



**Description of Recommended High Priority Adaptation Options
November 3, 2008**

Option #	Adaptation Option Name	Option Description
EA-1 (3.1)	Increase Arctic Ocean Activities	Increase/improve federal and state search and rescue; responses; navigation safety; inspection, prevention, and enforcement; and icebreaking capabilities in the Arctic Ocean. The expectation is that ports, infrastructure, and other facilities will be developed as warming temperatures result in less ice and longer seasonal access. Increases in these facilities will promote increased ship traffic, greater population, and more access; will create job opportunities; and will require investments to ensure safety and environmental protections. (This option will require that the EA TWG coordinate with the Public Infrastructure (PI) TWG on recommendations for shipping and Arctic Ocean infrastructure development.)
EA-2 (9.3, 5.7)	Explore Economic Activity Opportunities Offered by Climate Change	Explore the economic opportunities that may result from climate change, such as carbon management, renewable energy (tidal, wind, hydroelectricity), energy efficiency, sustainable infrastructure development, etc. The unique Alaskan environment and experiences of the state in dealing with climate impacts provide opportunities for new and as yet unforeseen economic activities, as well as the development of climate adaptive strategies that may be useful (and exportable) elsewhere. The intent of this option is to explore and foster these economic opportunities. Coordination with the Alaska Industrial Development and Export Authority (AIDEA) may be an approach to foster green innovation and economic development.
EA-3 (1.6, 2.8, 3.6, 5.13, 6.1)	Develop Scenarios of the Alaskan Economy	Establish means to conduct scenario analyses (e.g., examine possible alternative futures based on known, probable, and possible trends) to assess the potential rise or decline of major aspects of the Alaskan economy likely to be affected by a changing climate (e.g. oil and gas, mining, tourism, shipping, ocean transportation, commercial fishing, climate adaptive activities). The scenarios will be based on social, economic, and cultural considerations (rather than physical-climatological variables) such as migration patterns within and to /from the state, infrastructure changes and requirements, sector job growth, sector effects on state revenues, overall projections of the state economy, emerging businesses, etc.

Option #	Adaptation Option Name	Option Description
EA-4 (7.7)	Participate in National and International Forums on Arctic Issues	Identify approaches to coordinate and encourage participation in national and international forums dealing with Arctic issues on topics such as resource management, boundaries, shipping, navigation, health, etc. to better inform Alaska on other/international efforts and to prepare U.S. delegations on the desires, needs and interests of the State and its native populations associated with changing climate. The option recognizes the need to foster means to communicate and coordinate among potential participants in such forums and to identify means to make information from the forums more accessible to other scientists, practitioners, and policy makers. Consider the possibility of establishing a "Center of Excellence" or "Networks of Excellence" to help public and private sector scientists and practitioners share knowledge and formulate plans for adapting to climate change.
EA-5 (7.3, 10.5)	Improve Availability of Mapping, Surveying, Charting, and Imagery Data	Improve the availability of real-time mapping, surveying, charting, digital elevation models (DEM), and imagery data to provide means to better track and understand economic impacts of and opportunities to address climate change. Consider management of this spatial information within a geographic information system to promote use of the data. Potential needs include examining and resolving boundary concerns, considerations of patterns of economic development, and better modeling to understand potential economic impacts. Development of these spatial data sets will contribute to a more robust information infrastructure to plan and adapt to climate change. Coordination with the University of Alaska system may be an approach. Ideally, data close to real time will be made available. The state currently has an effort to create a digital basemap (Statewide Digital Mapping Initiative) – and this will be considered as well.
Recommendation to Research Needs Group (10.2, 10.4)	Develop Higher Resolution Climate Modeling and Monitoring Data	Develop finer scale understanding of the Alaska climate both from modeling and improved monitoring to allow the development and dissemination of environmental information and design criteria for use in adapting to climate change.