

**Draft Catalog of State Actions
Health and Culture Technical Working Group**

Option No.	Adaptation Policy Option	Significance	Benefits and Effectiveness	Costs	Feasibility	Other	Notes
HC-1	<i>Overarching Issues</i>						
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	Develop programs on public awareness, outreach, training, and capacity building for the general public, health care providers, environmental staff at local and State organizations and agencies, and other relevant groups, to increase understanding of the health and culture risks of and appropriate responses to climate change						
1.4	Establish community-based monitoring 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						
1.5	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						
1.5a	Ensure that the vulnerability of indigenous populations is explicitly addressed in the assessment						
1.5b	Identify actions to address gaps in and constraints to adaptive capacity						
1.6	Identify a central ombudsman agency to support rural communities deal with complex issues requiring coordination among multiple state and federal agencies, local governments, NGOs, and others						

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1.7	Identify mechanisms to increase cooperation and collaboration across all actors involved in preparing for and responding to extreme weather events						
HC-2	<i>Waterborne diseases</i>						
2.1	Develop educational programs for the public, health care providers, environmental staff, and others on the risks of and appropriate behaviors to reduce waterborne diseases						
2.1a	Develop specific programs targeting those most at-risk						
2.2	Strengthen and enforce watershed contamination protection laws						
2.3	Modify, rebuild, or move sanitation and solid waste disposal infrastructure at risk from flooding, melting permafrost, and other risks						
2.4	Strengthen the ADEC source water protection program to include assessments for climate-related impacts such as new pathogens or increased contaminant infiltration/runoff from waste impoundments/storage areas due to thawing permafrost, erosion, and increased flooding						
HC-3	<i>Vectorborne diseases</i>						
3.1	Augment surveillance and control programs for vectorborne diseases that are likely to be introduced, or become more common or widespread						
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	<i>Food Security, Food Safety, and Foodborne Diseases</i>						
4.1	Conduct a capacity needs assessment of regions at greatest current and future risk for food security and foodborne diseases						

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4.1a	Increase the capacity of the State for self-sustaining agriculture						
4.1b	Strengthen programs to address food safety for subsistence fishing						
4.1.c	Develop specific programs ensuring the delivery of fresh foods targeting those most at-risk of nutritional deficiencies						
4.1d	Develop monitoring programs to determine changes in food security						
4.2	Strengthen programs to ensure water quality of waste management and agricultural run-off						
4.3	Develop public educational programs on the risks of and appropriate actions to prevent foodborne illness from food not kept under temperature control						
4.3b	Support development of surveillance programs in rural communities to ensure safe temperatures in ice cellars, and safe conditions for fermentation of traditional foods						
4.4	Identify infrastructure needs and implement programs to ensure retail food and manufactured food including seafood is held and transported under temperature control.						
4.5	Increase monitoring for emerging pathogens so that control measures may be implemented when needed						
4.5b	Increase monitoring of fish and animal health to ensure food safety						
HC-5	<i>Flooding & Other Extreme Weather Events</i>						
5.1	Develop flooding early warning systems where possible, focusing on effective response actions						
5.1a	Identify mechanisms for increased coordination and collaboration across all actors involved in preparing for and responding to extreme weather events						
5.2	Develop educational programs on the benefits and risks of flooding, including risks to dump sites, and effective responses						

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HC-6	<i>Thermal Extremes</i>						
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						
6.3	Develop statewide or other protocols for emergency deliveries of (1) fuel and (2) food where there are insufficient supplies for the winter						
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	Modify the built environment, promulgate regulations, or provide incentives to promote reduced heat creation and exposure, including white roofs, more trees, improving building insulation, less asphalt, etc.						
6.9	Develop educational programs regarding the risks of and effective responses to heatwaves						
6.9a	Develop programs to inform care givers, pharmacists, churches, and other who work with vulnerable groups of the risks of and effective responses to heatwaves						
6.10	Increase the medical response capacity for heat stress, particularly in rural areas						
6.11	Develop educational programs of possible risks during outdoor activities due to changing weather patterns, including increased exposure to waterborne pathogens						

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	during swimming						
6.12	Develop educational programs of additional risks due to changing temperatures, including increased prevalence of ichthyophonus						
6.13	Develop statewide or other protocols for needed emergency deliveries of fuel. Reassess what is defined as an emergency level of fuel.						
HC-7	<i>Air Quality and Wildfires</i>						
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						
7.4	Research the respiratory impact of single and multiple respiratory irritants, including smoke from volcanic emissions, wildfires, dust, pollen, and other allergens.						
7.5	Develop a process for changing subsistence access to hunting and fishing during off seasons when wildfires result in insufficient food during the winter						
7.6	Review state policies on burn boxes, taking into consideration effectiveness under different weather patterns and resulting exposure to toxics						
HC-8	<i>Toxic Exposures</i>						
8.1	Conduct an assessment of areas at greatest risk of exposure to toxics						
8.1a	Conduct regular surveys of the extent of exposure to toxics, including from waste management and food contaminants						
8.1b	Expand biomonitoring for toxic exposures, including of humans, animals, and fish						
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						

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8.3	Develop public education programs on the risks, and avoidance of, toxic exposures						
HC-9	<i>Mental Stress</i>						
9.1	Develop a mental 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	<i>Health Care and Emergency Response Systems</i>						
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						
HC-11	<i>Traditional Knowledge, Ways of Knowing, and Subsistence Culture</i>						
11.1	Convene elders, 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.						
11.2	Provide ongoing information to elders and others about measured and projected changes. Use proactive forms of communication commensurate with the community such as radio, Native corporation newsletters, etc.						
11.3	Strengthen state public health programs and rural community and cultural-based counseling services through financial support and training (that involves a two-way dialogue with community elders and others) to identify, target and reduce the mental stress that results						

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	from change or loss of traditional ways of life, such as the impaired ability to practice subsistence.						
HC-13	<i>Diminishment or Change of Subsistence Diet</i>						
13.1	Provide educational pamphlets to educate young subsistence hunters and gatherers about the risks of disease, parasites, etc. Educate about alternatives to eating raw meat such as cooking and freezing. Because many food practices are generations old, education and encouragement of safe practices are the only realistic alternatives.						
13.2	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.						
13.3	Form a state advocacy commission on subsistence activities with the necessary expertise and authority to deal with state, federal, and international regulatory bodies such as the Federal Subsistence Board, the Marine Mammal Commission, and the Alaska Department of Fish and Game.						
HC-12	<i>Archaeology and History</i>						
12.1	Complete an assessment of archaeological sites most at risk; convene archaeologists, anthropologists, Native elders, and others to discuss how best to respond to and prioritize sites at risk; develop a plan for the protection or recovery of the sites most at risk.						
12.2	Secure funding at the federal, state, foundation and corporate levels for the protection or recovery of archaeological sites.						
12.5	Complete a statewide assessment of the grave sites most at risk; assist in identifying and opening new gravesites; convene a respectful discussion about grave sites and explore best practices; provide assistance for the relocation of existing at-risk grave sites.						

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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.						Might go to Economic Activities
14.2	Relocate snow-based activities, events and trails to higher elevations which may require government land conveyances or new permits.						Might go to Economic Activities
14.3	Modify school skiing race seasons.						Might go to Economic Activities
HC-15 Summer Sports and Recreation							
15.1	Extend visitor seasons for government supervised or maintained opportunities, campgrounds, etc (e.g. McNeil River and Round Island).						Might go to Economic Activities
15.2	Provide public education regarding summer smoke exposure, new insects, heat stress and other risks to reduce health impacts.						Might go to Economic Activities
15.3	Revise interpretive signs on public lands to reflect changes due to climate.						Might go to Economic Activities
HC-17 Local Food Production							
17.1	Provide public education about new gardening opportunities and also about new pests and control measures, to minimize, if possible, their spread.						Might go to Natural Systems
17.2	Provide additional surveillance, testing, and monitoring of incoming plants and Alaska garden specimens to prevent the introduction of invasive plant and pest species; provide specific eradication efforts as appropriate.						Might go to Natural Systems