ExhibitFLeverage

State of Alaska

ExhibitFLeverage.pdf

Exhibit F: Leverage

Outcomes

Our approach is designed to implement a long term approach which addresses disaster recovery and climate change adaptation. Regional and community development goals focus on sustainment and resilience of the Alaska Native culture and its values, as discussed in Exhibit E. Ideally, solutions are considered permanent. The stresses associated with responding to events in Alaska (harsh climate, remote locations, weak rural transportation systems, high poverty areas, and variable state economic growth) necessitate a comprehensive approach of policy change and project solutions that build resiliency. Our proposed solutions are strategic planning and a combination of single phase projects (e.g. elevations, infrastructure upgrades, and development of innovative technologies for water and sewer efficiencies) and multi-phase projects such as community relocation to more sustainable locations.

The State of Alaska and its partners have learned how to build projects in an environmentally sustainable way through practices recently pioneered through the University of Alaska Fairbanks's Sustainable Village and the Cold Climate Housing Research's Sustainable Community Initiative. The key to implementing a financially sustainable approach is to consider how it will be maintained by the local community based on their technical capacity and financial resources. This means we must assess local capacity, provide technical assistance and training if necessary, ensure the project is "right sized" for the community and not built over capacity. This approach will prevent the creation of unintended problems to the environment and the financial sustainability of the community.

Gray water onsite sewage treatment, ground source heat pumps, rainwater collection, arctic climate designed heat-recovery ventilation systems, are all examples of green building techniques that are being considered as potential outcomes. Other techniques (including 10 different green infrastructure projects to reduce runoff damage (Green Infrastructure | Cold Climate Housing Research Center) are

being studied at the University Alaska's Sustainable Village project in Fairbanks. This project blends the latest in cold-climate technology, environmentally sound land use and sustainable infrastructure that emphasizes a "community design" approach to resiliency. (Dropbox: AK-152) Property acquisition, demolition, and debris removal projects restore land to its natural flood plain function. The planning process will target suitable properties and convert the deed restricted area to usable subsistence processing and cultural gathering areas.

There are numerous co-benefits that can be produced from these investments, including reduced respiratory ailments, disease and adverse health impacts from improperly treated waste; use of grey water and rain runoff for gardening; reduced energy consumption (which reduces household need for cash in weak economic areas) and use of fossil fuels; building of local technical capacity; development of employment in the maintenance of infrastructure; and conversion of vacated land to community recreational or subsistence food gathering activities.

The economic revitalization of the targeted areas for this application is dependent on the improved resilience of their communities. The economic wellbeing of many communities is based on their ability to gather a significant amount of food through subsistence hunting and fishing. Improving resiliency through better building and infrastructure will increase the technical capacity and training opportunities for residents (many of which qualify under Section 3), leading to better employment opportunities. Successful implementation of our approach to the vulnerabilities of climate change and natural disasters will revitalize the target areas of this application, and reduce stress on state and federal recovery resources. From that experience the State of Alaska will leverage successful techniques in other coastal and riverine communities across the state.

Success will be measured by projects that test alternative and innovative climate specific techniques that improve community resiliency. Projects will be evaluated on impact on community

perception of resilience; reductions in energy usage and health effects in the community; and reductions in infrastructure risk associated from erosion and flooding. Another success of this approach will be the re-establishment of the State of Alaska Sub-Cabinet on Climate Change which will coordinate resiliency efforts across all departments of the State government through the adoption of a climate change strategy.

Leverage

The following local or regional partners or resources can potentially address the implementation and maintenance aspects of our response: local mayors and city managers, tribal chiefs, tribal administrators; regional tribal non-profits-TCC, AVCP, Kawerak, ANTHC; state agencies-DHS&EM, DCRA, DEC; CCHRC; University of Alaska Fairbanks; HUD, EDA, USDA and Denali Commission. State prioritization of FEMA Hazard Mitigation Grant Program (HMGP) through DHS&EM and the State Hazard Mitigation Advisory Committee (SHMAC) can be used as leverage for CDBG-NDR activities. This funding has already been utilized in impacted communities in the state's two target areas for disaster-impacted and non-disaster impacted residences (elevations) in Galena, Alakanuk and Kotlik (Dropbox: AK-156 through 158). The SHMAC prioritized HMGP funding in 2015 for relocation, acquisition and elevation projects in Newtok and Hughes (Dropbox: AK-154 and 155). The State of Alaska provided over $1M in funding for elevated residential foundations for new build of resilient Cold Climate-designed homes Galena in 2014. DCRA has committed $1.05M of funding for Community Adaptation Planning Grants (reference) and $1M from the Alaska Community Coastal Protection Project (Dropbox: AK-159).

In Exhibit G AHFC made a long term commitment to fund more resilient housing developments and increasing coordination under its Teacher, Health Professional Public Safety Officer housing program in rural Alaska. This state-funded program also leverages additional private debt and $1.95M of Rasmuson Foundation funds (Dropbox: AK-160 and Attachment B) over three years. This is both a

leverage component for this program for target areas, as well as projects at the broader regional and statewide level.

AHFC manages the Alaska Housing Finance Corporation :: Energy Efficiency Revolving Loan Fund (AEERLP) for Public Facilities program. This program provides financing to enhance resiliency of public facilities and can be used as leverage to NRDC funding throughout the target areas, the broader region and statewide. AHFC can issue up to $250M in bonds to finance these projects. Currently, the Alaska Legislature is considering HB58 which will expand eligibility to non-profits and Indian tribes. http://www.akleg.gov/basis/Bill/Detail/29?Root=HB%20%2058 . This would allow the program to have a greater impact on improving the resiliency of commercial and public facilities statewide.

10 years ago there were only a handful of private foundations in Alaska and none of them were actively engaged in implementing a resiliency approach. In our approach, we've brought two private foundations (Alaska Community Foundation, Rasmuson) into planning activities based on resiliency.

The State of Alaska has had extensive conversations about the availability of insurance, especially federal flood insurance through the NFIP to rural communities. See Exhibit E, page 6.

A recommendation of the Climate Change Sub-Cabinet Immediate Action Work Group is to develop recommendations and implementation strategies that address incorporated and unincorporated community eligibility in the NFIP. This will guide Alaska's approach to increase community resiliency. See Exhibit E, page 7.

Alaska's strategic management planning process, as modeled by the NPG, maximizes positive outcomes. This collaborative planning approach fosters leveraging of resources for cost-savings; and coordinates expertise and project timelines to reduce duplication of effort and project conflicts. As our approach is community-driven, there will be many opportunities to utilize local workforces, thereby incorporating technical training and workforce development.

We anticipate small cost savings in energy consumption from more efficient housing; reduced health care costs from improved housing conditions and contact with unsanitary conditions; and reduced future need for state dollars for buyouts, relocations and elevations.

Implementation of our approach has the potential to change the way state and federal disaster recovery funds are spent long into the future. These funds are State and FEMA IA, PA and mitigation program funds; State Department of Transportation & Public Facilities project funding; State DEC Village Safe Water project funding; and state school construction design and implementation funding.

The SIWG has preliminary commitments from the partner agencies to using the approach to redefine their own funding activities to use resiliency as an evaluation criteria in the design and construction of building and infrastructure projects. DCRA plans to advocate the State administration re-activate the Sub-cabinet on climate change to implement long term commitment to institutionalizing a resilient and innovative approach to addressing future climate change risks.

Our project is targeted at seven villages within two tribal areas. Because these areas comprise un-incorporated areas of the state there are no county or regional governments. Projects will take place directly in these areas. However, the approach we are using to develop stakeholder input into the process of building resilience in a community and then planning projects that meet that goal is an approach that we intend to use on a larger regional and statewide basis. According to the U.S. Army Corps of Engineers (USACE) Alaska Baseline Erosion Assessment, there are 160 communities along the western coast of Alaska that are in danger of severe damage from erosion, alone. (Dropbox: AK-132)

Committed Leverage Resources

AHFC and DHS&EM have each committed $50,000 cash contribution toward CDBG-NDR and future resiliency efforts. The Rasmuson Foundation has $1.95M commitment to future resiliency of housing in rural Alaska. All references are in Attachment B.