

### Vulnerabilities/Actions/Policies Catalog of Options: Other Economic Activities (EA)

ISSUE	Vulnerabilities, Impacts, Opportunities	Option No.	Adaptation Action/ Policy Option	Potential Impact Reduction	Cost	Externalities, Feasibility	Priority for Analysis	Notes
<b>Oil and Gas</b>		<b>EA-1</b>						
<b>Onshore</b>	Reduced ice road, tundra travel							
<b>Onshore</b>	Reduced efficiency of gas compression							
<b>Onshore</b>	Animal behavior changes							
<b>Onshore</b>	Migration of contaminants from flooding of gravel pads							
<b>Offshore</b>	Possible extensive offshore development							
<b>Offshore</b>	Animal behavior changes							
<b>Offshore</b>	Increased oil spill risk							
<b>Pipeline</b>	Sea level rise and coastal erosion impacts							
<b>Pipeline</b>	Thawing permafrost impacts							

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Existing Infrastructure	Coastal infrastructure, old wells and waste pits							
<b>Mining</b>		<b>EA-2</b>						
	Increased placer mine erosion							
	Reduced freezeback for tailings dams and modifications to disposal sites							
	Mining access							
<b>Ocean Transportation</b>		<b>EA-3</b>						
	Open shipping lanes due to less Arctic ice	<b>3.1</b>	Increase Coast Guard, rescue, navigation and information assistance					
	Longer winter access to north seas	<b>3.2</b>	Finance and build basic shipping infrastructure					
		<b>3.3</b>	Monitor impacts of shipping on environment, hunting, fishing and communities					

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		3.4	Ensure oil spill response and clean up capabilities					
		3.5	Traffic and maximum benefits					
		3.6	New standards and regulations					
<b>Rural Non-Road Ground Transportation</b>		<b>EA-4</b>						
	Reduction in season length							
<b>Other Business Impacts and Opportunities</b>		<b>EA-5</b>						
<b>Insurance</b>	Individual and government insurance impacts	5.1	Federal "all perils" insurance guarantee program					
		5.2	Reward climate protection at residential and commercial properties					
		5.3	Other insurance alternatives					
		5.4	Future income for selling carbon credits and offsets					

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<b>New Energy Changes</b>	Increased demand for renewable energy sources	<b>5.5</b>	New wind, geothermal, solar, and other renewable energy projects have been recently installed or are seeking permits					
<b>Regulatory Changes</b>	Increased need for related permitting, siting, regulatory changes	<b>5.6</b>	Increased staffing and data needs in regulatory agencies (e.g., \$10M over 10 years in DEC)					
		<b>5.7</b>	Permit reassessments re: safe drinking water and sanitation in villages					
<b>Tourism and Recreation</b>		<b>EA-6</b>						
<b>Downhill Skiing</b>	Less snow, less colder weather	<b>6.1</b>	Higher altitude land for skiing					
<b>Other winter tourism</b>		<b>6.2</b>	Study likely impacts on winter tourism					

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		6.3	Benefits of warmer, but sub-freezing temperatures, for selected locations					
		6.4	Alternative winter tourism options					
		6.5	Road, airport, bridge maintenance to support tourism needs					
<b>Summer and shoulder seasons</b>	Damaged roads, diseased or dying forests, smoke	6.6	Market longer summer season, deal with damages and health					
		6.7	Extend services for longer season					
		6.8	Less cooling needs related to warmer summers					
		6.9	Permit and other changed itinerary requirements					
		6.10	Tourist health response system					

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	Damaged views of Denali	6.11	Locate/re-locate visitor centers					
		6.12	Expansion of tourism into Arctic Ocean					
		6.13	Modify signage					
		6.14	Public education					
<b>Boundaries and Ownership</b>		<b>EA-7</b>						
<b>Outer Continental Shelf</b>	Arctic countries surveying and "laying claim" to Arctic Ocean submerged lands	7.1	Advocate for Law of Sea Convention Treating provisions					
		7.2	Field research re: Outer Continental Shelf					
<b>Boundary Adjustments</b>	Coastline changes and property ownership, including submerged lands	7.3	Establish new boundary dispute protocols as needed					
	River erosion and property impacts		Establish new boundaries due to erosion					
<b>Energy Demand</b>		<b>EA-8</b>						
<b>Costs to Businesses</b>		8.1	Reduced winter fuel needs					
		8.2	Reductions in peak demand					

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		8.3	Increase in summer demand for cooling					
<b>Green Collar Job Initiative</b>		<b>EA-9</b>						