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**DRAFT Catalog of Proposed Adaptation Actions and Policy Options
Health and Culture (HC) Technical Working Group**

July 16, 2008

Option No.	Adaptation Policy Option					Notes	Linkages
HC-1	Overarching Issues						
1.1	Require Health Impact Assessments be conducted for adaptation and mitigation options to ensure that they promote population health						
1.2	Develop uniform indicators, data systems, and community monitoring programs to monitor climate change-related health and culture impacts						
1.3	Establish community-based monitoring						

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	networks that sample ice thickness and other environmental variables, organize surveillance programs, provide a clearing house for government coordination, monitor indicators of community stress, and other activities						
1.4	Conduct an assessment of the capacity of communities to design and implement programs and activities to prepare for the health and culture risks of climate change						
1.4a	Ensure that the vulnerability of indigenous populations is explicitly addressed in the assessment						
1.4b	Identify actions to address gaps in and constraints to adaptive capacity						
1.5	Identify a central ombudsman agency to support rural communities deal with complex issues requiring input from multiple state agencies						
1.6	Develop education, training, and outreach						

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	programs to increase awareness of the health and culture risks of climate change						
HC-2	Waterborne diseases						
2.1	Assess the feasibility of developing a syndromic surveillance programs to identify outbreaks of waterborne diseases						
2.2	Develop public educational programs on the risks of and appropriate behaviors to reduce waterborne diseases						
2.2a	Develop specific programs targeting those most at-risk						
2.3	Strengthen and enforce watershed contamination protection laws						
2.4	Strengthen sanitation infrastructure at risk from flooding, melting permafrost, and other risks						
2.5	Strengthen water treatment systems to identify and manage new pathogens						
HC-3	Vectorborne diseases						
3.1	Augment surveillance and control programs for vectorborne diseases that are likely to be introduced, or						Work with Health Aides and their twice annual conference

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	become more common or widespread						
3.1a	Ensure the health system has adequate stocks of anti-venom and other interventions						
3.2	Develop public educational programs on the risks of vectorborne diseases						
3.2a	Emphasize identification, avoidance, and appropriate response						
3.2b	Develop specific programs targeting those most at-risk						
3.3	Conduct a capacity needs assessment of regions at greatest current and future risk						
HC-4	Food Security and Foodborne Diseases						
4.1	Develop syndromic surveillance programs to identify outbreaks of foodborne diseases						
4.1a	Incorporate risks from zoonotic pathogens and parasitic diseases						
4.2	Develop public educational programs on the risks of and appropriate responses to control foodborne diseases (including from spoilage)						
4.2a	Develop specific programs targeting						

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	those most at-risk						
4.3	Strengthen programs to address food security for subsistence fishing						
4.4	Conduct a capacity needs assessment of regions at greatest current and future risk for food security and foodborne diseases						
HC-5	Flooding						
5.1	Develop flooding early warning systems where possible, focusing on effective response actions						
5.2	Develop educational programs on the risks of and effective responses to flooding						
HC-6	Thermal Extremes						
6.1	Develop educational programs regarding the risks of and effective responses to cold extremes, including thinning ice and more dangerous hunting and fishing						
6.2	Create and designate "Warm Emergency Shelters", including systems for transporting elders and others to those centers without easy access to transportation						

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6.3	Develop statewide or other protocols for emergency deliveries of fuel						
6.4	Develop educational programs about new and increased risks of thinner sea, lake, and river ice						
6.5	Improve, as needed, rescue and health response capabilities						
6.6	Develop heatwave early warning systems, focusing on effective response actions						
6.7	Create and designate "Cool Community Centers" for people who do not have access to air conditioning, including systems for transporting elders and others to those centers without easy access to transportation						
6.8	Develop educational programs regarding the risks of and effective responses to heatwaves						
6.8a	Develop programs to inform care givers, pharmacists, churches, and other who work with vulnerable groups of the risks of and effective responses to						

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	heatwaves						
6.9	Increase the medical response capacity for heat stress, particularly in rural areas						
HC-7	Wildfires						
7.1	Develop educational programs on how to avoid injuries and death due to wildfires						
7.2	Develop evacuation response plans with key stakeholder involvement						
7.3	Assess the composition of emergency fire-fighting crews to ensure sufficient local capacity for fires						
HC-8	Toxic Exposures						
8.1	Conduct an assessment of areas at greatest risk						
8.2	Advocate for prompt action by responsible parties to clean-up toxic sites, and to minimize the spread of toxic chemicals before clean-up						
8.3	Develop public education programs on the risks, and avoidance of, toxic exposures						
HC-9	Mental Stress						
9.1	Develop a mental						

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	health plan in collaboration with appropriate state and local health professionals for communities expected to experience major impacts or dislocation						
9.2	Conduct a capacity needs assessment for mental health counseling after major evacuations or extreme weather events						
9.3	Provide support for rural communities to navigate the rules and mandates of multiple bureaucracies that must be engaged to deal with flooding, community relocation, infrastructure development, and other issues.						
HC-10	Health Care and Emergency Response Systems						
10.1	Conduct a capacity needs assessment for health care after major evacuations or extreme weather events						
10.2	Develop emergency response plans with the flexibility to incorporate future climate change risks						Work with Local Emergency Planning Committees
HC-11	Traditional Knowledge, Ways of Knowing, and Subsistence Culture						
11.1	Convene elders,						

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	<p>scientists, health professionals and others to discuss current and projected changes in the climate and the impacts of these changes on culture and subsistence, including new subsistence opportunities and ways to reduce health risks in a warming climate.</p>						
11.2	<p>Provide ongoing information to elders and others about measured and projected changes.</p>						
11.3	<p>Research and, as appropriate, convene representative ice cellar users to examine alternatives to ice cellars (e.g. drying, community freezers, or other preserving strategies).</p>						
11.4	<p>Explore new social subsistence activities (e.g., clamming or collecting driftwood after storm surges) that can maintain community socialization despite increasing difficulties with traditional subsistence activities (e.g., ice</p>						

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	fishing in many locations).						
11.5	Develop new sources of cash for Native communities to support the increasing cost of the larger boats and greater fuel needed to hunt for marine mammals further offshore and in rougher waters.						
HC-12	Archaeology and History						
12.1	Complete an assessment of artifact locations most at risk.						
12.2	Convene archeologists, Native elders and others to discuss how best to respond to artifacts at risk.						
12.3	Develop a plan to address how to maximize protection and recovery of the artifacts most at risk.						
12.4	Secure funding at the federal, state, foundation and corporate levels to protect and recover these artifacts.						
12.5	Complete a statewide assessment of the grave sites most at risk.						
12.6	Convene a respectful discussion about grave sites and explore best						

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	practices.						
12.7	Provide assistance for relocation of existing graves.						
12.8	Assist in identifying and opening new grave sites.						
HC-13	Diminishment or Change of Subsistence Diet						
13.1	Convene hunters, fishers, gatherers, scientists and managers to discuss current and projected changes in the climate and the impacts of these changes on subsistence, including new subsistence opportunities and ways to reduce health risks in a warming climate.						
13.2	Provide public education regarding projected impacts of climate change on hunting, fishing, and gathering opportunities and about new subsistence food opportunities (such as salmon in Northern Alaska), and safe food handling practices in warmer environments.						
13.3	Modify hunting and fishing seasons and other regulations to reflect changes in						

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	wildlife and fish locations and timing.						
13.4	Provide more testing of subsistence foods such as shellfish to promote consumption confidence.						
13.5	Create a citizen-based reporting system to document, potentially on-line, changes observed in fish and animal numbers, locations, and conditions as well as berry and other gathered food conditions.						
HC-14	Winter Sports and Recreation						
14.1	Provide more public education regarding where good skiing and snow machining conditions exist and where/when unsafe conditions exist.						
14.2	Relocate snow-based activities, events and trails to higher elevations which may require government land conveyances or new permits.						
14.3	Modify school skiing race seasons.						
HC-15	Summer Sports and Recreation						
15.1	Extend visitor seasons for government						

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	supervised or maintained opportunities, campgrounds, etc (e.g. McNeil River and Round Island).						
15.2	Provide public education regarding summer smoke exposure, new insects, heat stress and other risks to reduce health impacts.						
15.3	Revise interpretive signs on public lands to reflect changes due to climate.						
HC-16	Energy Demand						
16.1	Modify the built environment in locations in Alaska most at risk, to promote reduced heat creation and exposure, including white roofs, more trees, and less asphalt.						
16.2	Promulgate new regulations requiring or providing incentives for heat reduction strategies such as using green or white roofs, improving building insulation, etc.						
16.3	Develop statewide or other protocols for needed emergency deliveries of fuel.						

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16.4	Create and designate "warm emergency shelters", including a system for transporting elders and others.							
16.5	Provide public education on cold-based safety measures.							
HC-17	Gardening							
17.1	Provide public education about new gardening opportunities and also about new pests and control measures, to minimize, if possible, their spread.							
17.2	Provide additional testing and monitoring of incoming plants and Alaska garden specimens.							
17.3	Provide specific eradication efforts, as appropriate.							