

About the NEX-DCP30 Viewer

The following summary is the output of the NEX-DCP30 Viewer climate prediction modelling program. Worldwide climate modeling centers participating in the 5th Climate Model Assessment Program (CMIP5) are providing climate information for the ongoing Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC). The output from the global climate models is typically provided on grids on the order of ~1 to 3 degrees in latitude and longitude (roughly 80 to 230 km at 45°latitude). To derive higher resolution data sets from the global models, NASA has downscaled the CMIP5 model temperature and precipitation data using statistical methods to produce the NEX-DCP30 data on a very fine 800-m grid that covers the continental United States (CONUS) for a variety of climate change assessments that require higher resolution data.

The full NEX-DCP30 dataset includes 33 climate models and their respective downscaled data for historical (1950-2005) and 21st century simulations under four Representative Concentration Pathways (RCP) emission scenarios developed for AR5. The NEX-DCP30 Viewer, includes historical and future (2006-2099) climate for RCP4.5 (one of the possible trajectories for greenhouse gas (GHG) emissions in which atmospheric GHG concentrations continue to rise but are capped so as not to exceed a radiative equivalent of 4.5 Wm⁻² in 2100) and RCP8.5 (the most aggressive emissions scenario in which GHGs continue to rise unchecked through the end of the century leading to an equivalent radiative forcing of 8.5 Wm⁻².)

The NEX-DCP30 Viewer allows the user to visualize projected climate change for any county in the continental United States. To create a manageable number of permutations for the viewer, we have averaged the NEX-DCP30 data into 25-year climatologies that span the 21st century. The viewer provides a number of useful tools for characterizing climate change such as: climographs (plots of monthly averages), histograms that show the distribution or spread of the model simulations, monthly time series spanning 1950-2099, and tables that summarize changes in the quantiles of temperature and precipitation (e.g., extremes). The application also provides access to comprehensive, 3-page PDF summary reports for the CONUS, each states and each county.

The summary below was run to generate annual means, and shows the average of 30 model simulations (Mean Model) for the variables max temperature, min temperature, and precipitation.

You can run the predictor for specific models or to generate monthly mean data, by visiting the [NEX-DCP30 website](#). The model is simple to use and includes a tutorial. Data can be viewed on-screen or output in either metric or English units, to a PDF file or in tabular form (.CSV file).

Source: US Geological Survey

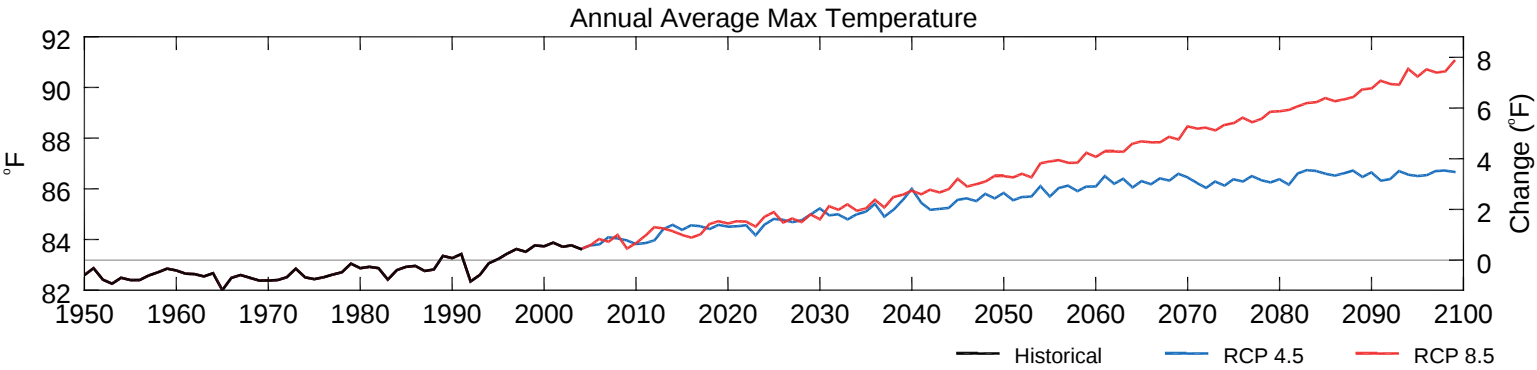
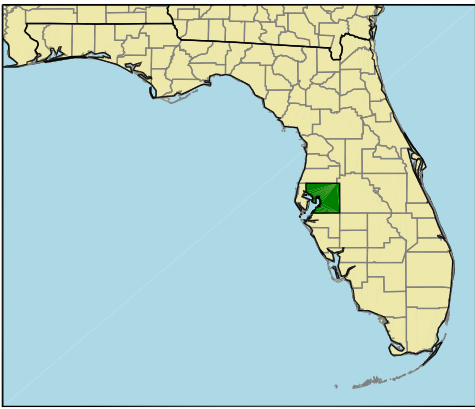
Location : Hillsborough County, Florida

Dataset : NASA NEX-DCP30

Model : MeanModel

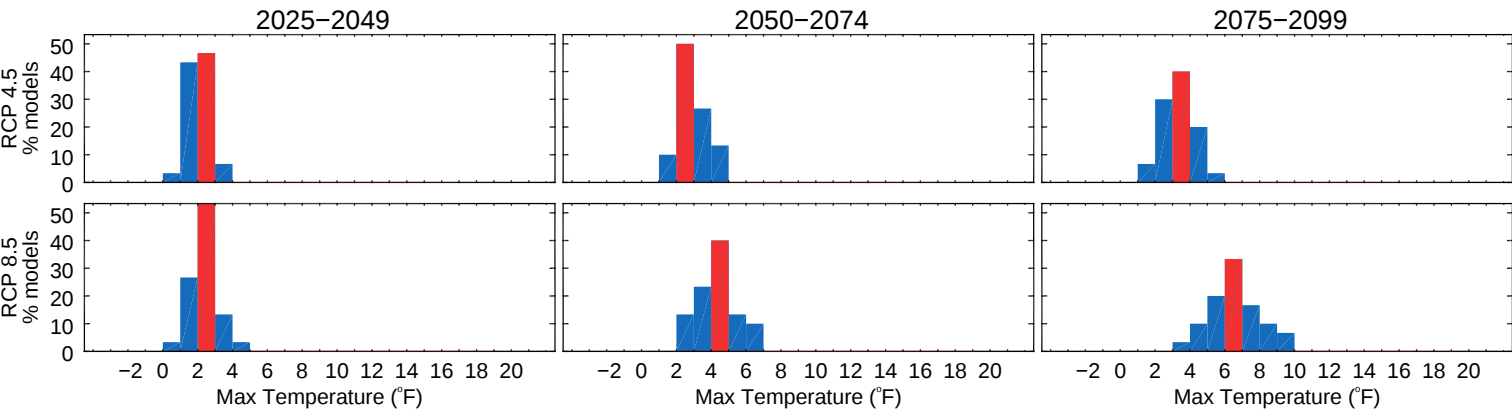
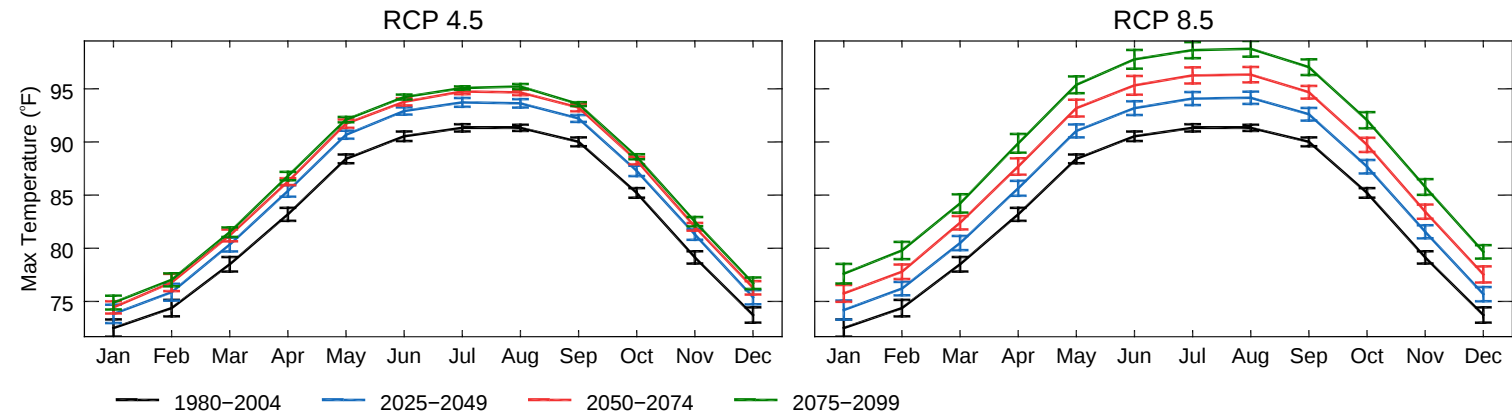
Variable : Max Temperature

Time Period : Annual Average



Max Temperature Percentile Table (all months)

	RCP 4.5	1%	5%	10%	25%	50%	75%	90%	95%	99%
1980–2004		71.51	72.50	73.36	76.37	84.35	90.27	91.25	91.56	91.83
2025–2049		72.55	73.98	74.81	77.67	86.48	92.62	93.59	93.90	94.41
2050–2074		73.71	74.48	75.50	78.58	87.21	93.49	94.66	94.89	95.13
2075–2099		74.03	75.08	76.10	78.85	87.92	93.86	95.11	95.22	95.49
RCP 8.5										
1980–2004		71.51	72.50	73.36	76.37	84.35	90.27	91.25	91.56	91.83
2025–2049		73.24	74.32	75.26	77.92	86.85	92.81	93.94	94.53	95.04
2050–2074		74.52	75.91	76.84	80.04	88.70	94.95	96.30	97.03	97.47
2075–2099		76.41	77.72	78.97	81.76	91.17	97.38	98.65	99.16	99.82



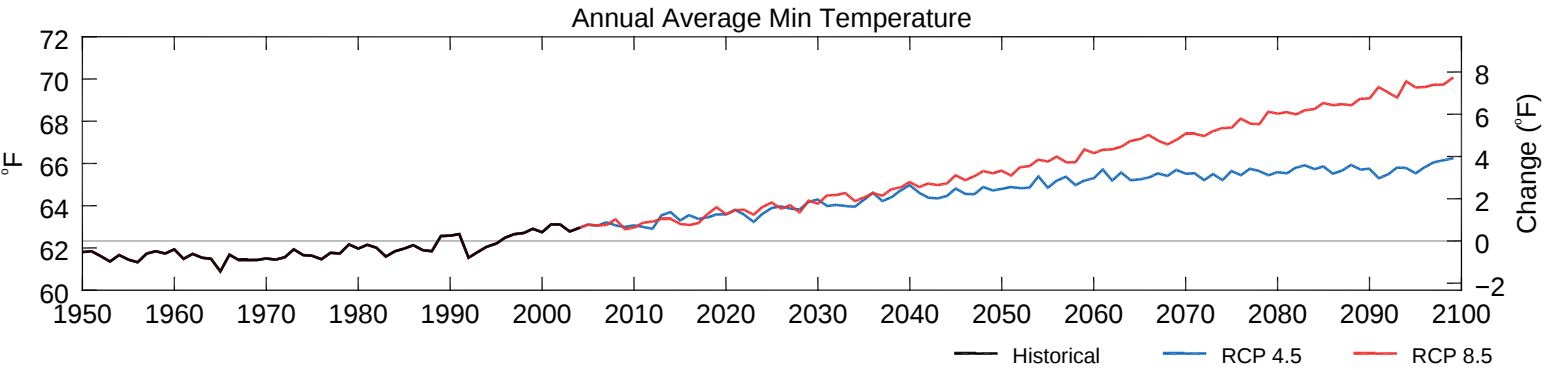
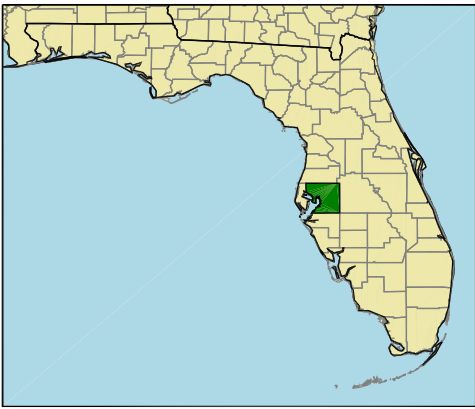
Location : Hillsborough County, Florida

Dataset : NASA NEX-DCP30

Model : MeanModel

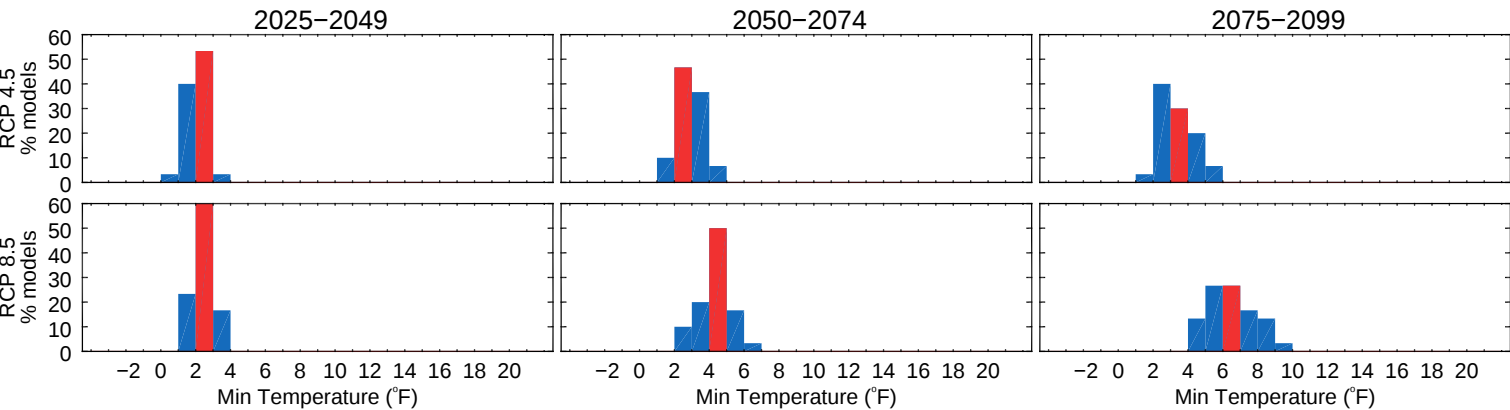
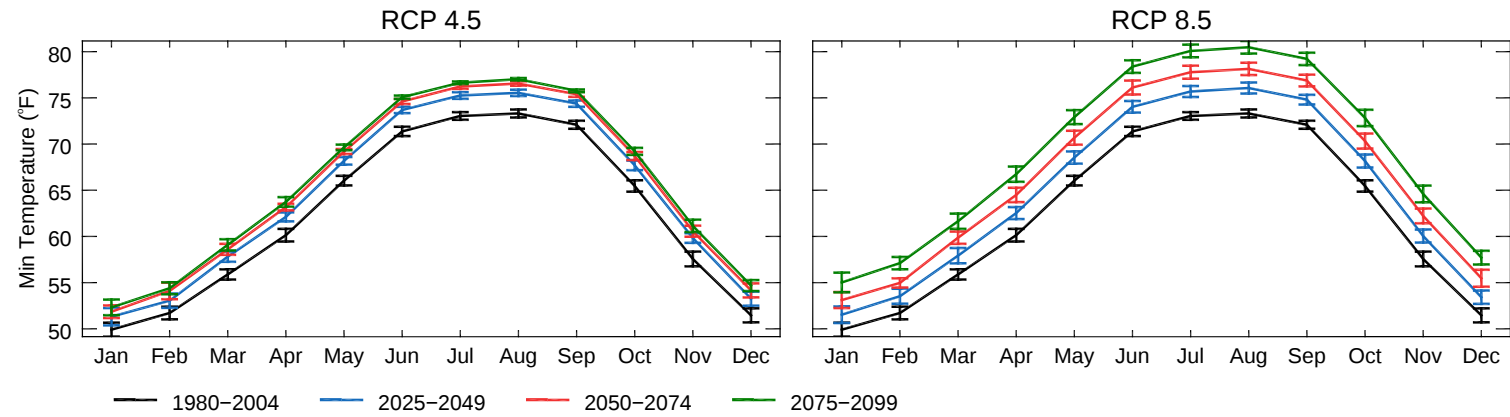
Variable : Min Temperature

Time Period : Annual Average



Min Temperature Percentile Table (all months)

	RCP 4.5	1%	5%	10%	25%	50%	75%	90%	95%	99%
1980–2004		48.98	50.13	50.80	53.56	62.95	71.78	73.04	73.38	73.94
2025–2049		49.96	51.49	52.28	55.24	65.12	74.05	75.31	75.60	76.05
2050–2074		51.01	52.07	53.08	56.09	66.06	74.98	76.35	76.60	76.89
2075–2099		51.26	52.35	53.76	56.41	66.70	75.46	76.77	77.00	77.13
RCP 8.5										
1980–2004		48.98	50.13	50.80	53.56	62.95	71.78	73.04	73.38	73.94
2025–2049		50.52	51.77	52.60	55.44	65.37	74.43	75.72	76.31	76.77
2050–2074		51.80	53.37	54.47	57.68	67.32	76.55	77.90	78.55	79.09
2075–2099		53.37	55.03	56.67	59.28	69.73	78.77	80.11	80.81	81.37



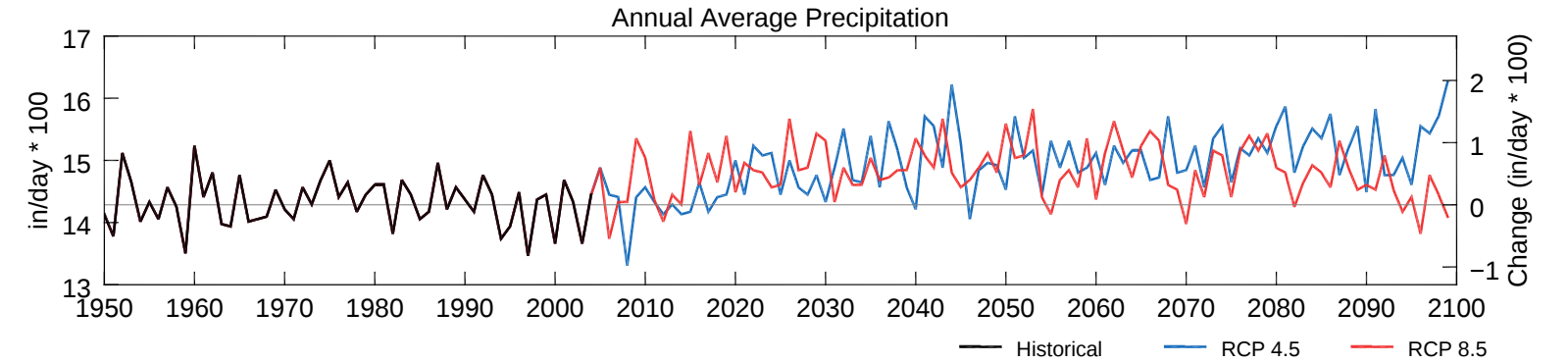
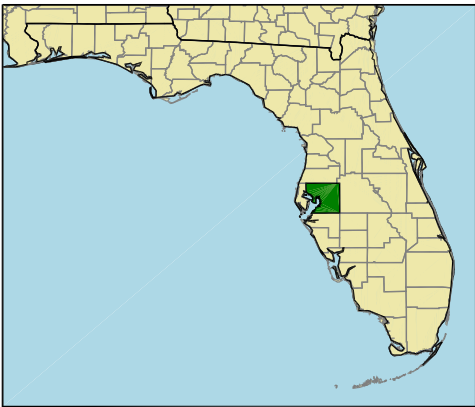
Location : Hillsborough County, Florida

Dataset : NASA NEX-DCP30

Model : MeanModel

Variable : Precipitation

Time Period : Annual Average



Precipitation Percentile Table (all months)

	RCP 4.5	1%	5%	10%	25%	50%	75%	90%	95%	99%
1980–2004		4.93	6.50	6.93	8.10	10.51	23.90	25.82	26.37	28.03
2025–2049		5.87	6.62	7.24	8.78	11.20	24.44	26.33	27.35	29.37
2050–2074		5.71	6.78	7.52	9.04	11.22	24.33	26.38	27.24	28.97
2075–2099		6.06	7.17	7.60	8.87	11.50	24.75	26.57	27.32	29.60
RCP 8.5										
1980–2004		4.93	6.50	6.93	8.10	10.51	23.90	25.82	26.37	28.03
2025–2049		5.63	6.65	7.17	8.75	11.08	24.52	26.57	27.63	29.45
2050–2074		5.47	6.50	7.28	8.83	11.50	23.97	25.98	27.47	30.08
2075–2099		5.51	6.73	7.33	8.86	11.59	22.94	25.19	27.08	30.62

