

INFRASTRUCTURE CLIMATE RISK ASSESSMENT - FEATURING THE PIEVC PROCESS (Example Project Risk Worksheet)

Consequence Score 0 - No Effect 1 - Insignificant 2 - Minor 3 - Moderate 4 - Major 5 - Catastrophic		Climate Parameter																																																																	
		Temperature																								Precipitation												Extreme Events																													
		Annual				Summer				Winter				Extreme				Extreme				Freeze Thaw				Annual				Intensity				Intensity				Drought Conditions				Winter Precipitation				Ice Storms				Extreme Winds				Lightning				Flood				Wildfire / Smoke					
		Mean Temperature (deg C)				Mean Temperature (deg C)				Mean Temperature (deg C)				Very Hot Days (+30 deg C)				Very Cold Days (-30 deg C)				Freeze Thaw Cycles				Annual Precipitation (mm)				Five Day Max Precipitation (mm)				Heavy Precipitation Days (20 mm)				Dry Days				Snow (mm)				Ice Storms				Tornado				Lightning				Flood Risk Report / Ice Jams				Fire					
Climate Projections (Climate Atlas - RCP 8.5)		Present		2050		2080		Present		2050		2080		Present		2050		2080		Present		2050		2080		Present		2050		2080		Present		2050		2080		Present		2050		2080		Present		2050		2080		Present		2050		2080													
Infrastructure Components		Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R	Y/N	L	C	R														
Adjacent Infrastructure																																																																			
Facilities																																																																			
Industry Sites	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	4		0		4		0		2		0		4		0		2		0		2		0		4		0		Y	3	3	9	Y	4	4	16		3		0		Y	4	4	16	Y	4	4	16	Y	4	4	16		4		0		Y	4	4	16	Y	4	3	12
	2080	5		0		5		0		2		0		5		0		1		0		2		0		4		0		3		9		4		16		3		0		4		16		5		20		5		20		5		20		5		15							
MB Public Works Yard	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	4		0		4		0		2		0		4		0		2		0		2		0		4		0		Y	3	3	9	Y	4	4	16		3		0		Y	4	4	16	Y	4	4	16	Y	4	3	12													
	2080	5		0		5		0		2		0		5		0		1		0		2		0		4		0		3		9		4		16		3		0		4		16		5		20		5		20		5		15											
Roads and Paths	Present	3		0		3		12		3		15		3		9		3		12		3		12		3		6		3		9		3		12		3		9		3		9		3		9		3		9															
	2050	4		0		Y	4	4	16		Y	2	5	10		Y	4	3	12		Y	2	4	8	Y	2	4	8		Y	3	3	9	Y	4	4	16		Y	3	3	9	Y	4	4	16		Y	3	3	9	Y	4	3	12												
	2080	5		0		5		20		2		10		5		15		1		4		2		4		8		4		8		3		9		4		16		3		9		4		16		5		20		5		15													
Rail Infrastructure	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	4		0		4		0		2		0		y	4	3	12		2		0		y	2	3	6		y	2	3	6		4		0		y	3	4	12		y	4	4	16		3		0		y	4	3	12													
	2080	5		0		5		0		2		0		5		15		1		0		2		3		6		4		0		3		9		4		16		3		0		4		16		5		20		5		15													
Water and Wastewater Facilities	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	4		0		4		0		2		0		y	4	3	12		y	2	3	6		y	2	3	6		4		0		y	3	4	12		y	4	4	16		3		0		y	4	2	8		y	4	3	12												
	2080	5		0		5		0		2		0		5		15		1		3		2		6		4		0		3		9		4		16		3		0		4		16		5		20		5		10															
Community Buildings / Schools	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	4		0		4		0		2		0		y	4	3	12		y	2	3	6		y	2	3	6		4		0		y	3	3	9		y	4	3	12		y	4	3	12		y	4	2	8		y	4	4	16											
	2080	5		0		5		0		2		0		5		15		1		3		2		6		2		0		4		0		3		9		4		12		3		0		4		12		5		15															
Public Areas (trails/parks)	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	y	4	3	12		4		0		2		0		y	4	4	16		y	2	3	6		2		0		y	4	2	8		y	3	3	9		y	4	3	12		y	3	2	6		y	4	3	12															
	2080	5		15		5		0		2		0		5		20		1		3		2		0		4		8		3		9		4		16		3		0		4		16		5		20		5		20															
Drainage Infrastructure	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	4		0		4		0		2		0		4		0		2		0		2		0		4		0		y	3	3	9		y	4	4	16		y	3	2	6		y	4	4	16		4		0		4		0		y	4	4	16						
	2080	5		0		5		0		2		0		5		0		1		0		2		0		4		0		3		9		4		16		3		0		4		16		5		0		5		20		5		15											
River	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	y	4	4	16		y	4	3	12		y	2	3	6		y	4	4	16		y	2	3	6		2		0		y	4	3	12		y	3	3	9		y	4	4	16		y	3	3	9		y	4	4	16													
	2080	5		20		5		15		2		6		5		20		1		3		2		0		4		3		9		4		16		3		0		4		16		5		0		5		20		5		15													
Maintenance	Present	3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0		3		0															
	2050	4		0		4		0		y	2	2	4		y	4	4	16		y	2	4	8		2		0		4		0		y	3	3	9		y	4	4	16		y	3	2	6		y	4	3	12																
	2080	5		0		5		0		2		4		5		20		1		4		2		4		2		0		4		0		3		9		4		16		3		6		4		12		5		20		5		20											

