stakeholders included the following:

- the Alaska Department of Community and Regional Affairs,
- the Alaska Department of Homeland Security and Emergency Management,
- the Alaska Planning and Design Commission,
- the Alaska Seismic Hazards Safety Commission,
- the American Society of Civil Engineers,
- the Earthquake Engineering Research Institute,
- the Matanuska-Susitna Borough,
- the Municipality of Anchorage,
- the Municipality of Anchorage Geotechnical Advisory Commission,
- National Earthquake Hazards Reduction Program partners: the Federal Emergency Management Agency (FEMA), U.S. Geological Survey, and National Institute of Standards and Technology,
- the Structural Engineers Association of Alaska, and
- the University of Alaska.

Agencies other than those identified above may be involved in implementing this report’s recommendations.

Findings and recommendations have been sorted into two categories, those meant to improve state and local hazard- mitigation planning processes and those meant to strengthen infrastructure resilience to earthquakes.

#### Recommendations to Improve State and Local Hazard-Mitigation Planning Processes

##### Overview

FEMA supports hazard-mitigation planning as a means to:

- foster partnerships for natural-hazard mitigation,
- promote more resilient and sustainable states and communities, and
- reduce the costs associated with disaster response and recovery.

FEMA encourages states to focus on a comprehensive and inclusive planning process to support mitigation throughout state government and at the community level. Continuous coordination among state agencies and communities is the key to achieving mitigation goals and long-term resilience.

## Findings

- After the event, state and local officials were aware of geographic areas that likely received higher damages due to soil performance, lack of maintenance, or substandard building codes and/or enforcement; however, residents, businesses, and agencies were unaware of their vulnerabilities.
- A comprehensive natural-hazard risk assessment is needed for all essential facilities, including schools and hospitals. Risk assessments previously completed are weak and not representative of true vulnerabilities. The needs and vulnerabilities that were identified through these assessments are not referenced or integrated into local or state hazard-mitigation planning or other risk-reduction processes, leaving a path toward resilience unclear.

### 10.2.3 Recommendations to Improve State and Local Hazard-Mitigation Planning Processes

1. After the event, state and local officials were aware of geographic areas that likely received higher damages due to soil performance, lack of maintenance, or substandard building codes; however, residents, businesses, and agencies were unaware of their vulnerabilities.

The State Hazard Mitigation Advisory Committee (SHMAC) and Local Emergency Planning Committees (LEPCs) should

- a) **Include representation from local geotechnical engineers, builders/developers, building owner organizations, school districts and education representatives, housing and finance, and infrastructure partners.** A planning team inclusive of the above stakeholders will generate feasible and politically supported mitigation strategies and foster an increased awareness of local vulnerabilities to hazards, thus instilling a culture of preparedness among Alaskans.
  - b) **Meet routinely to collaboratively develop, maintain, track, update, and implement mitigation actions.** Regular meetings and engagement of the SHMAC and LEPCs will ensure relevancy of proposed risk-reduction actions, increase awareness of available funding sources and timelines, and provide an increase in opportunities for mitigation investment. Additionally, these regular meetings should increase coordination between hazard-mitigation goals and existing future development and land use plans, reducing costs and impacts of future disasters.
  - c) **Publicize risk-reduction planning meetings and meeting notes.** Informing the general public and creating awareness of the state and local government interests in supporting risk-reduction efforts will build a culture of preparedness among Alaskans; increased awareness will allow for more informed decision making and the integration of mitigation planning into all aspects of community planning and development.
2. A comprehensive natural-hazard risk assessment is needed for all essential facilities, including schools and hospitals. Risk assessments previously completed are weak and not representative of true vulnerabilities. The needs and vulnerabilities that were identified through these assessments are not referenced or integrated into local or state hazard-mitigation planning or other risk-reduction processes, leaving a path toward resilience unclear. Risk assessment and vulnerability information should be improved by
    - a) **Ensuring school rapid visual screening (RVS) studies (1) cover a large pool of buildings representative of seismic vulnerabilities (determined by age, code benchmark dates, and structural type), (2) be followed up with a detailed structural evaluation for those identified as vulnerable, and**

- b) **(3) support actionable mitigation strategies at both state and local levels. Sharing of RVS and school risk-assessment data will increase awareness of vulnerabilities to all natural hazards and increase opportunities for investments in risk reduction. Additionally, these results should inform disaster-response planning (prioritization of post-event inspection and response needs and evaluation of designated shelter sites), thus helping Alaska to be more prepared for future disasters.**
- c) **Seeking alignment of school-district and other essential-facility Capital Improvement Plan budgets with state and local risk-reduction budgets.** State and local mitigation funds can be stretched further, providing increased investments in mitigation when aligned with existing school-maintenance and facility- planning processes.
- d) **Ensuring vulnerability and risk-assessment data from essential facilities are integrated into the local and state hazard-mitigation planning process.** Identified vulnerable buildings can be prioritized at state and local levels for seismic retrofits, compliant with modern seismic standards. Response plans can also be updated with this information, updating areas anticipated to receive higher damages due to lack of seismic stability. An inventory of vulnerable structures and systems may incentivize investments in risk- reduction efforts and help communities better prepare for disasters.

## **10.3 Strengthening Infrastructure Resilience to Earthquakes**

### **10.3.1 Overview**

A recent engineering analysis of national building codes revealed that only 7,265 of 23,000 communities have building codes with disaster-resistant provisions incorporated for both commercial and residential codes. Consumers are largely unaware of the dangerous gap between building code adoption/enforcement and disaster risk. They do not understand that they may live in a community without the protection of current, modern building codes and standards.

The Alaska Constitution and applicable statutes delegate Alaska building code requirements by borough and city class; there is no adoption of a statewide standard. Most cities that are not required to have building codes do not. Those that do have building codes face enforcement difficulties due to lack of funding, lack of staff, and the geographic size of the enforceable area.

### **10.3.2 Findings**

- Post-event inspections throughout declared boroughs found a patchwork of regulatory oversight and enforcement for compliance with state and local codes and seismic standards.
- State and local level governments do not have enough qualified staff to successfully support regulatory oversight and enforcement or public awareness and education for compliance with seismic standards.
- Because of the lack of code adoption and enforcement, the true vulnerability of Alaska's building stock is unknown.
- In most cases, nonstructural damage was the reason for building closures due to the earthquake.
- State and local level governments do not have enough trained staff to apply for and manage federal grant funding and meet matching requirements.

### **10.3.3 Recommendations to Strengthen Resilience to Earthquakes**

1. Post-event inspections throughout declared boroughs found a patchwork of regulatory oversight and enforcement for compliance with state policy, regulations, local codes, and seismic standards. Transparency and consistency of minimum seismic standards should be accomplished by

- a) **Consolidating code adoption and enforcement practices under one state entity.** Consolidating of codes currently falling under regulatory authority of the State Fire Marshal, Department of Labor, and other various agencies will result in a transparency of minimum building standards and a consistent approach to code enforcement from the state and local governments. Building code adoption and enforcement is one of the strongest strategies jurisdictions can use to increase their resilience against the effects of natural hazards.
  - b) **Establishing a statewide standard for building practices.** The state should adopt and enforce the most current building and residential codes, and it should encourage adoption and enforcement by all local jurisdictions (currently, the 2018 International Building Code (IBC) and the 2018 International Residential Code (IRC)). At the time of the November 30 earthquake, the 2012 IBC was adopted at the state level, and there was no statewide standard for residential homes. Since adoption of the 2012 codes, improvements have been made to the understanding of the seismic performance of buildings, and these new findings are represented in the 2018 IBC and IRC. Residential building codes make homes safer and stronger and are supportive of closing the insurance gap via a reduction in filed claims. An updated and consistent building code will promote best practices in residential and commercial construction, reduce future disaster losses, and support more prepared and resilient communities.
  - c) **Encouraging the adoption and enforcement of stronger seismic safety provisions, when appropriate.** Areas of known soil performance concerns, steep slopes, etc., should require a geotechnical assessment prior to permitting. Seismic standards should be established and placed on saturated soils and excavation and fill practices for new construction. These practices will minimize the impacts of seismic hazards on development and enhance safe construction in high-hazard areas. Prioritizing seismic safety with construction will reduce the losses associated with future earthquakes.
  - d) **Educating state and building design professionals and contractors on state seismic risk and construction best practices.** Building design professionals should possess a basic understanding and appreciation of seismic hazards (e.g., earthquake sources and activity, earthquake-induced ground motions and ground failure, tsunamis, etc.), as well as seismic engineering (i.e., evaluation and design to mitigate seismic risk to the populace and infrastructure). Engineering and building design professionals should be required to have completed a university-level or equivalent course addressing seismic hazards in order to practice in the state of Alaska. Contractors should be required to pass FEMA's P-593 Course, "Seismic Rehabilitation Training for One and Two-Family Dwellings." Requiring knowledge of seismic hazards and mitigation practices of the engineering and design-build community will contribute to a culture of seismic preparedness and foster innovation in the field of seismic design.
  - e) **Requiring independent third-party inspections of structural design and construction.** To ensure proper enforcement of compliance to minimum seismic standards, review of design and inspection of construction is needed prior to issuance of building permits and certificates of occupancy for all construction. Inspection duties should be delegated to local jurisdictional authorities and the state to avoid conflicts of interest between builder and inspector. Third-party inspections of design and construction practices will result in development of a more resilient building stock and reduce the costs of future disasters.
2. State and local level governments do not have enough qualified staff to successfully support regulatory oversight and enforcement or public awareness and education for compliance with seismic standards. To successfully implement and enforce adopted regulations, the state of Alaska and local governments should consider

- a) **Evaluating workloads and primary responsibilities of existing staff.** A resilient building stock begins at the permit counter. Priority should be given to ensuring design and construction work meet minimum state and local seismic standards. If current staffing levels do not support the ability to meet demand, a plan should be developed to increase adequate staffing levels. Ensuring adequate staff levels, manageable workloads, and promoting meaningful work contributing to risk-reduction goals will increase job satisfaction levels and support increased staff retention.
  - b) **Develop a training program/process for code-enforcement staff at the state and local level on seismic codes and enforcement.** Seismic codes and standards have no value if they are not implemented and enforced. To ensure implementation, staff tasked with enforcement should be well-trained on the value and importance of these regulations. Staff should also be educated on the enforcement process and the resources and tools to support their enforcement. Educated and empowered enforcement staff will feel supported in their role, have an increased sense of job satisfaction, and will be supportive of staff-retention goals.
- 3. Because of the lack of code adoption and enforcement, the true seismic vulnerability of Alaska's building stock is unknown. Awareness and understanding of seismic vulnerabilities can be improved by
  - a) **Conducting a public awareness campaign on building codes for earthquake safety.** There is a need for meaningful engagement of public officials, developers, realtors, contractors, building owners, and the general public about seismic hazards and building requirements. Targeting individual audiences with messages and attainable actions to take ownership of risk reduction will motivate investments in mitigation and build a culture of preparedness.
  - b) **Developing a homeowner-friendly program that provides guidance on home retrofits and earthquake safety.** A retrofit guidance program depicting a clear path to increased seismic safety through detailed do-it-yourself steps or engineer-selection guidance for repairing damaged foundations, anchoring homes, and strengthening shear and cripple walls will build a culture of seismic preparedness and create a more educated residential homeowner. As a result of this program, homeowners will know what seismic design qualities to look for in new homes and will encourage home builders to highlight their adherence to seismic standards.
- 4. In most cases, nonstructural damage was the reason for building closures due to the earthquake. Electromechanical issues, sprinkler-head failures, weak connections, pipe breaks, and sliding water boilers were the primary reasons buildings were closed after the November earthquake. To reduce these types of nonstructural damages from earthquakes, the state of Alaska should consider
  - a) Investigating the performance of different types of fire-sprinkler piping, connections, and bracing. Recommendations for approaches to reduce the potential for pipe breaks and the probability of unintended water release should be researched and developed. Consideration should be given to investigating new technologies or approaches to improved performance of fire sprinklers.
  - b) Requiring inspections of mechanical, electrical, and plumbing (MEP) equipment during construction. Installation of MEP equipment is often completed without inspection by a building official or design professional. Approaches for requiring equipment inspections during construction should be explored and implemented.

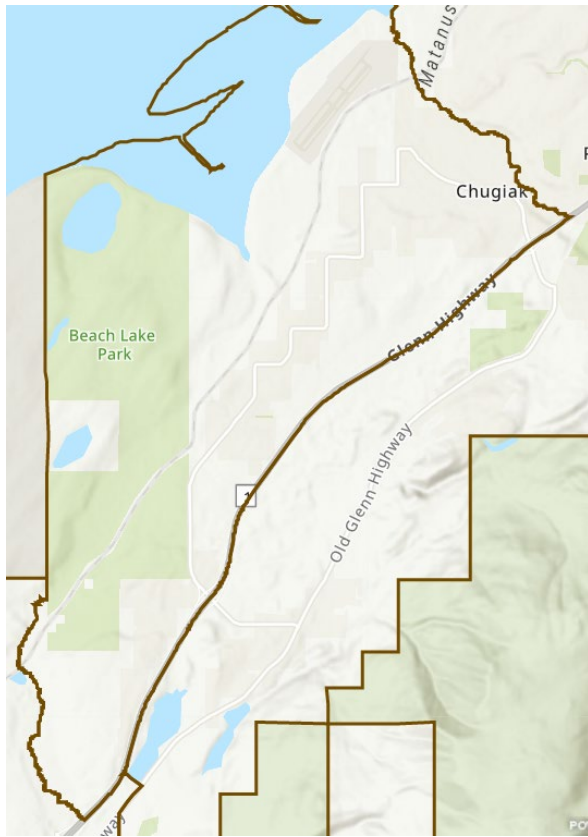
- c) Increasing and improving education on engineering nonstructural components for seismic design. Architects, mechanical engineers, plumbing engineers, electrical engineers, fire-protection engineers, information-technology consultants, and others associated with nonstructural components should be trained to better understand the seismic performance implications of improperly designed or installed nonstructural components.

The above recommendations were developed collaboratively. They are not intended to be implemented by one sole agency; collaboration is critical, not just during a crisis, but before as well. To achieve resilience, all levels of government, nonprofit organizations, private-sector businesses, and individual communities need to work together to prepare for and mitigate disasters before they happen. The ability of Alaska to be truly ready for the next big earthquake depends on everyone knowing and understanding the part they play in the state's collective resilience.

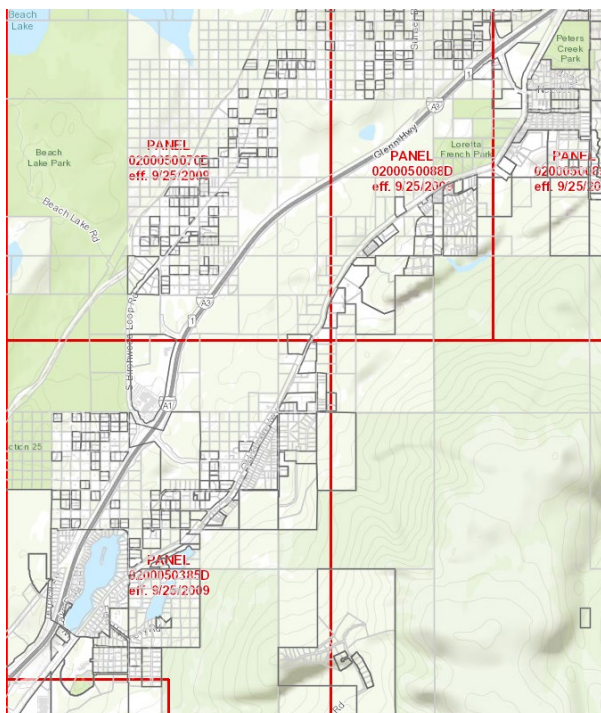
*\*This chapter has been contributed by FEMA Region 10 to summarize its post-earthquake mitigation recommendations based on an independent Nov 30, 2018 earthquake investigation that was not associated with EERI Field Reconnaissance Mission presented in this report. The EERI Field Reconnaissance Team has not reviewed the findings and the recommendations of this FEMA study. The EERI Field Reconnaissance Mission's conclusions and recommendations are presented in Chapter 11.*



## Appendix C – Birchwood/Chugiak Disaster Recovery Area Affirmatively Furthering Fair Housing Data



Birchwood Community Council Map.



South Chugiak FEMA Floodplain Map

The Birchwood/Chugiak Disaster Recovery Area (DRA) (Census Tract: 000102) AFFH Map 3 – National Origin.

<b>National Origin</b>	<b>Birchwood/ Chugiak Total Numbers</b>	<b>Birchwood/ Chugiak Total Percentage</b>	<b>Municipality of Anchorage Total Numbers</b>	<b>Municipality of Anchorage Total Percentage</b>
Philippines	0	0.00%	8,602	2.35%
Other Southeastern Asia	75	1.43%	3,227	0.88%
Korean	0	0.00%	3,172	0.87%
Mexico	0	0.00%	2,612	0.71%
Other Caribbean	0	0.00%	1,327	0.36%

The Birchwood/Chugiak Disaster Recovery Area (DRA) (Census Tract: 000102) AFFH Map 4 – Limited English Proficiency. This data set is null.

The Birchwood/Chugiak Disaster Recovery Area (DRA) (Census Tract: 000102) AFFH Map 14 – Disability Type.

<b>Disability Type</b>	<b>Birchwood/ Chugiak Total Numbers</b>	<b>Birchwood/ Chugiak Total Percentage</b>	<b>Municipality of Anchorage Total Numbers</b>	<b>Municipality of Anchorage Total Percentage</b>
Hearing Difficulty	220	4.21%	12,981	3.68%
Vision Difficulty	50	0.96%	6,341	1.80%
Cognitive Disability	131	2.51%	15,851	4.49%
Ambulatory	382	7.32%	19,368	5.49%
Self-Care	63	1.21%	8,384	2.38%
Independent Living	68	1.30%	12,949	3.67%

The Birchwood/Chugiak Disaster Recovery Area (DRA) (Census Tract: 000102) AFFH Map 15 – Disability by Age Group.

<b>Disability by Age</b>	<b>Birchwood / Chugiak Total Numbers</b>	<b>Birchwood / Chugiak Total Percentage</b>	<b>Municipality of Anchorage Total Numbers</b>	<b>Municipality of Anchorage Total Percentage</b>
Age 5-17	52	1.00%	2,101	0.79%
Age 18-64	308	5.90%	17,412	6.56%
Age 65+	189	3.62%	9,454	3.56%

The South Chugiak Disaster Recovery Area (DRA) has four Areas of Mitigation Interest (Unspecified Seismic Hazard Zones; Lower Fire Lake Dam Failure Inundation Hazard Area; Fire Creek Special Floodplain Hazard Area; and Avalanche Hazard Zones). The South Chugiak DRA is east of the Glenn Highway, south of Peters Creek, north of Carol Creek, and west of Chugach State Park.

The South Chugiak DRA (Census Tract: 000102; Block Group Code: 4) ACS Median Household Income Variables (2015-2019):

Low Income Persons: 815

Low & Moderate: 1,440

Low/Moderate/Median Income Persons: 1,635

Persons with Potential for being deemed Low/Moderate/Medium Income: 1,930

Percentage of Low & Moderate-Income Persons: 75%

The South Chugiak DRA (Census Tract: 000102; Block Group: 4) AFFH Map 1 – Race/Ethnicity. Population: 1,834.

<b>Race/Ethnicity</b>	<b>South Chugiak Total Numbers</b>	<b>South Chugiak Total Percentage</b>	<b>Municipality of Anchorage Total Numbers</b>	<b>Municipality of Anchorage Total Percentage</b>
White, Non-Hispanic (BG)	1,468	80.04%	256,490	67.35%
Black, Non-Hispanic (BG)	35	1.91%	16,125	4.23%
Native American, Non-Hispanic (BG)	74	4.03%	26,782	7.03%
Asian/Pacific Islander, Non-Hispanic (BG)	74	4.03%	30,273	7.95%
Hispanic (BG)	67	3.65%	25,362	6.66%
Other, Non-Hispanic (BG)	2	0.11%	683	0.18%
Multiracial, Non-Hispanic (BG)	114	6.22%	25,106	6.59%

According to the HUD AFFH, there are 186,572 females or 48.99% of the population within the Municipality of Anchorage. No data is available for the South Chugiak DRA.

There is no data available from the HUD AFFH database regarding religion within the Municipality of Anchorage. The following religious organizations/churches are located within the Birchwood/Chugiak Disaster Recovery Area:

Baptist- Bible Baptist Church, Northstar Missionary Baptist Church, Peters Creek Baptist Church and The Crossing at Birchwood

Church of Jesus Christ of Latter Day Saints

Christian- Christ Temple Apostolic Church and Eagle River Grace Church

Lutheran-Our Redeemer Lutheran Church and the River of Life ELCA Lutheran Church

Methodist- United Methodist Church of Chugiak

Non-Denominational-Peters Creek Christian Center, New Hop on Last Frontier Church, Northern Light Tabernacle

Pentecostal- Gate Way Fellowship Church

According to the HUD AFFH Map 5, Publicly Supported Housing, there are 0 households using Housing Choice Vouchers in the Birchwood/Chugiak DRA compared to 2.42% of the households within the Municipality of Anchorage. There are 0 Public Housing, Project-Based Section 8 Housing, Other Multi-Family Housing, or Low-Income Housing Tax Credit projects within the South Chugiak DRA (Census Tract: 000102; Block Group: 4).

According to the HUD AFFH Map 6, Housing Problems, there are 505 households or 26.23% of the population with any of the 4 housing problems in the Birchwood/Chugiak DRA compared to 34,170 households or 32.55% of the population within the Municipality of Anchorage. The four housing problems are: incomplete kitchen facilities, incomplete plumbing facilities, more than 1 person per room, and cost burden greater than 30%.

According to the HUD AFFH Map 7, Demographics and School Proficiency, there are 221 Families with Children or 48.57% of the population in the South Chugiak DRA (Census Tract: 000102; Block Group: 4) compared to the 46,838 Families with Children or 50.30% of the population within the Municipality of Anchorage.

According to the HUD AFFH Map 8, Demographics and Job Proximity, the Jobs Proximity Index is 10 for the South Chugiak DRA (Census Tract: 000102; Block Group: 4) compared to 50 for the Municipality of Anchorage.

According to the HUD AFFH Map 9, Demographics and Labor Market, the Labor Market Index is 66 for the Birchwood/Chugiak DRA compared 64 for the Municipality of Anchorage.

According to the HUD AFFH Map 10, Demographics and Transit Trips, the Transit Trip Index is 51 for the Birchwood/Chugiak DRA compared to 70 for the Municipality of Anchorage.

According to the HUD AFFH Map 11, Demographics and Low Transportation Cost, the Low Transportation Cost Index is 73 for the Birchwood/Chugiak DRA compared to 84 for the Municipality of Anchorage.

According to the HUD AFFH Map 12, Demographics and Poverty, the Low Poverty Index is 63 in the Birchwood/Chugiak DRA compared to 71 for the Municipality of Anchorage.

According to the HUD AFFH Map 13, Demographics and Environmental Health, the Environmental Health Index is 97 for the Birchwood/Chugiak DRA compared to 69 for the Municipality of Anchorage.

According to the HUD AFFH Map 16, Housing Tenure, there are 1,520 Homeowners or 78.96% of the population in the Birchwood/Chugiak DRA compared to 86,645 Homeowners or 63.80% of the population within the Municipality of Anchorage.

According to the HUD AFFH Map 17, Location of Affordable Rental Housing (% of Rental Units Affordable to 50% AMI), there are 155 Affordable Rental Units or 38.27% of the Total Renter-Occupied Units in the Birchwood/Chugiak DRA. No data is available for the Municipality of Anchorage.

According to the HUD AFFH Map 18, Racial/Ethnic Dissimilarity, there is no data available for the Birchwood/Chugiak DRA. However, the following data is available for the Municipality of Anchorage:

<b>Racial/Ethnic Dissimilarity Index</b>	<b>1990 Trend</b>	<b>2000 Trend</b>	<b>2010 Trend</b>	<b>Current</b>
Non-White/White	27.28	30.18	31.69	35.58
Black/White	39.39	42.38	41.25	46.55
Hispanic/White	23.80	29.01	29.10	31.04
Asian or Pacific Islander/White	30.94	35.62	40.49	46.41

## Appendix D – Summary of Public Comments

On Tuesday, June 22, 2021, DCCED received the following comment from Amanda Siok, Earthquake Program Manager, Mitigation Division, Region 10, Federal Emergency Management Agency:

"I scrolled through and am quite impressed. The Areas of Mitigation Interest dataset created through Risk MAP is highlighted. Attention is given to the Mitigation Planning process and to building code adoption and enforcement.

I saw two things of particular interest, one is the buyout/relocation of mobile homes- what a great project! The other is "to evaluate all HUD-Assisted housing within the Disaster Recovery Areas. This may include Seismic Studies, Seismic/Structural Analysis, and Seismic/Structural Retrofits, or Replacement." This is a really interesting project, and I'm wondering if it is successful, if it could be applied to non-HUD housing as well? This could be a potential BRIC application. Based on the observed damages to people's foundations, especially wood foundations, a project to identify and retrofit them would certainly improve local seismic resiliency.

Ya'll are doing great work leveraging recovery funding from the 2018 earthquake. Keep it up!

-Amanda"

On Tuesday, June 22, 2021, DCCED received the following comment from Terrence Murphy, State Hazard Mitigation Officer (SHMO), Emergency Management Specialist III, State of Alaska, Department of Military and Veterans Affairs (DMVA), Division of Homeland Security and Emergency Management (DHS&EM):

"My comments, focused on the statements concerning two of the boroughs plans:

- Page 9, paragraph 02: plan adoptions: Corrected on pages 9 and 51 on July 22,2021.
- On March 21, 2021, FEMA approved the Matanuska-Susitna Borough Hazards Mitigation Plan
- On December 18, 2019, FEMA approved the Kenai Peninsula Borough Hazard Mitigation Plan

I have no further comments and appreciate the opportunity

Murf"

On Wednesday, June 23, 2021, DCCED received the following comment from Kimberly Collins, Legislative Aide to Municipality of Anchorage Assembly Member Crystal Kennedy, serving District 2, Eklutna Valley, Chugiak, Birchwood, Eagle River, Eagle River Valley, South Fork and Joint Base Elemendorf-Richardson:

"Hi Anita!

Do you have a copy of the study cited on Page 13, second full paragraph? I'm curious about the statement that the primary damage in the Eagle River area is "due to lack of building code enforcement". I wonder how the authors came to this conclusion. Did they inspect buildings that sustained substantial damage, look at the code in place at the time, find that the buildings would not have passed inspection based on that code? I believe this would be the only way to know if this statement is accurate.

Is the writer of the study meaning the building codes themselves were not substantial enough to prevent damage, or was there a lack of code enforcement? There's a very big difference between the two.

I have heard that the geography of Eagle River Valley, and structure of the mountains and valley, contributed to the amplifying effect of the earthquake, thereby more substantial damage. Unfortunately, I didn't ask where the person got their information when they were telling me this, and it may be a myth/legend. If you know anything of this, I would love to know where to go for more research.

For planning purposes, we all need to understand why we sustained more damage. I work on local zoning and building code issues, so definitely want to be as informed as I can be.

Thanks so much!

-Kim"

On Tuesday, July 13, 2021, DCCED made the following response:

"Good Afternoon Kimberly Collins,

Please accept my apology for not responding sooner.

Thank you for reading Substantial Amendment #1 and contacting me. Reference 2 is the Earthquake Engineering Research Institute's (EERI's) "Reconnaissance Report: M7.1 Anchorage Earthquake on Nov. 30, 2018". I have requested, but have not received, EERI's permission to link this report to the CDBG-DR Comprehensive Website.

Within the Municipality of Anchorage, there is the Building Safety Service Area (BSSA), depicted on page 53, where building codes have been adopted and enforced. Eagle River is outside of the BSSA, where building codes have not been adopted and are not enforced. Please contact the MOA, Office of Economic and Community Development, Development Services, 907-343-8301, for more information.

Also, within the Municipality of Anchorage, there is the Anchorage Bowl Seismic Hazard Zone Map, depicted on page 50. This map does not include any of the Northern Communities of Eagle River, Chugiak, Birchwood, Peters Creek, Thunderbird Falls, and Eklutna nor any of the Southern Communities of Indian, Bird Creek, Girdwood, and Portage. Currently, the United States Geological Survey (USGS) is updating the National Seismic Map for Alaska.

<https://www.usgs.gov/centers/asc/science/alaska-seismic-hazard-map>.

The Federal Emergency Management Agency (FEMA) Region X is also conducting some seismic studies of the Eagle River Valley. You may be interested in reading Appendix B, FEMA Region X Post-Earthquake Recommendations for Mitigation.

Again, thank you for contacting the Division of Community and Regional Affairs."

Later, on Tuesday, July 13, 2021, DCCED received the following comment from Kimberly Collins:

"That's excellent information, Anita. Thank you! I very much appreciate your time in giving me additional details and places to look for further information.

I am aware that Eagle River is outside the BSSA and does not require inspection, therefore inspections do not happen.

Saying 'building codes are not enforced', when inspections aren't required doesn't mean that building codes are not met. The language used in the report is misleading.

Please consider this my official request to edit that reference in the report, so it accurately reflects 'adherence to building codes during construction is unknown, because compliance inspections are not required by law' or similar reference. Comment incorporated on page 53 on July 22, 2021.

I would appreciate you following up with me on this, to ensure the report is updated and accurate. I would think the State would also want to request the statement be clarified in EERI's report.

Thanks so much.

-Kim"

On Wednesday, July 14, 2021, DCCED made the following response:

"Good Morning Kimberly,

Again, thank you for contacting our office and for providing your input.

Anita Baker  
Grants Administrator II  
Division of Community & Regional Affairs  
Department of Commerce, Community and Economic Development  
State of Alaska  
550 7<sup>th</sup> Ave, Suite 1650  
Anchorage, AK 99501  
(907) 269-4252"

On Thursday, July 22, 2021, DCCED sent the following e-mail message:

"Good Morning Kimberly Collins,

I am summarizing the public comments to Substantial Amendment #1. Please specify your position within the Municipality of Anchorage. Do you work for Assembly Member Crystal Kennedy? Thank you.

Anita Baker"

Later, on Thursday, July 22, 2021, DCCED received the following response:

"Hi Anita!

I'm a Legislative Aide and yes, work for Assembly Member Kennedy. You can use my details below, as a resident of the area.

Was the suggested change incorporated unto the final update?

Thanks!

-Kim"



Later, on Thursday, July 22, 2021, DCCED sent the following response:

“Good Afternoon Kimberly Collins,

Thank you for answering my questions.

On page 51, I have revised the following paragraph:

“The Municipality of Anchorage only enforces building codes for new construction and major renovations through building plan reviews and building inspections within the Anchorage Building Safety Service Area, excluding the Northern Communities of Eagle River, Chugiak, Birchwood, Peters Creek, Thunderbird Falls, and Eklutna, and the Southern Communities of Indian, Bird Creek, Girdwood, and Portage. Therefore, compliance with current building codes outside of the Anchorage Building Safety Service Area is unknown.”

If this does not communicate your intended correction, please let me know.

Also, according to the FEMA Region X, Earthquake Program Manager, Mitigation Division, the Earthquake Engineering Research Institute’s (EERI’s) Reconnaissance Report: M7.1 Anchorage Earthquake on Nov. 30., 2018” is still a draft report. I will forward your comment to the both FEMA Region X and EERI.

Anita Baker  
Grants Administrator II  
Division of Community & Regional Affairs  
Department of Commerce, Community and Economic Development  
State of Alaska  
550 7<sup>th</sup> Ave, Suite 1650  
Anchorage, AK 99501  
(907) 269-4252”