

ExhibitGLongTermCommitment

State of Alaska

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Exhibit G Long Term Commitment

Climate change impacts Alaska at a (well documented) rate many times faster than the continental U.S. August 2015 brought three major events that focused the world's attention on the imminent threat facing the State and its indigenous people. President Obama's visit, the meetings of the Arctic Council, and the US State Department's GLACIER Conference all emphasized Alaska's place at the forefront of the U.S.'s costly climate change future; a future that the people of Alaska have known for quite some time. While many parts of the country have debated the origin of climate change over the last 10 years, the State of Alaska has quietly and without fanfare continued to increase resilience in its local, regional, and state jurisdictions. Out of necessity, this commitment will continue regardless of whether NDRC funding is approved.

Updates to Phase 1 Commitments:

Progress has been made since September 17, 2014 as indicated by work by State, Federal, regional and local entities. There were seven commitments made in the State's Phase I application. First, DHS&EM committed to updating the Hazard Mitigation Plans (HMP) for six rural communities in NRDC target areas, and helping to plan and fund HMP projects to improve resilience. Kotlik, Alakanuk, Emmonak, and Galena have current HMPs (Dropbox EXG/G32 through G35). DHS&EM is committed to updating these plans when they expire in 2018-2020. Ft. Yukon and Hughes are working with DHS&EM to update their plans that expired in August-September 2015. As a demonstration of the State's commitment to local hazard mitigation planning, DHS&EM has assisted Alaska communities Galena, Emmonak, St. George, Koyuk, Shishmaref, Shaktoolik, Kotzebue, Marshall, Napaskiak, Toksook Bay in updating their HMPs (Dropbox EXG/G36-G43) since the NOFA release. DHS&EM is also providing direct technical assistance to 19 other communities statewide in updating their HMPs.

Second, DCRA committed to fund strategic management plans in Shishmaref, Kivilina, and

Shaktoolik through its Alaska Community Coastal Protection Project; DCRA received an extension of its \$1 million US Fish and Wildlife Grant until June 30, 2016. (Dropbox: EXG/G44-45). In August 2015, DCRA hosted introductory meetings of these three community inter-agency working groups, using the model of the Newtok Planning Group. Those meetings were followed up in October with a second round of meetings in conjunction with the annual Alaska Federation of Natives Convention, October 14-17, 2015. DCRA anticipates plan completion by June 30, 2016. Project documentation may be found on community webpages at <https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/AlaskaCommunityCoastalProtectionProject.aspx>.

Third, after the 2013 qualifying event when the FEMA-State Joint Field Office (JFO) provided the City of Galena updated data that indicated that their 1983 FIS-BFE of 131.5 feet under-estimated the flood risk, the City acted to self-regulate to a higher standard than required by the NFIP and adopted a two-foot freeboard above Base Flood Elevation for the lowest floor requirement. This will impact 86 housing units and buildings in Galena and future development.

Fourth, the State of Alaska has prioritized over \$7M of Hazard Mitigation Grant Program (HMGP) funding for the following projects since September 17, 2015: Newtok 12-home relocation and 5-home acquisition project applications for \$3.5M; Galena City Hall and Clinic elevation project application for \$1.27M; Hughes City Hall elevation project for \$312K; Nunum Iqua mitigation plan for \$3.9K; Nome mitigation plan for \$3.5K. Previously funded projects were implemented for a two-home relocation project in Quinhagak for \$260K and a three home elevation project in Alakanuk for \$224K. Additionally, DHS&EM has applied for and received funding under Pre-Disaster Mitigation 14 for mitigation projects for the City of Fairbanks (\$1.0M) and the Alaska Rail Road Corporation (\$2.4M). (Dropbox EXG/G46-47).

Fifth, Alaska Housing Finance Corporation (AHFC)'s grant agreement with the Bering

Straits School District was executed on May 15, 2015 for \$1.3M of the \$1.68M development cost for 4 teacher housing units, with a 10 year life to the restrictive covenants recorded on the property. Useful life of the property is 30 years. Construction is ongoing and is expected to be completed and available for occupancy by February 1, 2016 (Dropbox: EXG/G24).

Sixth, AHFC committed to changing the rating criteria for the State's Qualified Allocation Plan for the Low Income Housing Tax Credit to add a resilience criterion for the 2015 funding cycle. AHFC did not pursue any changes to the allocation plan in 2015 due to the lateness of the State Budget approval process and re-commits to changing the criterion for the 2016 cycle in May 2016. AHFC secured a \$2 million commitment from the Rasmuson foundation to match State funds appropriated for senior housing development under States' QAP in FY 2016 (Dropbox: EXG/G25). AHFC's commitment will affect over \$25 million in housing development resources and produce 150-200 new units of affordable housing for vulnerable populations from the current baseline of 5,478 units.

Seventh, AHFC committed to increased coordination with its NDRC partners and adding a resilience criterion to its statewide Teacher, Health Professional and Public Safety Program. AHFC opened the \$2.6 million grant application cycle in July 2015. The housing development funds are for rural Alaskan projects focused on units for teachers, health care workers, and public safety employees. These projects will improve social and cultural resilience of the communities based on student performance, the incidence of violence and domestic abuse, sexual assault, and health care needs. After consulting with members of the NDRC application team (SIWG), AHFC changed the threshold criteria for this program to require a statement and explanation on how the project would improve the resilience of the community, from location of the buildings to more socio-economic impacts. The application cycle ends October 30, 2015. AHFC anticipates adding six more resilient housing units to the statewide baseline of 418 units. The useful life of these

buildings is 30 years. (Dropbox: EXG/G4)

Lesson Learned:

Alaska's application is focused on the impact of community resilience on a regional basis. A very recent example of Galena important role as a regional hub played out during the 2015 Fire Season. In July 2015, a series of fires caused by lightning were located on both sides of the Yukon River within the Galena Fire Management Zone and the western end of the Tanana Zone, stretching over 150 river miles from east to west. Approximately 353,000 acres were consumed and threatened Nulato, Ruby, and Last Chance. Despite still undergoing recovery from the 2013 flood, Galena supported regional efforts as the headquarters for the Incident Command Team to assist the Galena BLM station. The community leased office space, lodging, dining services, and vehicles. Galena Airport is one of the largest airports in the Tanana Chiefs Conference (TCC) area and provided fuel and parking space for aircraft. Galena also provided housing for evacuees. Other Galena regional assets include a fuel depot, Elders' home, two major stores, full-service clinic with a doctor on call, a mental health department with two full-time counselors, two Alaska State Troopers, a U.S. Fish & Wildlife Office, and a boarding school.

During the development of Alaska's application, several high profile events outlined below, helped shape the development of the approach with regard to long term commitment. A number of different climate change projects are either under way or being planned, and a number of innovative new technology projects were being discussed. The SIWG used this information to add an umbrella planning project supporting long term commitment. *Moving from the Past to the Future* will document and coordinate work by ANTHC, DCRA, Alaska Institute of Justice and the Denali Commission. Examples of innovative technologies like the *Lifewater* potable water system, decentralized utilities, and energy efficient housing meeting the International Energy Conservation Code (IECC) 2012 were incorporated into designs for the four targeted

communities.

During the stakeholder engagement process in Alakanuk, the importance of an alternative barge landing site to reduce human caused erosion in the riverbank was discussed. Although this community was not prioritized for a project, this activity was added to the Emmonak project supporting regional transportation resilience among communities on the Yukon River system.

During the development of this application, the Alaska Federation of Natives met in Anchorage, October 14-17, 2015 and passed a resolution calling the state and federal government to action on climate change and to insure tribal voices are represented during planning and implementation (Dropbox: EXG/G26). Alaska's approach honors that call by including local tribes, the regional tribal corporations, and statewide tribal organizations like ANTHC in project development and implementation.

In August 2015, foreign delegations from Canada, Russian and the Scandinavian countries, and many observing states came together in Anchorage, Alaska at the [Conference on Global Leadership in the Arctic: Cooperation, Innovation, Engagement and Resilience](#), otherwise known as GLACIER. High-level speakers included Secretary of State John Kerry, Interior Secretary Sally Jewell and Norwegian Foreign Minister Borge Brende. With 19 European Union countries, they have stood by President Barack Obama and pledged their commitment through a joint statement to alleviate the effects of climate change in the Arctic (Alaska Dispatch News, September 7, 2015 and Arctic Newswire, August 29, 2015). See Dropbox: EXG/G5 and G6.

The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination, and interaction among the Arctic states, Arctic Indigenous communities, and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic (Dropbox: EXG/G8). Of the scheduled Arctic Council Meetings from 2015 to 2017, ten meetings are located in Alaska. The most recent meeting was

held on the week of October 19th, 2015 (Dropbox: EXG/G9).

Given the momentum the events of August 2015 created in Alaska regarding the impacts of climate change, the growing importance of resiliency and Alaska's place in the global picture of Arctic Policy, the Governor and Lt. Governor of Alaska penned an October 2, 2015 white paper on resilience activities and state financed project underway in 2015. The white paper was used as a backdrop to meetings held in Washington DC with White House representatives the first week of October, 2015, and detailed the \$126 million in capital projects already committed during 2015. The Lt. Governor sits on the Denali Commission as state-co-chair. One of the main purposes of the white paper is to insure coordination with federal climate change efforts spearheaded by the Denali Commission (Dropbox: EXG/G27).

Raising Standards:

Regional Native Tribal Organizations are raising construction, operations and project management standards amongst tribes, providing conferences and training in their regions. AVCP Housing conducts an annual regional conference for its tribal members related to resilience and recovery every March or April. TCC held a Small Community Emergency Response Plan development workshop April 1-2, 2015 for its tribal members.

The Association of Alaska Housing Authorities (AAHA) coordinates regional trainings and on-site technical assistance to tribes and regional housing authorities. On-site technical assistance provides a wide array of services depending on the needs of the Tribes/Regional Housing Authorities (RHAs). AAHA's Training & Technical Assistance (T&TA) Program helps Tribes and RHAs build sustainable and resilient communities. All services through the AAHA T&TA Program are underwritten by HUD's Office of Native American Programs (ONAP) through its national technical assistance program. Regional training programs from October 2015

to 2016 are listed in the Dropbox (Dropbox: EXG/G10). AVCP has requested funding from HUD's ONAP to develop a master housing plan for Newtok/Metarvik using CCHRC as the technical assistance provider.

Part of AHFC's mission is to raise residential energy efficiency and construction standards throughout Alaska and more specifically on homes and apartments it finances. To that goal, AHFC has developed tools for Energy Efficient retrofits for non-Residential properties and offers a variety of tools for facility owners to utilize in planning an energy-efficient retrofit. Consumer education includes professional level classes and webinars and a website which offers many resources for building owners to use in planning retrofits. AHFC produced a paper on Energy Use in Alaska's Public Facilities Strategic Energy Management Practices manual and a brochure called "Introduction to Energy Efficiency, a Guide to managing Energy Use in Public and Commercial Facilities." www.akenergyefficiency.org. AHFC has developed a cadre of 60 professional commercial energy auditors since 2009. They have performed over 500 energy audits in Alaska, and information on these audits is stored in the Alaska Retrofit Information System (ARIS) database. They use the AKWarm – C (commercial) energy auditing software to help populate the data sets in ARIS. This data is then used to produce research to affect change in policies like the rating criteria for energy efficiency in the States' Qualified allocation plan for the Low Income Housing Tax Credit program. AHFC has also developed BMON, a building monitoring system that integrates multiple sources into one monitoring interface system. This system is open source and available at no charge to anyone who wishes to use it. The ARIS database is also a repository for energy usage, entered from utility bills, for any organization wishing to use it. Armed with the above information, facility owners can establish project feasibility using a cash flow calculator developed by AHFC to see an overview of the financial benefits of the project. This helps AHFC underwrite multi-family rental housing projects under

HOME, LIHTC and other federal and state housing development programs. Recognizing that commercial and public facility energy efficiency is the next market to reduce energy consumption after residential housing, AHFC has committed to develop infrastructure for non-residential EE retrofits. Using a \$236,000 State Energy Program (SEP) grant from the US Department of Energy, a solicitation for energy efficiency project developers has been released (Dropbox: EXG/G29). The selected developers will help commercial building owners, municipal or school officials create successful energy efficiency retrofits. They will also be able to provide contract energy management and maintenance services for those organizations which are too small to warrant full-time energy managers. Money to fund a retrofit is available through multiple financing options: Alaska Energy Efficiency Revolving Loan Program, AIDEA Loan Participations for Qualified Energy Developments, commercial lenders, DCCED Alternative Energy Conservation Loan Fund, RCAC loan fund, USDA Business and Industry Loan Guarantee, USDA Rural Energy for America Program, and several other sources. AHFC has proposed to its Board of Directors to adopt 2012 International Residential Building Code for all residential housing that AHFC invests loan or grant funding in. This would complement AHFC's 2014 adoption of the IECC 2012 for energy efficiency building standards. In August 2015, AHFC's Board of Directors approved a public process to gather input from the building and lending communities. Final approval of the new codes will be considered at the November 2015 AHFC Board meeting. When adopted, this code will affect 15% of all loan production in Alaska (AHFC's market share) on an annual basis or \$486 million a year. (Dropbox EXG/G30)

Resilience actions related to Plan Updates or Alignment:

Several other plans being aligned to improve disaster recovery and improve resilience include the Consolidated Housing Plan for the Balance of the State (outside Anchorage) which is

prepared by AHFC and includes as one of its objectives the incorporation of climate specific design, engineering, energy efficiency and innovative technologies in the development of housing and community facilities. The Plan also includes the Analysis of Impediments to Fair Housing Choice, an analysis of barriers that vulnerable populations have in finding affordable housing (Dropbox: EXG/G48). AHFC chairs the Alaska Council on the Homeless, which recently updated its *Plan to End Long Term Homelessness* and adopted the final version on October 13, 2015. The Plan includes an emphasis on resilient affordable housing development and supportive services for vulnerable populations (Dropbox: EXG/G49). EDA has provided a small short-term planning grant to TCC to develop a regional comprehensive economic development strategy (CEDS) which includes Galena. TCC has a 2015-2020 Strategic Plan (Dropbox EXG/G17, page 20). Teller is covered by Kawerak, Inc.'s regional CEDS which it maintains for the Norton Sound Region; and Emmonak and Newtok/Mertarvik are covered by the AVCP regional CEDS (Dropbox: EXG/G18 and 19). Per the TCC 2015-2020 Strategic Plan, TCC is currently developing a regional economic development strategy, a regional transportation plan, and regional energy plan (Dropbox: EXG/G17). Teller has a Local Economic Development Plan for 2013-2018 (Dropbox: EXG/G19, Page 51).

Resilience actions related to financing and economic issues:

On September 2, 2015, President Obama announced a series of new investments to help Alaskans adapt to a rapidly changing environment. He requested \$14M in coordinating federal, state, and tribal resources to implement climate change solutions across Alaska. Thirty-one Alaska villages have only 10-20 years of livability before their streets, schools, and homes become uninhabitable. \$2M of this will be reserved to support relocation efforts and other resilience strategies for exceptionally vulnerable communities. Moving an entire community to a safer location mere miles away such as Newtok can cost anywhere from \$80M to \$250M.

President Obama's pledge is the first financial recognition of the dire climate situation of tens of thousands of American citizens. Federal funding will support equitable and safe climate-related relocation and retreat efforts by communities in high-risk areas. For those staying in their ancestral homes, the funding will help improve critical clean drinking water infrastructure that has been compromised by melting permafrost and support renewable energy developments for rural communities that currently spend up to half of their income on diesel fuel. These federally-financed projects will be based on sound baseline data from supportive NOAA and EPA programs and implemented by local capacity building initiatives like the newly endowed Resilience AmeriCorps and internship program for tribal youth working on resilience projects (Alaska Dispatch News, September 7, 2015)(Dropbox: EXG/G5).

On May 28, 2015, AHFC announced the award of \$5.9M in state funds; \$750,000 in HOME funds; and \$235,000 in Low Income Housing Tax Credits for three new permanent supportive housing projects. Two projects met the highest energy rating possible under the State of Alaska's energy efficiency standard which exceeds the IECC 2012 standard. Design features to improve resilience include: solar thermal (hot water) and photovoltaic (electricity) to offset more than 5% of the energy load for the building. These projects will provide energy efficient, resilient housing for very low income homeless people with physical and mental disabilities. For the FY 2016 application cycle, AHFC has committed to adopting new resilience criteria for its Special Needs Housing Grant Program which targets vulnerable populations. The two new projects added 52 units to a statewide baseline of 302 and represent \$13.7M in total development costs.

(Dropbox: EXG/G50)

For Phase 2, the SIWG has added the Rasmuson Foundation to its roster of formal philanthropic partners. In Phase 1, the Alaska Community Foundation submitted a partner letter. For Phase 2, both foundations committed to review projects for long-term sustainability and

consider community resilience in their philanthropic decision-making, affecting a combined \$38M in annual giving. Most significantly, the Rasmuson Foundation has committed to being the State of Alaska's "philanthropic ambassador" to other national foundations who the State will target for participation in resilience project funding in the future, regardless of NDRC funding. (Dropbox: EXG/G25).

On September 16, 2015, USDA awarded more than \$425,000 to ANTHC to help reduce the energy costs of providing sanitation services to residents in remote rural areas where the cost of producing electricity is extremely high. The grant to ANTHC, one of nine awarded through the High Energy Cost Grant program administered by USDA's Rural Utilities Service, will retrofit sanitation systems and train operators in eight communities across Alaska including Napaskiak, Nunapitchuk, Chefornak, Nightmute, Tuntutuliak, Newtok, Teller and Tununak. The \$426,916 project will increase energy efficiency by upgrading interior and exterior lighting; installing new controls for heating systems and laundry services, installing new controls for water storage and pumping; and making weatherization improvements.

The Alaska Rural Utility Collaborative (ARUC) manages water and sewer systems in partnership with rural Alaska communities, resulting in a more cost-effective O&M approach. ARUC sets rates with community council input. Each community's rates are set to be self-supporting, so rates will vary per community. ARUC hires a local water plant operator (and backup) in each community at good wages and retirement benefits and purchases all fuel, parts, electricity, etc. for water/sewer system with money collected from water/sewer customers. ARUC can often find grant money to purchase fuel, supplies, and needed parts and repairs for ARUC communities in the first year of membership. ARUC communities meet all Alaska Rural Utility Business Advisor (RUBA) essential indicators, unless it owes IRS taxes. Each ARUC community selects a community member to represent them on the Advisory Committee that meets four times

per year and ARUC communities receive monthly financial statements and yearly reports. Money from each community's customers is only used to pay expenses from that community.

Finally, in a major move to stimulate economic investment in climate change technologies and businesses throughout the US, the Alaska Permanent Fund Corporation announced a \$200M investment in climate change related capital investments (October 19, 2015). Alaska TV Channel KTVA 11 reported that the Permanent Fund Corporation is one of five long-term US investors who, together, will put up at least \$1.2B. The money will go towards funding an investment group that would act as a financial "middle man." It will screen companies and projects to identify commercial investments that could make an impact on climate change around the world. (Dropbox: EXG/G51)