Earth's Future

Supporting Information for

Projected Increase in Hydrologic Extremes in the Mid-21st Century for Northeastern United States

Sujan Pal[1], Jiali Wang[1], Jeremy Feinstein[1], Eugene Yan[1], Veerabhadra Rao Kotamarthi[1]

[1]Environmental Science Division, Argonne National Laboratory, Lemont, IL, USA

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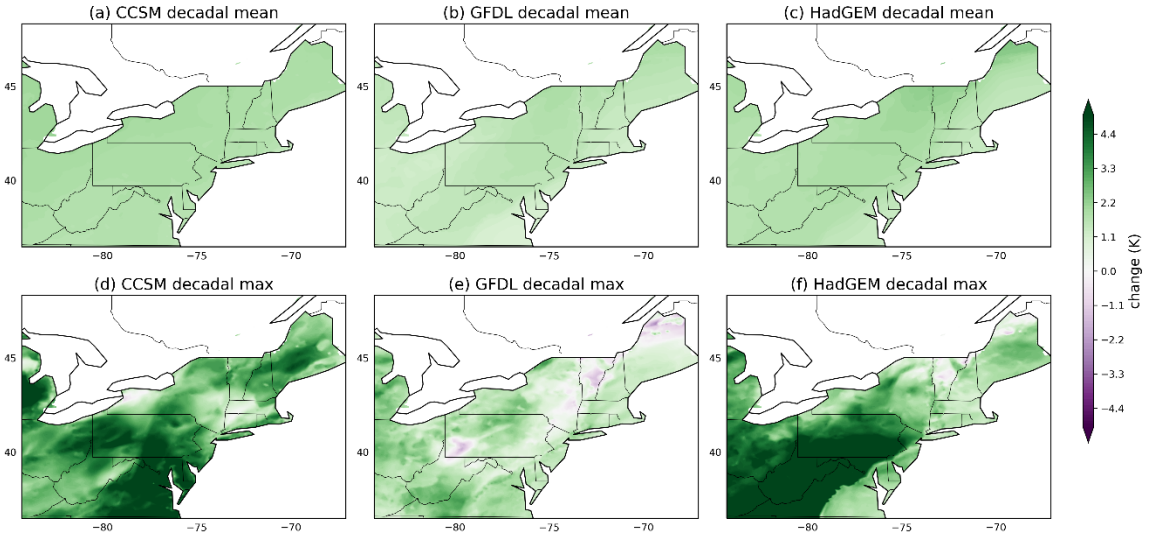

Figure S1. Changes in mean (top row) and maximum (bottom row) temperature as projected in three GCMs.

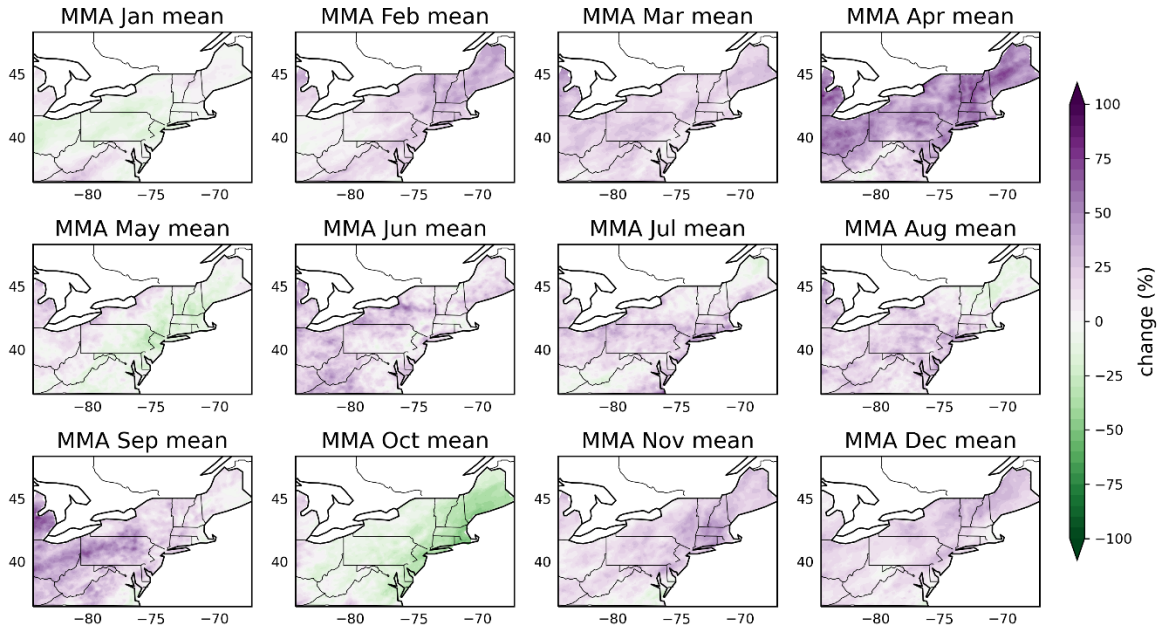

Figure S2. Changes in monthly mean precipitation as projected in multi-model ensemble of CCSM-WRF, GFDL-WRF and HadGEM-WRF.

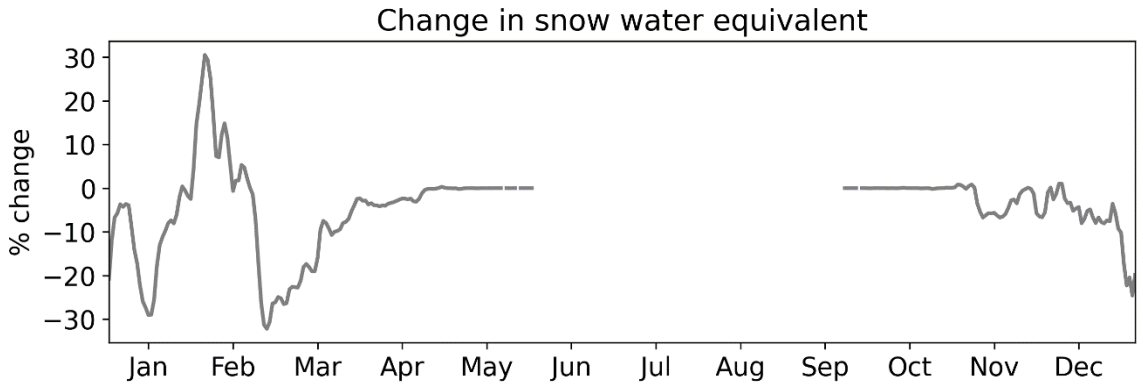

Figure S3. Future changes in domain average snow water equivalent.

Table S1. Calibrated 22 parameters and the optimum parameters found after five iterations based on the four USGS stations indicated in Figure 1.

Calibrated parameter	Default	Lower bound	Upper bound	Optimum parameter
MannN1	0.55	0.35`	0.6	0.6
MannN2	0.35	0.15	0.35	0.199
MannN3	0.15	0.08	0.15	0.15
MannN4	0.1	0.05	0.15	0.15
MannN5	7×10^{-2}	0.02	0.1	0.072
MannN6	5×10^{-2}	0.015	0.1	0.44
MannN7	4 x 10-2	0.01	0.08	0.08
MannN8	3 x 10-2	0.005	0.06	0.03
Xslope1	0.1	1×10^{-4}	1	0.056
REFDK	2×10^{-6}	1×10^{-8}	1×10^{-5}	7.4×10^{-7}
REFKDT	1	0.01	5	3.616
ov1 (urban)	2.5×10^{-2}	0.005	0.06	0.025
ov2 (dry crop)	3.5×10^{-2}	0.015	0.06	0.025
ov3 (irrigated crop)	3.5×10^{-2}	0.015	0.06	0.035
ov5 (crop-grass)	3.5×10^{-2}	0.015	0.06	0.024
ov6 (crop-wood)	6.8×10^{-2}	0.035	0.25	0.099
ov7 (grass)	5.5×10^{-2}	0.015	0.25	0.055
ov10 (savanna)	5.5×10^{-2}	0.015	0.3	0.053
ov11 (deciduous forest)	0.2	0.1	0.3	0.22
ov14 (evergreen forest)	0.2	0.1	0.3	0.165
ov15 (mixed forest)	0.2	0.1	0.3	0.2
ov16 (water)	5×10^{-3}	0.001	0.01	0.005