

**APPENDIX F—KAKTOVIK**

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The community of Kaktovik is shown in Figure F-1. In this plan, Kaktovik refers to all city and tribal lands and people within the 0.97 square miles of the community land area, which also serves as the tribal planning area. For the 2023 MJHMP, hazard impact assessments were prepared for land area, population center, and critical facilities for Kaktovik. The land area of Kaktovik is 637.45 acres, and the population center is 314.66 acres (Table F-1). For the 2023 MJHMP, 13 public and private critical facilities were collected from Kaktovik (Figure F-2). This does not include facilities included in the analysis for the NSB. The overall results of the hazard assessments for Kaktovik are provided below for land area (Table F-2), population center (Table F-3), and critical facilities (Table F-4). Due to a combination of a lack of adequate information and methodology, a semi-quantitative hazard impact assessment has been prepared for earthquake, erosion, permafrost degradation, and wildfire. Slight discrepancies may appear as a result of GIS data limitation. A qualitative analysis has been prepared for climate change, flooding, severe weather, and space weather. An erosion figure for Kaktovik is provided in Figure F-3. Earthquake, permafrost distribution, and wildfire figures for all communities in the NSB are provided in Appendix A.

**Table F-1: Kaktovik Total Land Area, Population Center, and Critical Facilities**

| Category            | Number        |
|---------------------|---------------|
| Land Area           | 637.45 acres  |
| Population Center   | 314.66 acres  |
| Critical Facilities | 14 facilities |

**Table F-2: Kaktovik Total Acres of Land in a Hazard Area**

| Hazard Area                        | Acres  | Percent of Total Acres |
|------------------------------------|--|------------------------|
| Climate Change                     | 637.45   | 100                    |
| Earthquake                         |  |                        |
| Weak-Light                         | 0  | 0                      |
| Moderate                           | 637.45   | 100                    |
| Strong-Severe                      | 0  | 0                      |
| Erosion                            | 6.78   | 1                      |
| Flooding                           | No mapping data are available for flooding. Based on existing reports and the community planning team, approximately 1% of total land area is susceptible to flooding. |                        |
| Permafrost Degradation             |  |                        |
| Continuous (>90%)                  | 602.23   | 94                     |
| Glacier                            | 0  | 0                      |
| Large Waterbodies (Unfrozen Below) | 0  | 0                      |
| Severe Weather                     | 637.45   | 100                    |
| Space Weather                      | 637.45   | 100                    |
| Wildfire                           |  |                        |
| Very Low/Low Exposure              | 637.16   | 99                     |

**Table F-2: Kaktovik Total Acres of Land in a Hazard Area**

| Hazard Area           | Acres | Percent of Total Acres |
|-----------------------|-------|------------------------|
| Moderate Exposure     | 0     | 0                      |
| Significant Exposure  | 0     | 0                      |
| Considerable Exposure | 0     | 0                      |

**Table F-3: Kaktovik Total Number of Acres of Population Center in a Hazard Area**

| Hazard Area                        | Acres  | Percent of Total Acres |
|------------------------------------|--|------------------------|
| Climate Change                     | 314.66   | 100                    |
| Earthquake                         |  |                        |
| Weak-Light                         | 0  | 0                      |
| Moderate                           | 314.66   | 100                    |
| Strong-Severe                      | 0  | 0                      |
| Erosion                            | 7.83   | 2                      |
| Flooding                           | No mapping data are available for flooding. Based on existing reports and the community planning team, approximately 5% of total land area is susceptible to flooding. |                        |
| Permafrost Degradation             |  |                        |
| Continuous (>90%)                  | 287.29   | 91                     |
| Glacier                            | 0  | 0                      |
| Large Waterbodies (Unfrozen Below) | 0  | 0                      |
| Severe Weather                     | 314.66   | 100                    |
| Space Weather                      | 314.66   | 100                    |
| Wildfire                           |  |                        |
| Very Low/Low Exposure              | 314.24   | 100                    |
| Moderate Exposure                  | 0  | 0                      |
| Significant Exposure               | 0  | 0                      |
| Considerable Exposure              | 0  | 0                      |

**Table F-4: Kaktovik Total Number of Critical Facilities in a Hazard Area**

| Hazard Area           | Number | Percent of Total Facilities |
|-----------------------|--------|-----------------------------|
| Climate Change        | 13     | 100                         |
| Earthquake (Moderate) | 13     | 100                         |
| Erosion               | 0      | 0                           |

**Table F-4: Kaktovik Total Number of Critical Facilities in a Hazard Area**

| Hazard Area                              | Number | Percent of Total Facilities |
|--|--------|-----------------------------|
| Flooding                                 | 0      | 0                           |
| Permafrost Degradation (Continuous >90%) | 13     | 100                         |
| Severe Weather                           | 13     | 100                         |
| Space Weather                            | 13     | 100                         |
| Wildfire (Very Low/Low Exposure)         | 14     | 100                         |

Kaktovik’s existing authorities, policies, programs, and resources available for hazard mitigation are provided in Table F-5 (human and technical resources), Table F-6 (financial resources), and Table F-7 (planning and policy resources). The ways in which the community is looking to expand and improve on its hazard mitigation authorities, policies, programs, and resources are provided in Table F-8.

According to USAspending.gov, since fiscal year 2008, Kaktovik Village has not received any federal grant money from FEMA or other federal agencies for mitigation. Members of the tribe are not aware of any other mitigation grants.

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**Table F-5: Kaktovik Human and Technical Resources for Hazard Mitigation**

| Staff/Personnel   | Department/Agency   | Principal Activities Related to Hazard Mitigation  |
|---|---|--|
| Planner(s) and technical staff with knowledge of land development, land management practices, human-caused hazards, and natural hazards | City of Kaktovik Mayor and City Clerk, Kaktovik Village President and Tribal Administrator                    | Anticipates and acts on the need for new plans, policies, and code changes. Applies the approved plans, policies, code provisions, and other regulations to proposed land uses.  |
| Engineer(s), project manager(s), technical staff, equipment operators, and maintenance and construction staff                           | NSB Department of Public Works  | Maintains and operates of a wide range of local equipment and facilities and assists members of the public. This includes providing sufficient clean fresh water, reliable sewer services, street maintenance, and storm drainage systems. Engineer work is contracted.  |
| Floodplain Manager  | City of Kaktovik, Kaktovik Village  | The city mayor and tribal president consult with the state floodplain manager.   |
| Emergency Manager   | City of Kaktovik, Kaktovik Village, NSB Mayor’s Office, NSB Department of Search and Rescue, NSB RISK Manager | Coordinates local response and relief activities; works closely with local, state, and federal partners to support planning and training and to provide information and coordinate assistance.   |
| Procurement Services Manager  | City of Kaktovik Mayor and City Clerk, Kaktovik Village President and Tribal Administrator                    | Provides a full range of municipal financial services and administers several licensing measures.  |
| Fire Chief  | NSB Fire Department   | Provides fire protection services in the borough. There are two fire stations in Utqiagvik and one in each village. Each village fire station has one village fire chief, emergency responders, as well as voluntary emergency responders. The typical village fire station has one tanker, one engine truck, one ambulance, one pick-up truck, and one sport utility vehicle. |
| Public Information Officer  | City of Kaktovik Mayor and City Clerk, Kaktovik Village President and Tribal Administrator                    | Coordinates and facilitates a public information program regarding activities in Kaktovik; actively promotes the services and successes of operating departments and the benefits to residents; proactively establishes and maintains productive relationships between Kaktovik and any media; and performs related duties as required.  |

**Table F-5: Kaktovik Human and Technical Resources for Hazard Mitigation**

| Staff/Personnel     | Department/Agency                            | Principal Activities Related to Hazard Mitigation   |
|---------------------|--|---|
| NSB Chief of Police | NSB Police Department, Alaska State Troopers | Provides law enforcement services in the borough. The Department’s headquarters are in Utqiagvik, as are the jail and 24-hour dispatch center. The Department also has offices, jail facilities, police officers, and a community public safety specialist in each of the seven villages and Prudhoe Bay. The Alaska State Troopers also provide public safety services throughout the NSB. |

**Table F-6: Kaktovik Existing and Potential Financial Resources for Hazard Mitigation**

| Type   | Summary  |
|--|--|
| General Fund                                   | A general fund is the primary fund used by the city and tribe. This fund is used to record all resource inflows and outflows that are not associated with special-purpose funds and constitute the core administrative and operational tasks.  |
| FEMA: Assistance to Firefighters Grant Program | The Assistance to Firefighters Grant Program is a direct annual competitive grant program that focuses on enhancing the safety of the public and firefighters with respect to fire and fire-related hazards. Funding can be used to purchase equipment, protective gear, and emergency vehicles and provide training and other resources related to fire hazards. The Assistance to Firefighters Grant Program provides financial assistance directly to eligible fire departments, nonaffiliated emergency medical service organizations, and state fire training academies. Total national funding for fiscal year 2022 was \$325 million.                 |
| FEMA: Emergency Management Performance Grant   | Emergency Management Performance Grants are annual competitive pass-through grants that provide state, local, tribal, and territorial emergency management agencies with the resources required for implementation of the National Preparedness System and work toward the National Preparedness Goal of a secure and resilient nation. Allowable costs support efforts to build and sustain core capabilities across the prevention, protection, mitigation, response, and recovery mission areas.<br>Total funding for Emergency Management Performance Grants in fiscal year 2022 was \$405.1 million.  |
| FEMA: EOC Grant Program                        | The EOC Grant Program is an annual competitive pass-through grant program that is intended to improve emergency management and preparedness capabilities by “supporting flexible, sustainable, secure, strategically located, and fully interoperable emergency operations centers with a focus on addressing identified deficiencies and needs” to ensure the continuity of operations and continuity of government during and after any major disaster or emergency. Mitigation staff are often present in an EOC during disaster or emergency response, and the EOC creates and maintains documentation for immediate or future mitigation opportunities. |

**Table F-6: Kaktovik Existing and Potential Financial Resources for Hazard Mitigation**

| Type   | Summary   |
|--|---|
|  | EOC grants are available to state and local agencies and federally recognized tribal governments. Total funding for the EOC Grant Program for fiscal year 2022 was \$49.02 million.   |
| FEMA: HMA, BRIC  | <p>BRIC is an annual competitive pass-through grant program that focuses on reducing the nation’s risk by funding public infrastructure projects that increase a community’s resilience before a disaster affects an area. BRIC was created in 2020 as part of the Disaster Recovery Reform Act of 2018 and replaces FEMA’s legacy Pre-Disaster Mitigation grant program. BRIC funds a wide variety of mitigation activities, including microgrids, flood control, wetland restoration, community relocation/buyouts, seismic retrofits, and nature-based solutions.</p> <p>BRIC is available to state and local agencies and federally recognized tribal governments with a FEMA-approved and locally adopted HMP. In Alaska, the State Hazard Mitigation Advisory Committee, under the guidance of DHS&amp;EM, prioritizes state and local sub-applicants based on the state’s mitigation priorities.</p> <p>Total funding for BRIC for fiscal year 2022 was \$2.295 billion.</p> |
| FEMA: HMA, HMGP  | <p>HMGP is a pass-through grant program that supports pre- and post-disaster mitigation plans and projects for state and local agencies and federally recognized tribal governments. HMGP funding is authorized with a Presidential Major Disaster Declaration. A governor or tribal chief executive may request HMGP funding when submitting a disaster declaration. The amount of funding made available to the applicant is generally 15% of the total federal assistance amount provided for recovery from the Presidential Major Disaster Declaration.</p> <p>In Alaska, the State Hazard Mitigation Officer, under the guidance of DHS&amp;EM, prioritizes state and local sub-applicants based on the state’s mitigation priorities.</p>   |
| FEMA: Homeland Security National Training Program Continuing Training Grants Program | The Homeland Security National Training Program Continuing Training Grants program provides funding via “cooperative agreements to partners to develop and deliver training to prepare communities to prevent, protect against, mitigate, respond to, and recovery from natural, technological, and man-made hazards. Including acts of terrorism.” For fiscal year 2022, the total amount of Homeland Security National Training Program funds available for Continuing Training Grants was \$6 million for two focus areas: climate resilience for equitable outcomes and equity in tribal and rural preparedness.  |
| National Oceanic and Atmospheric Administration: Environmental Literacy Program      | The Environmental Literacy Program is an annual competitive grant program that focuses on helping communities build environmental literacy around resilience to extreme weather, climate change, and other environmental hazards. The National Oceanic and Atmospheric Administration’s vision is to help communities understand current conditions, project future changes, and make informed decisions that reduce vulnerability and increase the ability to cope with—or mitigate—natural hazards. The Environmental Literacy Program is available to institutions of higher education, public and independent schools and school systems, other nonprofits, state and local agencies, and federally recognized tribal governments. Total funding for fiscal year 2022 was \$5 million.  |
| National Oceanic and Atmospheric Administration and the National Fish                | The NCRF is a direct annual competitive grant program that supports the implementation of nature-based solutions to enhance the resilience of coastal communities and ecosystems by reducing the “threats from coastal hazards (such as   |

**Table F-6: Kaktovik Existing and Potential Financial Resources for Hazard Mitigation**

| Type  | Summary  |
|---|--|
| and Wildlife Foundation, and other governmental and private-sector partners: NCRF | <p>rising sea- and lake-levels, more intense storms, increasing flooding and erosion, and melting permafrost) to property and key assets, such as hospitals and evacuation routes.” The NCRF funds nature-based solutions including restoring coastal marshes, reconnecting floodplains, rebuilding dunes or other natural buffers, and installing living shorelines. NCRF grants are available to state and local agencies and federally recognized tribal governments within the coastal areas of the U.S. Total funding for NCRF for fiscal year 2022 was \$140 million.</p>  |
| Natural Resources Conservation Service: Watershed Programs                        | <p>The Natural Resources Conservation Service Watershed Programs provide technical and financial assistance to help implement conservation practices that address watershed resource concerns through the following programs:</p> <p>EWP Program: The EWP Program offers technical and financial assistance to help relieve imminent threats to life and property caused by floods, fires, windstorms, and other natural disasters that impair a watershed. EWP grants are available to local agencies, conservation districts, federally recognized tribal governments, and interested public and private landowners that have a sponsor. EWP does not require a disaster declaration by the federal or state government. In Alaska, federally recognized tribal governments are often the primary local sponsors requesting federal assistance through EWP.</p> <p>Watershed Protection and Flood Prevention Program: The Watershed Protection and Flood Prevention Program provides technical and financial assistance to help plan and implement watershed programs, including flood prevention. It is available to state and local agencies and federally recognized tribal governments and for watersheds that are 250,000 acres and smaller.</p> <p>Watershed Rehabilitation Program: The Watershed Rehabilitation Program provides technical and financial assistance to rehabilitate aging dams that are reaching the end of their design life and/or no longer meet federal or state safety criteria or performance standards or build or augment existing water supplies based on current and future water supply demands.</p> <p>In 2022, Natural Resources Conservation Service received \$918 million of Bipartisan Infrastructure Law funding to allocate through its watershed programs.</p> |
| USACE: Civil Works Program  | <p>The USACE Civil Works Program funds studies and projects to maintain existing infrastructure and to repair damage and dredge channels in response to floods and coastal storms. For fiscal year 2022, the USACE utilized \$22.81 billion in supplemental funding from the Infrastructure Investment and Jobs Act (also known as the Bipartisan Infrastructure Law) and 2022 Disaster Relief Supplemental Appropriations Act. Over \$5 billion is allocated to improve community resilience to climate change.</p>   |
| U.S. HUD: CDBG-DR   | <p>CDBG-DR grants help state and local agencies and federally recognized tribal governments recover from Presidentially declared disasters, especially in low-income areas, subject to availability of supplemental appropriations. CDBG-DR funds a broad range of recovery activities, but each activity must address a direct or indirect impact from the disaster in a most-impacted and distressed area, be a CDBG-eligible activity, and meet a national objective (combating climate crisis and advancing equity). Grantees must ensure that their activities align</p>  |



**Table F-6: Kaktovik Existing and Potential Financial Resources for Hazard Mitigation**

| Type   | Summary  |
|--|--|
|  | with the mitigation strategy of their State Hazard Mitigation Plan. In 2022, HUD allocated nearly \$3 billion in CDBG-DR funds for major disasters occurring in 2020 and 2021.   |
| United States Fish and Wildlife Service: National Coastal Wetlands Conservation Grants Program | The National Coastal Wetlands Conservation Grants Program is an annual competitive grant program through the United States Fish and Wildlife Service to fund projects that protect, restore, and enhance coastal wetland ecosystems and associated uplands. Grants range from \$50,000 to \$1 million and are available to eligible state agencies (which often collaborate with land trusts, tribes, conservation organizations, and other entities to plan and “deliver the conservation outcomes”). The total funding for the National Coastal Wetlands Conservation Grants Program for fiscal year 2022 was \$20 million.      |
| United States Forest Service: Community Wildfire Defense Grant                                 | The Community Wildfire Defense Grant, funded through the Bipartisan Infrastructure Law, is intended to help at-risk local communities and tribes reduce their risk from wildfire. The grant provides funding for two types of projects: the development and revision of Community Wildfire Protection Plans and the implementation of projects described in Community Wildfire Protection Plans that were written less than 10 years ago. Priority is given to at-risk communities in an area that is identified as having high or very high wildfire hazard potential, low income, and/or has been impacted by a severe disaster. |
| Denali Commission Grants   | The Denali Commission partners with tribal, federal, state, and local governments and collaborates with all Alaskans to improve the effectiveness of government services, to develop a well-trained labor force employed in a diversified and sustainable economy, and to build and ensure the operation and maintenance of Alaska’s basic infrastructure.   |
| Alaska Energy Authority: Renewable Energy Fund   | The Renewable Energy Fund provides funding for the development of qualifying and competitively selected renewable energy projects in Alaska. The program is designed to produce cost-effective renewable energy for both heat and power for fiscal year 2019. \$11 million has been allocated by the governor to fund the Renewable Energy Fund. This program runs through 2023.   |

**Table F-7: Kaktovik Planning and Policy Resources for Hazard Mitigation**

| Name   | Description   | Hazards Addressed   | Emergency Management               |
|--|---|---|------------------------------------|
| Kaktovik, Alaska Comprehensive Plan 2021-2041 (NSB 2021) | Describes hazard areas and lists goals and policies to reduce the potential risk of death, injuries, and economic damage resulting from natural and human-caused hazards in Kaktovik. | Climate Change, Erosion, Flooding, Permafrost Degradation, Severe Weather | Mitigation, Preparedness, Response |

**Table F-7: Kaktovik Planning and Policy Resources for Hazard Mitigation**

| Name  | Description  | Hazards Addressed   | Emergency Management               |
|---|--|---|------------------------------------|
| North Slope Borough Comprehensive Plan 2019-2039 (NSB 2019) | Describes hazard areas and lists goals and policies to reduce the potential risk of death, injuries, and economic damage resulting from natural and human-caused hazards in the NSB.   | Climate Change, Erosion, Flooding, Permafrost Degradation, Severe Weather, Wildfire | Mitigation, Preparedness, Response |
| Long Range Development Plan (NSB Port Authority Department) | The plan guides and prioritizes early actions and longer-term initiatives. It is a roadmap for the NSB Port Authority Department, covering all aspects of current and future operations, including construction and operation of sea, land, and air transportation and associated trades, enabling facilities and enabling infrastructure to provide emergency response capability, efficient commercial delivery of goods and services, resource development, and workforce training. | Climate Change, Erosion, Flooding, Permafrost Degradation, Severe Weather           | Response, Recovery                 |
| North Slope Borough Emergency Response Plan (NSB 2008)      | The plan describes the NSB’s organizational structures, roles, and responsibilities; protocols for providing emergency response and short-term recovery; the purpose, situation, and assumptions; concept of operations, organization, assignment of responsibilities, and plan development and maintenance; authorities; and references.  | Flood, Erosion, Permafrost Degradation  | Response, Recovery                 |
| 2020 – 2025 Six Year Capital Plan: Kaktovik (NSB 2020)      | Identifies capital projects and equipment purchases, provides a planning schedule, and identifies options for financing the plan. The plan/program is short-range, 6 years.  | Erosion, Flooding   | Mitigation, Preparedness           |
| Public Outreach   | The City of Kaktovik and the Village of Kaktovik use their websites to provide outreach to the public on relevant events, activities, and planning processes happening in the area.  | All   | All Phases                         |

**Table F-8: Kaktovik Ability to Expand Resources**

| Capability          | Type/Description      | Expansion  |
|---------------------|-----------------------|--|
| Human and Technical | Mitigation Specialist | Appoint or assign someone with the city, tribal, or NSB government to oversee hazard mitigation grant opportunities, including notifying departments/agencies of upcoming grant cycles, and spearheading Notice of Intents applications, grant applications, and grant management requirements. This may require additional training or contractors. |
| Financial           | HMA Funding           | Apply for BRIC and HMGP funding as it becomes available. The focus should be on projects that mitigate critical infrastructure, provide protection for disadvantaged areas, and address climate change.  |
| Planning and Policy | Climate Action Plan   | Develop a Climate Action Plan to reduce or continue to greenhouse emissions through a series of local transportation, land use, building energy, water, waste, and green infrastructure programs and policies.   |

The planning team determined the hazards and threats of immediate concern based on the 2023 MJHMP’s hazard profiles, risk assessment, and capability assessment for Kaktovik are as follows: climate change, erosion, flooding, and permafrost degradation. The results of the prioritization process are provided in Table F-9. For each mitigation action listed, potential funding sources, responsible departments or agencies, and implementation timelines have been identified.

**Table F-9: Kaktovik Prioritized Action Plan**

| No. | Project Name                                 | Priority                      | Potential Funding Source                | Responsibility                          | Estimated Timing |
|-----|--|-------------------------------|---|---|------------------|
| 1   | Spill Response and Incident Command Training | High                          | NSB                                     | NSB                                     | Annual           |
| 2   | Emergency Shelter and Evacuation Route       | High                          | FEMA BRIC                               | NSB/ City of Kaktovik/ Kaktovik Village | 6 to 9 years     |
| 3   | Critical Facility Auxiliary Power            | Medium (City)                 | FEMA BRIC/HMGP                          | NSB/ City of Kaktovik/ Kaktovik Village | 3 to 5 years     |
| 4   | Centralized Point of Distribution            | Medium                        | NSB                                     | NSB/ City of Kaktovik/ Kaktovik Village | 4 to 5 years     |
| 5   | Infrastructure Planning                      | Medium (City)/ High (Village) | NSB/ City of Kaktovik/ Kaktovik Village | NSB/ City of Kaktovik/ Kaktovik Village | 3 to 6 years     |
| 7   | Earthquake-Resistant Pipes Replacement       | Medium (City)                 | FEMA BRIC/HMGP                          | NSB/ City of Kaktovik/ Kaktovik Village | 5 to 10 years    |
| 8   | Erosion Control Revetments/ Seawall          | Medium (City)/ High (Village) | FEMA BRIC/HMGP                          | NSB/USACE                               | 2 to 15 years    |

|    |   |                                  |  |  |               |
|----|---|----------------------------------|--|--|---------------|
| 9  | Managed Migration Plans                     | Medium                           | NSB/ City of Kaktovik/<br>Kaktovik Village           | NSB/ City of Kaktovik/<br>Kaktovik Village | 5 to 15 years |
| 10 | Archaeological Site Protection and Recovery | High                             | NSB/ City of Kaktovik/<br>Kaktovik Village           | NSB/ City of Kaktovik/<br>Kaktovik Village | 2 to 7 years  |
| 11 | Zoning to Avoid Hazards                     | Medium (City)                    | NSB/ City of Kaktovik/<br>Kaktovik Village           | NSB/ City of Kaktovik/<br>Kaktovik Village | 2 to 5 years  |
| 14 | Culvert Installation/<br>Upgrades           | Medium/ High                     | FEMA<br>BRIC/HMGP                                    | NSB/ City of Kaktovik/<br>Kaktovik Village | 1 to 3 years  |
| 15 | Operator Training                           | Medium/ High                     | NSB  | NSB/ City of Kaktovik/<br>Kaktovik Village | 0 to 2 years  |
| 16 | Potable Water Protection                    | Medium (City)                    | FEMA<br>BRIC/HMGP                                    | NSB/ City of Kaktovik/<br>Kaktovik Village | 5 to 10 years |
| 17 | Backup Potable Water Source                 | High                             | FEMA<br>BRIC/HMGP                                    | NSB/ City of Kaktovik/<br>Kaktovik Village | 5 to 10 years |
| 18 | Spillway Repair                             | Medium (City)                    | FEMA<br>BRIC/HMGP,<br>Federal Highway Administration | NSB/ City of Kaktovik/<br>Kaktovik Village | 8 to 10 years |
| 19 | Ice Cellars                                 | Medium                           | NSB/ City of Kaktovik/<br>Kaktovik Village           | NSB/ City of Kaktovik/<br>Kaktovik Village | 3 to 6 years  |
| 20 | Protection from Subsidence                  | Medium (City)/<br>High (Village) | FEMA<br>BRIC/HMGP                                    | NSB/ City of Kaktovik/<br>Kaktovik Village | 5 to 10 years |
| 21 | Develop New Boat Launches                   | High (Village)                   | FEMA<br>BRIC/HMGP                                    | NSB/ City of Kaktovik/<br>Kaktovik Village | 5 to 6 years  |
| 22 | Cryosphere Community Planning               | Medium                           | NSB/ City of Kaktovik/<br>Kaktovik Village           | NSB/ City of Kaktovik/<br>Kaktovik Village | 3 to 6 years  |
| 23 | Weatherization Assistance Program           | High                             | NSB/ City of Kaktovik/<br>Kaktovik Village           | NSB/ City of Kaktovik/<br>Kaktovik Village | 1 to 5 years  |
| 24 | StormReady Program                          | High (City)                      | NSB/ City of Kaktovik/<br>Kaktovik Village           | NSB/ City of Kaktovik/<br>Kaktovik Village | 1 to 5 years  |
| 25 | Snow Fences                                 | High (Village)                   | NSB/ City of Kaktovik/<br>Kaktovik Village           | NSB/ City of Kaktovik/<br>Kaktovik Village | 3 to 6 years  |

Information about how the 2023 MJHMP will be integrated into Kaktovik’s relevant plans and programs moving forward is provided in Table F-10.

**Table F-10: Kaktovik Integration of 2023 MJHMP**

| MJHMP Section                   | Existing Plan/Policy/Program                  | Process / Timeframe   |
|---------------------------------|---|---|
| Section 3—Hazard Identification | North Slope Borough Comprehensive Plan        | Update of the NSB Comprehensive Plan to address hazards in the MJHMP that are not currently included. Consider creating a hazard profiles section in the Comprehensive Plan.  |
| Section 3—Hazard Identification | Kaktovik, Alaska Comprehensive Plan 2021-2041 | Update of the Kaktovik Comprehensive Plan to address hazards in the MJHMP that are not currently included. Consider creating a hazard profiles section in the Comprehensive Plan.   |
| Section 4—Risk Assessment       | North Slope Borough Emergency Response Plan   | Incorporate risk assessment findings into the North Slope Borough Emergency Response Plan to help identify and ensure critical resources to maintain operations internally and externally.  |
| Section 5—Mitigation Strategy   | 2020 – 2025 Six Year Capital Plan: Kaktovik   | Incorporate the mitigation actions provided in Table F-9 into the Six Year Capital Plan by further studying and evaluating the underlying problems or if studies exist that outline potential solutions. Begin the design stage to develop a plan for each identified project, the actions to be taken, engineering and construction required, schedule, and estimated costs. |

The community of Kaktovik reviewed the 2015 MJHMP’s mitigation strategies and documented progress made toward each local mitigation effort, provided in Table F-11. Mitigation actions that had not been implemented were considered for the 2023 MJHMP.

In addition, supporting local plans, studies, and programs were reviewed to determine additional progress in local mitigation efforts. Relevant ongoing actions were considered for the 2023 MJHMP as well.

**Table F-11: Kaktovik Progress in Local Mitigation Efforts**




| Action # | Action   | Status  |
|----------|--|---|
| 2.3      | Develop a StormReady program for all communities.  | Ongoing. Mitigation action modified and included in the 2023 MJHMP.   |
| 2.7      | Reinforce or relocate generator buildings to resist storm damage.  | Ongoing. The NSB is researching options for generator buildings. Mitigation action modified and included in the 2023 MJHMP. |
| 3.1      | Coastal communities: Seek funding to elevate, flood proof, buyout, or relocate structures subject to flooding and coastal storm surge. | Ongoing. Mitigation action modified and included in the 2023 MJHMP.   |
| 4.1      | Acquire the services of a suitably qualified firm or individual to study the effects of a warmer weather pattern on the permafrost.    | Ongoing. The NSB is working with ARIES for research and funding. Mitigation action modified and included in the 2023 MJHMP. |
| 4.2      | Apply for mitigation funds to insulate the permafrost from development.  | Ongoing. The NSB is working with ARIES for research and funding. Mitigation action modified and included in the 2023 MJHMP. |

**Table F-11: Kaktovik Progress in Local Mitigation Efforts**

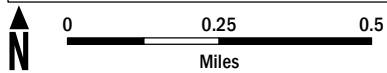
| Action # | Action  | Status  |
|----------|---|---|
| 5.1      | Conduct an annual fuel spill response exercise in each community in the NSB.                                    | Ongoing. The NSB conducts trainings annually, and efforts are being made to expand the program. Mitigation action modified and included in the 2023 MJHMP.                                  |
| 5.3      | Provide, or arrange provision of annual HAZWOPER training to community members who handle hazardous substances. | Ongoing. The NSB conducts trainings as needed. The NSB is working to ensure consistency for opportunities for refresher courses. Mitigation action modified and included in the 2023 MJHMP. |
| 6.1      | Encourage use of earthquake resistant materials and construction practices.                                     | Ongoing. Mitigation action modified and included in the 2023 MJHMP.   |
| 6.2      | Ensure all future development includes reinforcement for seismic protection in all communities.                 | Ongoing. Mitigation action modified and included in the 2023 MJHMP.   |
| 7.2      | Promote Firewise USA® building design, sites, and construction materials.                                       | Ongoing. Mitigation action modified and included in the 2023 MJHMP.   |
| 7.3      | Obtain Incident Command System training.  | Ongoing. The NSB conducts trainings on occasion and efforts are being made to expand the program. Mitigation action modified and included in the 2023 MJHMP.                                |



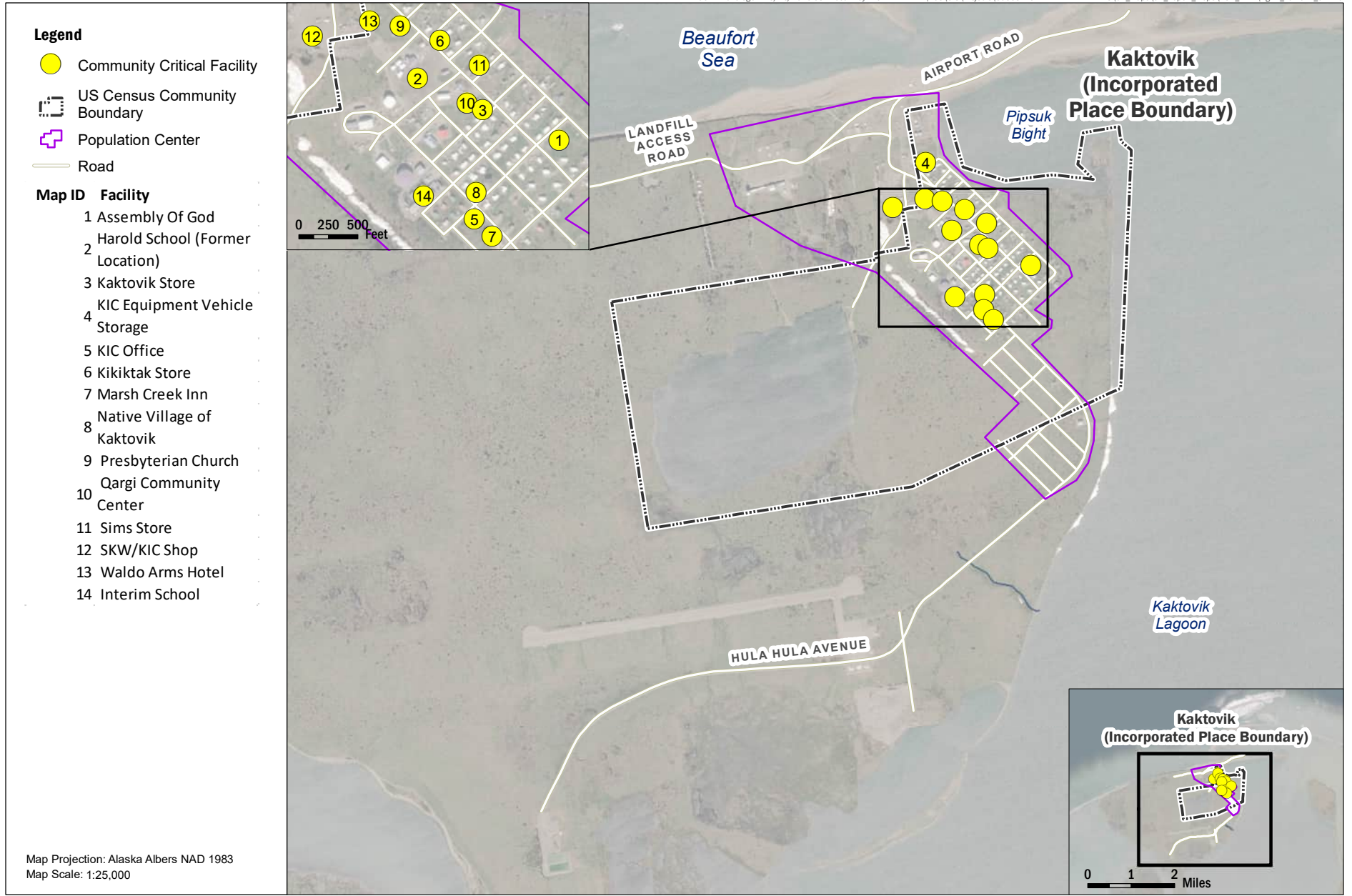
**Legend**

-  US Census Community Boundary (Borough, Census Designated Place, or Incorporated Place)
-  Population Center
-  Road

Map Projection: Alaska Albers NAD 1983  
Map Scale: 1:20,000



US Census TigerLine (2021)  
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community  
Source: Esri, Maxar, Earthstar Geographics, and the GIS User



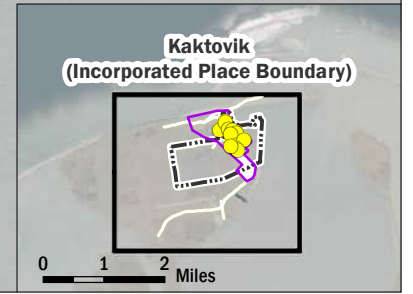
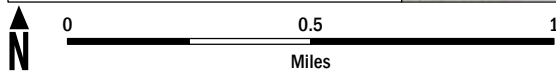
**Legend**

- Community Critical Facility
- US Census Community Boundary
- Population Center
- Road

**Map ID Facility**

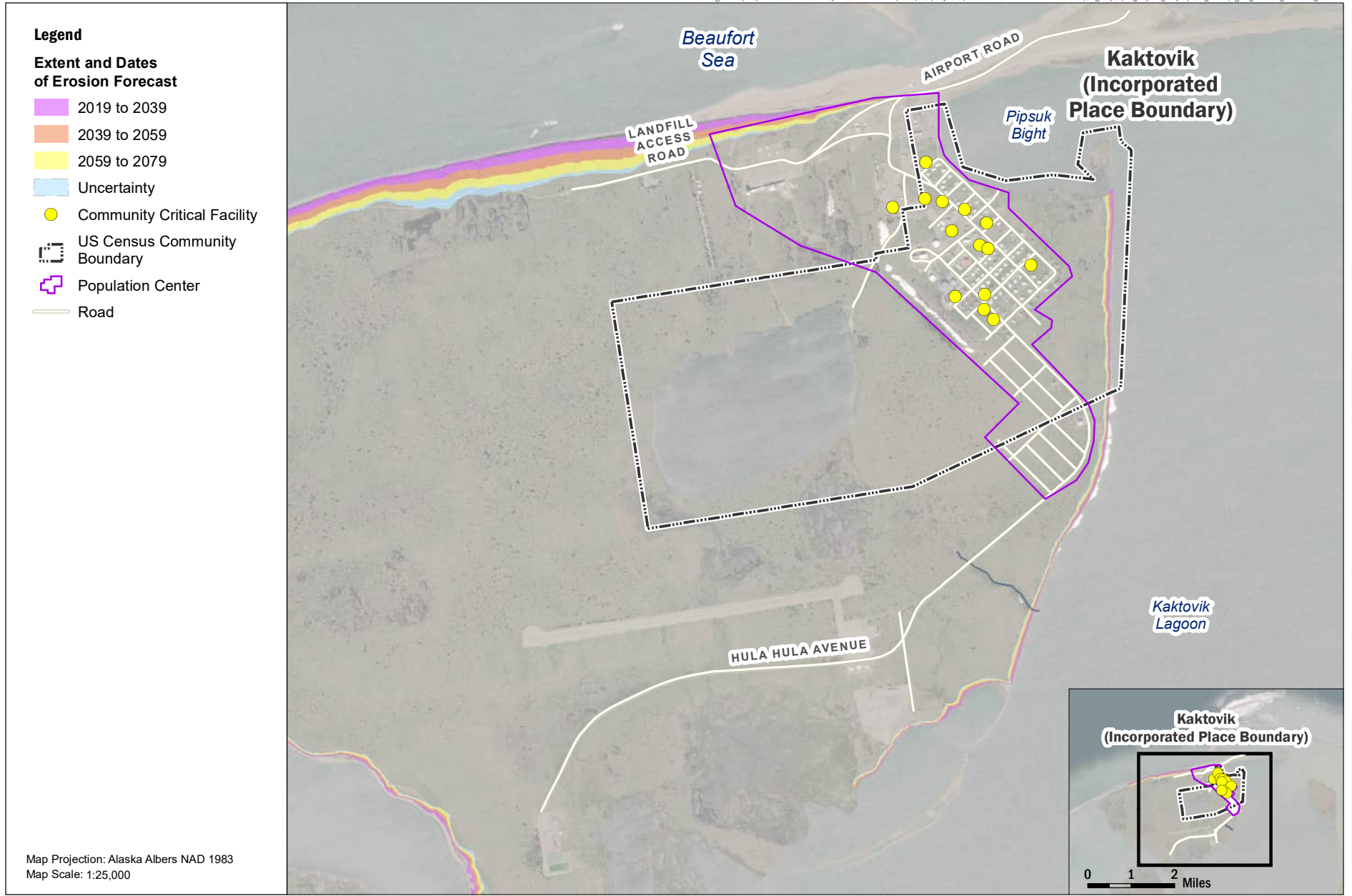
- 1 Assembly Of God
- 2 Harold School (Former Location)
- 3 Kaktovik Store
- 4 KIC Equipment Vehicle Storage
- 5 KIC Office
- 6 Kikiktak Store
- 7 Marsh Creek Inn
- 8 Native Village of Kaktovik
- 9 Presbyterian Church
- 10 Qargi Community Center
- 11 Sims Store
- 12 SKW/KIC Shop
- 13 Waldo Arms Hotel
- 14 Interim School

Map Projection: Alaska Albers NAD 1983  
Map Scale: 1:25,000



North Slope Borough (2022); US Census TigerLine (2021)  
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community  
Source: Esri, Maxar, Earthstar Geographics, and the GIS User





# EROSION HAZARDS AND KAKTOVIK CRITICAL FACILITIES

Figure F-3