

ICNet Members' New England Research & Project Survey



Research/Project Focus	Climate change Projections for the City of Cambridge, Massachusetts.
Research/Project Description	Application of statistically downscaled station-based climate output from a collection of AOGCMs and future scenarios to assess the probability of extreme weather events (temperature and precipitation) for further use in infrastructure impact assessments. . In collaboration with Paul Kirshen and Kleinfelder
Primary Category*	Climate Model Output
Geographic Location	Cambridge, Massachusetts.3 long-term weather stations: Reading, Jamaica Plain (had insufficient precipitation data), Boston Logan International Airport, and 3 short-term stations: Cambridge, Belmont, Brighton
Funding	City of Cambridge
Contact	Katharine Hayhoe, Paul Kirshen, UNH: Paul.Kirshen@unh.edu
Infrastructure sectors effected, subject area	All
For modeled climate or sea level rise projections, AOGCM or other sources used	CMIP3 AOGCMs: CCSM3, GFDL-CM2.1, HadCM3, PCM (SRES scenarios: A1fi, B1) CMIP5 AOGCMs: CCSM4, CNRM-CM5, CSIRO-Mk3.6.0, MPI-ESM-LR, MPI-ESM-MR, HadGEM2-CC, INMCM4, IPSL-CM5A-LR, MIROC5, MRI-CGCM3 (RCP scenarios 4.5, 8.5)
Other Information, data, models, used	Station observations (daily minimum and maximum temperature, precipitation, relative humidity),

Time periods analyzed	3 30-year periods: historical (1971-2000), 2030s (2020-2049), and 2070s (2060-2089)
Status /Date submitted to ICNet	In Progress, nearing completion. Submitted: Oct, 2013
Brief key findings to date	Projections show increases in temperature, including high-temperature extremes. Precipitation is projected to increase, mainly in winter and spring, with increases in heavy precipitation as well as precipitation intensity.
Key publications/reports?	Report (not yet published): Climate Change Projections for the City of Cambridge.
Other information (e.g., web links to technical reports).	N/A

*** Categories: Roads, bridges, and culverts; Pavement and/or soils; Hydrology (study of data/floods); Environmental/water resources (stormwater, drinking water); Transportation assets (network); Climate model output**