SUPPLEMTARY MATERIAL

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Supplementary Table S2 Descriptive statistics for daily maximum air temperature, °C, for Adrian, MI; Fort Wayne, IN; and Norwalk, OH from the climate projection sources, different bias correction methods, and future climate projections.

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FIGURES

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Supplementary Figure S1 (A) (a) Density distribution charts for Fort Wayne, IN for count of monthly precipitation totals, mm, in each year (b) Distribution of annual precipitation totals, mm, with range bound from different climate model outputs. (For the period from 1966-2015 for GDO (right frame) and 1966-2005 for MACA (left frame))

Supplementary Figure S1 (B) (a) Density distribution charts for Norwalk, OH for count of monthly precipitation totals, mm, in each year (b) Distribution of annual precipitation totals, mm, with range bound from different climate model outputs. (For the period from 1966-2015 for GDO (right frame) and 1966-2005 for MACA (left frame))

Supplementary Figure S2.A. Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily precipitation, mm and to present the future climatic scenarios (2006-2099) for Adrian, MI.

Supplementary Figure S2.B. Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily precipitation, mm and to present the future climatic scenarios (2006-2099) for Norwalk, OH.

Supplementary Figure S2.C. Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily maximum temperature, °C and to present the future climatic scenarios (2006-2099) for Fort Wayne, IN.

Supplementary Figure S2.D. Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily maximum temperature, °C and to present the future climatic scenarios (2006-2099) for Norwalk, OH.

Supplementary Figure S2.E. Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily minimum temperature, °C and to present the future climatic scenarios (2006-2099) for Adrian, MI.

Supplementary Figure S2.F. Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily minimum temperature, °C and to present the future climatic scenarios (2006-2099) for Fort Wayne, IN

Supplementary Figure S3.A. Comparison of GDO and MACA climate projection sources for different climate indices for Fort Wayne IN between 1966 and 2005 (GDO_NT: GDO No Treatment; MACA_NT: MACA No Treatment).

Supplementary Figure S3.B. Comparison of GDO and MACA climate projection sources for different climate indices for Norwalk, OH between 1966 and 2005 (GDO_NT: GDO No Treatment; MACA_NT: MACA No Treatment).

TABLE LIST

Supplementary Table S1 Descriptive statistics for daily precipitation, mm, for Adrian, MI; Fort Wayne, IN; and Norwalk, OH from the different climate projection sources, different bias correction methods, and future climate projections.

Adrian, MI									
Treatment	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	Days with no Precipitation (%)	Maximum	Minimum
Observed	2.4	0.0	6.5	4.9	36.0	0.4	66.9	120.4	0.0
GDO	(2.3-2.4), 2.4	(0.2-0.2), 0.2	(5.4-5.8), 5.6	(4.1-5.3), 4.5	(22.8-43.3), 29.3	(0.4-0.4), 0.4	(29.8-31.9), 30.9	(70.6-110.1), 84.7	(0-0), 0
MACA NoTreatment	(2.5-2.6), 2.5	(0-0), 0	(5.4-5.7), 5.6	(3.8-4), 3.9	(18.8-21.9), 20.8	(0.4-0.5), 0.5	(53.5-54.1), 53.9	(67.2-71), 69.7	(0-0), 0
MACA Conventional	(2.4-2.5), 2.4	(0-0), 0	(6.5-6.6), 6.6	(5.3-5.6), 5.5	(41.9-50.7), 47.9	(0.4-0.4), 0.4	(53.5-54.1), 53.9	(116.6-134.3), 125.1	(0-0), 0
MACA CLIGEN75	(0.6-0.7), 0.7	(0.5-0.6), 0.5	(0.5-0.5), 0.5	(1.3-1.5), 1.4	(2.5-3.4), 2.9	(1.3-1.3), 1.3	(7.5-9.2), 8.4	(3.9-5.5), 4.7	(0-0), 0
MACA CLIGEN90	(1.9-2), 1.9	(1.7-1.8), 1.8	(1-1.1), 1.1	(0.8-1), 0.9	(0.9-1.8), 1.2	(1.7-1.9), 1.8	(0.1-0.2), 0.1	(7.9-9.6), 8.6	(0-0), 0
MACA LARSWG75	(2.3-2.6), 2.4	(1.8-2.1), 1.9	(1.9-2), 1.9	(1.4-1.7), 1.5	(2.9-4.4), 3.5	(1.2-1.3), 1.2	(2-3.7), 2.6	(13.9-20.1), 18.1	(0-0), 0
MACA LARSWG90	(7.4-7.8), 7.6	(6.7-7.1), 6.8	(4.2-4.5), 4.3	(1-1.1), 1.1	(1.3-2.1), 1.7	(1.7-1.8), 1.7	(0-0), 0	(30.5-40.1), 35.4	(0-0.1), 0
RCP4.5	(2.5-2.7), 2.6	(0-0), 0	(5.7-6.3), 6	(3.8-4.5), 4.3	(19.2-33.3), 27.9	(0.4-0.5), 0.4	(52.3-53.8), 53.1	(83-127.3), 107	(0-0), 0
RCP4.5 Treated	(2.5-2.7), 2.6	(0-0), 0	(6.8-7.6), 7.3	(5.5-8.1), 6.6	(50.9-157.3), 84.2	(0.3-0.4), 0.4	(52.3-53.8), 53.1	(164.2-302.6), 214.4	(0-0), 0
RCP8.5	(2.5-2.8), 2.7	(0-0), 0	(5.8-6.5), 6.1	(3.9-4.5), 4.3	(21.5-31.5), 27.6	(0.4-0.5), 0.4	(52.7-54.7), 53.5	(88.9-122.1), 103.9	(0-0), 0
RCP8.5 Treated	(2.5-2.8), 2.7	(0-0), 0	(6.8-7.9), 7.4	(5.6-7), 6.3	(50.9-91.2), 68.1	(0.3-0.4), 0.4	(52.7-54.7), 53.5	(157.5-258), 191.1	(0-0), 0
Fort Wayne, IN									
Observed	2.5	0.0	6.7	4.7	32.2	0.4	63.5	111.8	0.0
GDO	(2.5-2.6), 2.5	(0.4-0.5), 0.4	(4.9-5.3), 5.1	(3.4-4.0), 3.7	(15.2-22.0), 18.3	(0.5-0.5), 0.5	(15.4-20.7), 17.7	(52.0-72.0), 63.7	(0-0), 0
MACA NoTreatment	(2.6-2.7), 2.6	(0-0), 0	(5.8-6), 5.9	(3.9-4.1), 4	(20.5-23.3), 22	(0.4-0.4), 0.4	(54.6-55.5), 54.9	(65-74.5), 72.3	(0-0), 0
MACA Conventional	(2.5-2.5), 2.5	(0-0), 0	(6.7-6.7), 6.7	(5-5.5), 5.3	(35.8-45.1), 40.3	(0.4-0.4), 0.4	(54.6-55.5), 55	(92.7-127.6), 108.8	(0-0), 0
MACA CLIGEN75	(0.7-0.7), 0.7	(0.5-0.6), 0.6	(0.5-0.6), 0.5	(1.2-1.5), 1.3	(2.1-3.4), 2.5	(1.2-1.3), 1.3	(9.6-12.4), 11.2	(4.1-5.4), 4.6	(0-0), 0
MACA CLIGEN90	(2-2.1), 2	(1.9-1.9), 1.9	(1.1-1.1), 1.1	(0.8-1), 0.9	(0.8-1.3), 1.1	(1.8-1.9), 1.8	(0.1-0.3), 0.2	(8.1-11.8), 9.1	(0-0), 0
MACA LARSWG75	(2.4-2.7), 2.5	(1.9-2.3), 2	(2-2.1), 2	(1.4-1.6), 1.4	(2.7-4.2), 3	(1.2-1.3), 1.2	(3.6-5.4), 4.4	(15.2-22.9), 18.4	(0-0), 0
MACA LARSWG90	(7.7-8.2), 7.9	(7-7.5), 7.1	(4.3-4.6), 4.5	(1-1.1), 1	(1.4-2.5), 1.8	(1.7-1.8), 1.8	(0-0), 0	(35.5-49.8), 40.5	(0-0), 0
RCP4.5	(2.7-2.9), 2.8	(0-0), 0	(6.2-6.6), 6.3	(4.1-5.1), 4.4	(23.1-57.8), 30.6	(0.4-0.4), 0.4	(53.1-55), 54.3	(83.2-208.6), 116.8	(0-0), 0
RCP4.5 Treated	(2.7-2.9), 2.7	(0-0), 0	(7.4-8.1), 7.7	(5.7-10.7), 6.8	(50.8-372.2), 100.8	(0.3-0.4), 0.4	(53.1-55), 54.3	(134.9-454.6), 213.2	(0-0), 0
RCP8.5	(2.6-2.9), 2.8	(0-0), 0	(6.2-6.7), 6.5	(4.2-4.8), 4.5	(25.5-38.2), 31.2	(0.4-0.4), 0.4	(54.3-55.8), 54.9	(95.1-151.2), 116.7	(0-0), 0

RCP8.5 Treated	(2.6-2.9), 2.8	(0-0), 0	(7.3-8.3), 7.9	(5.9-7.4), 6.6	(56.4-112.4), 75.9	(0.3-0.4), 0.4	(54.3-55.8), 54.9	(151.5-293.8), 205.6	(0-0), 0
Norwalk, OH									
Observed	2.6	0.0	7.0	7.5	133.0	0.4	64	229.1	0.0
GDO	(2.5-2.5), 2.5	(0.7-0.8), 0.8	(4.0-4.3), 4.1	(2.7-3.3), 2.9	(9.9-15.5), 11.7	(0.6-0.6), 0.6	(10.7-13.0), 11.9	(40.1-48.0), 43.6	(0-0), 0
MACA NoTreatment	(2.6-2.7), 2.7	(0-0), 0	(5.4-5.7), 5.6	(3.4-4), 3.9	(14.3-26.9), 23.8	(0.5-0.5), 0.5	(51-51.7), 51.4	(54.5-112.8), 101.6	(0-0), 0
MACA Conventional	(2.6-2.6), 2.6	(0-0), 0	(6.9-7), 7	(5.6-8.2), 7.3	(48.4-166.3), 122.6	(0.4-0.4), 0.4	(51-51.7), 51.4	(133.7-258.4), 220.7	(0-0), 0
MACA CLIGEN75	(0.7-0.8), 0.8	(0.6-0.7), 0.7	(0.5-0.6), 0.5	(1.1-1.3), 1.2	(1.7-2.7), 2.2	(1.4-1.5), 1.4	(5.2-6.3), 5.7	(3.8-4.8), 4.3	(0-0), 0
MACA CLIGEN90	(2-2.1), 2	(1.8-2), 1.9	(1-1), 1	(0.7-1), 0.9	(0.7-2.2), 1.2	(1.9-2.1), 2	(0-0.1), 0.1	(7.9-13.6), 9	(0-0), 0
MACA LARSWG75	(2.6-2.9), 2.7	(2.1-2.5), 2.3	(1.9-2), 2	(1.4-1.6), 1.5	(2.8-4.1), 3.3	(1.3-1.4), 1.4	(1.3-2.2), 1.8	(15-21.2), 17.9	(0-0), 0
MACA LARSWG90	(7.6-8.2), 7.9	(6.9-7.5), 7.2	(4.2-4.5), 4.3	(0.8-1), 0.9	(0.8-1.4), 1.1	(1.8-1.9), 1.8	(0-0), 0	(31.9-37.7), 34.3	(0-0.3), 0.1
RCP4.5	(2.7-2.8), 2.8	(0-0.3), 0	(5.8-6.2), 6	(3.9-4.5), 4.1	(23.3-40), 28.6	(0.4-0.5), 0.5	(49.8-51.5), 50.8	(100.7-166.3), 123.3	(0-0), 0
RCP4.5 Treated	(2.6-2.8), 2.7	(0-0), 0	(7-8.5), 7.7	(6.7-12.4), 9	(101.4-390.7), 206.5	(0.3-0.4), 0.4	(49.8-51.5), 50.8	(215.3-461.7), 324	(0-0), 0
RCP8.5	(2.6-2.9), 2.8	(0-0), 0	(5.8-6.5), 6.2	(3.9-4.9), 4.4	(21.1-51.7), 34.6	(0.4-0.5), 0.5	(50.1-52.2), 51.2	(89.8-200.1), 145	(0-0), 0
RCP8.5 Treated	(2.6-2.9), 2.8	(0-0), 0	(7.1-8.8), 8.1	(7.3-13.2), 10.3	(113.7-499.6), 281.9	(0.3-0.4), 0.3	(50.1-52.2), 51.2	(255.4-536.9), 381.9	(0-0), 0

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Supplementary Table S2 Descriptive statistics for daily maximum air temperature, °C, for Adrian, MI; Fort Wayne, IN; and Norwalk, OH from the climate projection sources, different bias correction methods, and future climate projections.

Adrian, MI									
Treatment	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	Number of days with Maximum Temperature more than 35°C	Maximum	Minimum
Observed	15.0	16.1	11.5	-0.2	-1.1	1.3	0.3	40.0	-20.0
GDO	(14.9-15.2), 15.0	(15.8-16.3), 16.1	(11.4-11.7), 11.5	(-0.2--0.2), -0.2	(-1.2--1.1), -1.1	(1.3-1.3), 1.3	(0-0.4), 0.2	(36.0-38.9), 37.4	(-20.4--16.2), -18.5
MACA NoTreatment	(15.3-15.5), 15.4	(16-16.5), 16.2	(11.4-11.6), 11.5	(-0.2--0.2), -0.2	(-1.1--1.1), -1.1	(1.3-1.4), 1.3	(0.5-0.7), 0.6	(39.5-40.2), 39.9	(-17.5--16.5), -17.1
MACA Conventional	(12.9-12.9), 12.9	(12-12.3), 12.2	(19.1-19.1), 19.1	(0.2-0.3), 0.2	(0-0.1), 0.1	(0.7-0.7), 0.7	(12.1-12.5), 12.3	(87.3-95.5), 92.5	(-57.3--43.9), -49.8
MACA CLIGEN75	(-9.3--9.2), -9.3	(-9.1--8.7), -8.9	(5.7-5.8), 5.7	(-0.2--0.1), -0.1	(-1.5--1.4), -1.4	(-1.6--1.6), -1.6	(0-0), 0	(0-0.3), 0.2	(-20.2--19.8), -19.9
MACA CLIGEN90	(-9.3--9.2), -9.3	(-9.1--8.7), -8.9	(5.7-5.8), 5.7	(-0.2--0.1), -0.1	(-1.5--1.4), -1.4	(-1.6--1.6), -1.6	(0-0), 0	(0-0.3), 0.2	(-20.2--19.8), -19.9
MACA LARSWG75	(15-15.4), 15.2	(14.9-16.1), 15.6	(10.2-10.5), 10.4	(-0.1-0), -0.1	(-1.5--1.5), -1.5	(1.4-1.5), 1.5	(0-0), 0	(30.7-31.7), 31.2	(-4.2--1.3), -3
MACA LARSWG90	(15-15.4), 15.2	(14.9-16.1), 15.6	(10.2-10.5), 10.4	(-0.1-0), -0.1	(-1.5--1.5), -1.5	(1.4-1.5), 1.5	(0-0), 0	(30.7-31.7), 31.2	(-4.2--1.3), -3
RCP4.5	(16.7-18.5), 17.7	(17.6-19.2), 18.6	(10.8-11.9), 11.5	(-0.2--0.1), -0.2	(-1.2--1), -1.1	(1.4-1.7), 1.5	(1.8-4.8), 3.1	(42.7-51.2), 45.8	(-18.9--13.9), -16.1
RCP4.5 Treated	(12.9-12.9), 12.9	(12.1-12.4), 12.3	(19.1-19.1), 19.1	(0.2-0.4), 0.3	(0-0.5), 0.2	(0.7-0.7), 0.7	(11.7-12.6), 12.1	(96.2-126.5), 107.8	(-67.8--54.5), -61.9
RCP8.5	(17.6-20), 18.8	(18.4-20.4), 19.6	(11.2-12.1), 11.7	(-0.2--0.1), -0.1	(-1.2--1), -1.1	(1.5-1.8), 1.6	(3.6-8.7), 6.7	(46.2-52.6), 50	(-19.7--13.6), -15.6
RCP8.5 Treated	(12.9-12.9), 12.9	(11.8-12.5), 12.3	(19-19.1), 19.1	(0.2-0.4), 0.3	(0-0.7), 0.3	(0.7-0.7), 0.7	(11.3-12.6), 11.9	(91.4-131.4), 111	(-61.9--48.9), -54.8
Fort Wayne, IN									
Observed	15.4	16.7	11.8	-0.3	-1.0	1.3	0.3	41.1	-23.9
GDO	(15.5-15.8), 15.6	(16.8-17.3), 17.1	(11.5-11.8), 11.6	(-0.3--0.3), -0.3	(-1.1—1.0), -1.1	(1.3-1.4), 1.3	(0.1-0.5), 0.2	(36.7-39.5), 38.1	(-23.2--17.4), -19.7
MACA NoTreatment	(15.5-15.9), 15.7	(16.7-17.3), 16.9	(11.4-11.7), 11.5	(-0.3--0.3), -0.3	(-1--1), -1	(1.3-1.4), 1.4	(0.5-0.8), 0.7	(40.6-42.1), 41.8	(-22.1--20.3), -21.4
MACA Conventional	(15.4-15.4), 15.4	(16.7-16.8), 16.7	(11.8-11.8), 11.8	(-0.3--0.3), -0.3	(-1--0.9), -0.9	(1.3-1.3), 1.3	(0.5-0.7), 0.6	(39.8-42.9), 41.9	(-26.6--23.6), -25
MACA CLIGEN75	(-9.2--9), -9.1	(-8.8--8.3), -8.6	(5.7-5.8), 5.7	(-0.2--0.2), -0.2	(-1.4--1.4), -1.4	(-1.6--1.6), -1.6	(0-0), 0	(-0.3-0.3), 0.1	(-20.5--20.1), -20.3
MACA CLIGEN90	(-9.2--9), -9.1	(-8.8--8.3), -8.6	(5.7-5.8), 5.7	(-0.2--0.2), -0.2	(-1.4--1.4), -1.4	(-1.6--1.6), -1.6	(0-0), 0	(-0.3-0.3), 0.1	(-20.5--20.1), -20.3

MACA LARSWG75	(15.3-15.8), 15.5	(15.7-16.9), 16.3	(10.3-10.5), 10.4	(-0.2--0.1), -0.2	(-1.5--1.4), -1.5	(1.5-1.5), 1.5	(0-0), 0	(30.7-32), 31.1	(-4.3--1.2), -3.1
MACA LARSWG90	(15.3-15.8), 15.5	(15.7-16.9), 16.3	(10.3-10.5), 10.4	(-0.2--0.1), -0.2	(-1.5--1.4), -1.5	(1.5-1.5), 1.5	(0-0), 0	(30.7-32), 31.1	(-4.3--1.2), -3.1
RCP4.5	(17-19), 18	(18.3-20), 19.3	(11.1-12.1), 11.6	(-0.3--0.2), -0.3	(-1--0.9), -1	(1.5-1.7), 1.6	(2-5.1), 3.3	(45.2-53.9), 48	(-24.1--18.4), -20.3
RCP4.5 Treated	(15.4-15.4), 15.4	(16.7-16.9), 16.8	(11.8-11.8), 11.8	(-0.3--0.3), -0.3	(-1--0.9), -1	(1.3-1.3), 1.3	(0.5-1), 0.7	(43.3-50.5), 45	(-30.3--22.1), -25.7
RCP8.5	(17.9-20.4), 19.2	(19.1-21), 20.2	(11.6-12.1), 11.9	(-0.3--0.1), -0.2	(-1.1--0.9), -1	(1.5-1.8), 1.6	(4-10.3), 7.3	(50-56.5), 52.4	(-26.5--18.7), -20.8
RCP8.5 Treated	(15.4-15.4), 15.4	(16.7-17), 16.8	(11.7-11.8), 11.8	(-0.3--0.3), -0.3	(-1.1--0.9), -1	(1.3-1.3), 1.3	(0.6-1), 0.8	(43-49.1), 45.2	(-31.6--23.8), -26.5
Norwalk, OH									
Observed	15.0	16.1	11.4	-0.3	-1.0	1.3	0.2	39.4	-22.2
GDO	(15.3-15.6), 15.4	(16.4-16.9), 16.7	(11.0-11.4), 11.2	(-0.3--0.3), -0.3	(-1.1—1.0), -1.1	(1.3-1.4), 1.4	(0-0.3), 0.1	(34.8-39.8), 36.9	(-21.3--14.9), -18.2
MACA NoTreatment	(15.1-15.4), 15.2	(16-16.5), 16.2	(10.9-11.2), 11	(-0.3--0.2), -0.2	(-1.1--1), -1.1	(1.4-1.4), 1.4	(0.2-0.3), 0.2	(37.6-37.8), 37.7	(-19.2--17.8), -18.8
MACA Conventional	(14.6-14.6), 14.6	(14.5-14.7), 14.6	(13.1-13.1), 13.1	(0-0), 0	(-0.3--0.2), -0.3	(1.1-1.1), 1.1	(3.3-3.5), 3.4	(68.1-83), 75.8	(-47.7--36.7), -42.6
MACA CLIGEN75	(-9.4--9.3), -9.3	(-9.2--8.8), -9	(5.4-5.6), 5.5	(-0.2--0.1), -0.1	(-1.4--1.4), -1.4	(-1.7--1.7), -1.7	(0-0), 0	(-0.7--0.4), -0.6	(-20--19.7), -19.8
MACA CLIGEN90	(-9.4--9.3), -9.3	(-9.2--8.8), -9	(5.4-5.6), 5.5	(-0.2--0.1), -0.1	(-1.4--1.4), -1.4	(-1.7--1.7), -1.7	(0-0), 0	(-0.7--0.4), -0.6	(-20--19.7), -19.8
MACA LARSWG75	(14.8-15.3), 15.1	(14.7-15.9), 15.4	(9.8-10.1), 9.9	(-0.1--0.1), -0.1	(-1.5--1.5), -1.5	(1.5-1.6), 1.5	(0-0), 0	(30-32.3), 30.6	(-3.1--1.4), -2.5
MACA LARSWG90	(14.8-15.3), 15.1	(14.7-15.9), 15.4	(9.8-10.1), 9.9	(-0.1--0.1), -0.1	(-1.5--1.5), -1.5	(1.5-1.6), 1.5	(0-0), 0	(30-32.3), 30.6	(-3.1--1.4), -2.5
RCP4.5	(16.6-18.2), 17.5	(17.6-18.9), 18.4	(10.6-11.5), 11.1	(-0.3--0.2), -0.2	(-1.1--1), -1.1	(1.5-1.7), 1.6	(0.9-3.1), 2	(41-47.9), 43.9	(-20.4--14), -16.9
RCP4.5 Treated	(14.6-14.6), 14.6	(14.5-15), 14.8	(13.1-13.1), 13.1	(0-0.1), 0	(-0.3-0), -0.2	(1.1-1.1), 1.1	(3.3-3.6), 3.5	(69.2-95.8), 79.2	(-62.1--36.9), -48.3
RCP8.5	(17.5-19.5), 18.6	(18.4-19.9), 19.4	(10.8-11.6), 11.4	(-0.2--0.1), -0.2	(-1.1--0.9), -1	(1.5-1.8), 1.6	(2.5-6.4), 4.9	(44.8-52.2), 47.5	(-20.8--14.5), -17
RCP8.5 Treated	(14.6-14.6), 14.6	(14.5-15), 14.8	(13.1-13.1), 13.1	(-0.2-0.1), 0	(-0.2-4.1), 0.3	(1.1-1.1), 1.1	(3.4-3.7), 3.5	(77.5-92.9), 83	(-244.8--37.6), -67.1

Supplementary Table S3 Descriptive statistics for daily minimum air temperature, °C, for Adrian, MI; Fort Wayne, IN; and Norwalk, OH from the climate projection sources, different bias correction methods, and future climate projections.

Adrian, MI									
Treatment	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	Days with Minimum Temperature < 2°C	Maximum	Minimum
Observed	3.1	3.3	10.0	-0.3	-0.5	0.3	46.3	24.4	-30.0
GDO	(3.2-3.5), 3.3	(3.3-3.8), 3.5	(9.5-10), 9.7	(-0.3--0.2), -0.2	(-0.9--0.7), -0.8	(0.3-0.4), 0.4	(44.4-46.0), 45.4	(21.7-26.3), 23.6	(-31.2- -25.8), -29.0
MACA NoTreatment	(3.5-3.7), 3.6	(3.4-3.7), 3.5	(9.6-9.7), 9.7	(-0.2--0.2), -0.2	(-0.7--0.6), -0.7	(0.4-0.4), 0.4	(44.8-45.7), 45.3	(23.8-24), 24	(-28.2--26.4), -27.9
MACA Conventional	(2.1-2.1), 2.1	(2.4-2.6), 2.5	(14.3-14.3), 14.3	(-0.2--0.1), -0.2	(1-1.1), 1.1	(0.1-0.1), 0.1	(48.2-48.7), 48.4	(60.5-64.6), 62.9	(-76.6--62.7), -69.4
MACA CLIGEN75	(-15.8--15.7), -15.8	(-16--15.7), -15.9	(4.7-4.8), 4.7	(0-0), 0	(-1.4--1.3), -1.4	(-3.4--3.3), -3.3	(100-100), 100	(-7.5--7.3), -7.4	(-25.4--25.1), -25.3
MACA CLIGEN90	(-15.8--15.7), -15.8	(-16--15.7), -15.9	(4.7-4.8), 4.7	(0-0), 0	(-1.4--1.3), -1.4	(-3.4--3.3), -3.3	(100-100), 100	(-7.5--7.3), -7.4	(-25.4--25.1), -25.3
MACA LARSWG75	(3.4-3.8), 3.6	(2.7-3.2), 2.9	(8.2-8.4), 8.4	(0-0.1), 0.1	(-1.4--1.3), -1.4	(0.4-0.5), 0.4	(46-47.6), 46.8	(18.2-19.1), 18.5	(-14.2--11.3), -12.8
MACA LARSWG90	(3.4-3.8), 3.6	(2.7-3.2), 2.9	(8.2-8.4), 8.4	(0-0.1), 0.1	(-1.4--1.3), -1.4	(0.4-0.5), 0.4	(46-47.6), 46.8	(18.2-19.1), 18.5	(-14.2--11.3), -12.8
RCP4.5	(4.9-6.9), 5.8	(4.8-6.8), 5.6	(9-9.8), 9.4	(-0.2--0.1), -0.1	(-0.9--0.7), -0.8	(0.5-0.8), 0.6	(32.3-40.9), 38.1	(26.3-28.8), 27.4	(-31.5--21.7), -26.8
RCP4.5 Treated	(2.1-2.1), 2.1	(2.2-2.8), 2.5	(14.3-14.3), 14.3	(-0.2--0.1), -0.1	(0.8-1.2), 1	(0.1-0.1), 0.1	(47.5-49.4), 48.5	(62.8-77.7), 68.8	(-76.8--65.5), -70.4
RCP8.5	(5.7-8.1), 6.9	(5.4-7.8), 6.6	(9.2-10.2), 9.6	(-0.1-0), -0.1	(-0.9--0.7), -0.8	(0.6-0.9), 0.7	(28.4-39.2), 34.9	(29.7-33.1), 30.8	(-27.5--22.6), -25.6
RCP8.5 Treated	(2.1-2.1), 2.1	(2.1-2.9), 2.6	(13.9-14.3), 14.3	(-0.2-0.1), -0.1	(0.8-1.3), 1	(0.1-0.2), 0.1	(47.5-49.8), 48.3	(68.2-81), 76.1	(-76.3--56.5), -69
Fort Wayne, IN									
Observed	4.8	5.0	10.3	-0.4	-0.5	0.5	41.1	25.6	-30.0
GDO	(4.8-5.1), 4.9	(5.1-5.5), 5.3	(9.9-10.5), 10.2	(-0.4--0.3), -0.3	(-0.8--0.6), -0.7	(0.5-0.5), 0.5	(39.5-41.2), 40.3	(22.7-26.8), 25.0	(-33.8--26.8), -30.2
MACA NoTreatment	(4.9-5.2), 5.1	(5.1-5.5), 5.3	(9.9-10.1), 10	(-0.3--0.2), -0.3	(-0.7--0.6), -0.6	(0.5-0.5), 0.5	(39.9-40.7), 40.4	(25.2-25.5), 25.5	(-28.9--26.9), -28.4
MACA Conventional	(4.8-4.8), 4.8	(5.1-5.2), 5.1	(10.3-10.3), 10.3	(-0.4--0.4), -0.4	(-0.4--0.4), -0.4	(0.5-0.5), 0.5	(40.6-40.8), 40.7	(25-25.5), 25.2	(-34.1--32.3), -33.2
MACA CLIGEN75	(-15.1--14.9), -15	(-15.1--14.9), -15	(4.9-4.9), 4.9	(-0.1-0), -0.1	(-1.4--1.3), -1.4	(-3.1--3), -3.1	(100-100), 100	(-6.6--6.3), -6.4	(-25.1--24.6), -24.9
MACA CLIGEN90	(-15.1--14.9), -15	(-15.1--14.9), -15	(4.9-4.9), 4.9	(-0.1-0), -0.1	(-1.4--1.3), -1.4	(-3.1--3), -3.1	(100-100), 100	(-6.6--6.3), -6.4	(-25.1--24.6), -24.9

MACA LARSWG75	(4.9-5.3), 5	(4.2-4.7), 4.4	(8.4-8.8), 8.7	(0-0.1), 0	(-1.4--1.4), -1.4	(0.6-0.6), 0.6	(41-42.4), 41.8	(19.3-21.1), 19.9	(-13.2--10.3), -11.8
MACA LARSWG90	(4.9-5.3), 5	(4.2-4.7), 4.4	(8.4-8.8), 8.7	(0-0.1), 0	(-1.4--1.4), -1.4	(0.6-0.6), 0.6	(41-42.4), 41.8	(19.3-21.1), 19.9	(-13.2--10.3), -11.8
RCP4.5	(6.3-8.4), 7.2	(6.5-8.6), 7.4	(9.5-10.1), 9.9	(-0.2--0.2), -0.2	(-0.8--0.7), -0.8	(0.6-0.9), 0.7	(28.5-36.4), 33.7	(28.1-30.6), 29.5	(-30.3--23.3), -27
RCP4.5 Treated	(4.8-4.8), 4.8	(5.1-5.3), 5.2	(10.3-10.3), 10.3	(-0.4--0.3), -0.3	(-0.5--0.4), -0.5	(0.5-0.5), 0.5	(40.1-40.9), 40.5	(26.2-29.5), 27.5	(-41.8--32.8), -35.7
RCP8.5	(7.1-9.4), 8.3	(7.1-9.4), 8.3	(9.8-10.5), 10.1	(-0.2--0.1), -0.2	(-0.9--0.7), -0.8	(0.7-1), 0.8	(25.3-34.9), 31.1	(31-34.9), 32.5	(-28.6--22.8), -26.3
RCP8.5 Treated	(4.8-4.8), 4.8	(5.1-5.3), 5.2	(10.2-10.3), 10.3	(-0.4--0.3), -0.3	(-0.6--0.4), -0.5	(0.5-0.5), 0.5	(40-40.8), 40.4	(27.1-29.1), 28	(-40--33.3), -36.3
Norwalk, OH									
Observed	4.4	4.4	10.1	-0.3	-0.6	0.4	41.8	25.0	-29.4
GDO	(4.6-4.9), 4.7	(4.9-5.2), 5.0	(9.5-10.1), 9.8	(-0.3--0.2), -0.3	(-0.9--0.7), -0.8	(0.5-0.5), 0.5	(39.9-41.6), 40.9	(22.0-27.8), 24.6	(-29.7--23.6), -27.2
MACA NoTreatment	(4.6-4.8), 4.7	(4.6-5), 4.7	(9.5-9.7), 9.6	(-0.3--0.2), -0.2	(-0.8--0.7), -0.7	(0.5-0.5), 0.5	(41-41.6), 41.4	(24-24), 24	(-28--27), -27.5
MACA Conventional	(4-4), 4	(3.7-3.8), 3.8	(11.9-11.9), 11.9	(-0.1--0.1), -0.1	(0-0.2), 0.1	(0.3-0.3), 0.3	(44.5-44.8), 44.7	(50.6-59.5), 57	(-48--40.2), -43.7
MACA CLIGEN75	(-17.4--15.1), -15.4	(-16.8--15.2), -15.5	(4.7-4.9), 4.8	(-0.1-0), 0	(-1.4--1.2), -1.4	(-3.5--3.2), -3.2	(100-100), 100	(-7.2--5.1), -6.9	(-30.4--24.5), -25.3
MACA CLIGEN90	(-17.4--15.1), -15.4	(-16.8--15.2), -15.5	(4.7-4.9), 4.8	(-0.1-0), 0	(-1.4--1.2), -1.4	(-3.5--3.2), -3.2	(100-100), 100	(-7.2--5.1), -6.9	(-30.4--24.5), -25.3
MACA LARSWG75	(4.5-4.7), 4.6	(3.8-4.2), 4	(8.2-8.5), 8.4	(0-0.1), 0	(-1.4--1.4), -1.4	(0.5-0.6), 0.5	(42.7-43.6), 43.3	(18.5-19.5), 18.9	(-12.1--10.8), -11.5
MACA LARSWG90	(4.5-4.7), 4.6	(3.8-4.2), 4	(8.2-8.5), 8.4	(0-0.1), 0	(-1.4--1.4), -1.4	(0.5-0.6), 0.5	(42.7-43.6), 43.3	(18.5-19.5), 18.9	(-12.1--10.8), -11.5
RCP4.5	(5.9-7.8), 6.8	(6.1-7.8), 6.8	(9-9.8), 9.4	(-0.2--0.1), -0.2	(-0.9--0.8), -0.8	(0.6-0.9), 0.7	(29.1-37), 34.5	(25.7-28.8), 27.3	(-30.9--21.1), -26.6
RCP4.5 Treated	(4-4), 4	(3.9-4), 3.9	(11.9-11.9), 11.9	(-0.1--0.1), -0.1	(0-0.1), 0	(0.3-0.3), 0.3	(43.9-45.2), 44.5	(51.4-63), 56.7	(-56.8--42.4), -48.2
RCP8.5	(6.8-9), 7.8	(6.7-8.8), 7.8	(9.2-10.1), 9.6	(-0.2--0.1), -0.1	(-1--0.7), -0.8	(0.7-1), 0.8	(25.1-35.6), 31.6	(29.2-34), 30.8	(-28.2--21.9), -25.4
RCP8.5 Treated	(4-4), 4	(3.7-4.1), 4	(11.9-11.9), 11.9	(-0.7--0.1), -0.2	(-0.1-20.9), 2.4	(0.3-0.3), 0.3	(43.6-45.6), 44.3	(50-74.3), 60.3	(-342.2--45.1), -82.3

Supplementary Table S4 Performance evaluation in simulating annual one-day max precipitation of two different climate projection source (GDO and MACA) and different bias correction methods applied on MACA data for Adrian, MI, Fort Wayne, In, and Norwalk, OH.

Adrian, MI																				
	Mean				Standard Deviation				Skewness				Maximum				Minimum			
Treatments	Mean	Median	Max	Min	Mean	Median	Max	Min	Mean	Median	Max	Min	Mean	Median	Max	Min	Mean	Median	Max	Min
Observed	55.3				17.8				1.8				120.4				34.8			
GDO	46.1	45.1	51.3	42.5	13.3	12.3	17.5	10.8	1.0	1.0	1.8	0.4	87.6	82.5	110.1	74.5	25.3	24.6	30.3	20.3
CLIGEN75	3.1	3.1	3.3	3.0	0.5	0.5	0.7	0.5	0.9	1.1	1.5	0.1	4.7	4.5	5.5	3.9	2.3	2.3	2.5	1.9
CLIGEN90	6.4	6.4	7.0	6.1	0.9	0.9	1.0	0.7	0.7	0.7	1.1	0.5	8.6	8.5	9.6	7.9	5.2	5.1	5.4	4.9
MACA Conventional	59.8	59.9	61.2	58.3	21.3	22.2	22.9	17.4	1.4	1.4	1.7	1.1	125.1	124.3	134.3	116.6	29.5	28.8	33.4	27.4
LARSWG75	11.9	11.9	12.6	11.4	2.1	2.1	2.7	1.3	0.9	1.0	1.7	0.0	18.1	18.2	20.1	13.9	8.7	8.7	9.4	8.0
LARSWG90	26.4	26.7	27.3	24.9	3.6	3.5	4.4	2.8	0.5	0.7	1.0	-0.1	35.4	35.0	40.1	30.5	20.0	19.9	21.4	19.0
MACA No Treatment	43.4	43.7	44.4	41.5	10.7	10.7	11.8	8.4	0.7	0.8	0.9	0.5	69.7	71.0	71.0	67.2	25.2	25.4	27.9	23.6
RCP4.5	48.6	49.0	52.6	42.7	15.1	16.4	18.0	10.9	1.2	1.3	1.7	0.5	107.0	117.3	127.3	83.0	25.0	25.5	30.1	20.7
RCP8.5	50.2	50.4	53.4	47.0	15.1	15.3	16.9	12.8	1.0	0.9	1.7	0.6	103.9	100.2	122.1	88.9	23.8	24.1	25.8	20.5
RCP4.5 treated	68.6	68.3	76.6	59.1	30.3	30.5	38.9	22.8	2.0	1.8	3.0	1.4	214.4	197.6	302.6	164.2	29.1	28.8	34.7	23.0
RCP 8.5 Treated	70.4	70.7	75.2	63.8	29.2	29.5	33.7	24.4	1.6	1.7	2.4	1.0	191.1	182.5	258.0	157.5	27.2	26.3	31.3	23.5
Fort Wayne, IN																				
Observed	55.6				18.2				1.3				111.8				28.7			
GDO	38.7	38.8	43.0	36.5	9.5	9.4	11.3	8.0	1.0	0.9	1.5	0.4	69.4	69.1	80.1	58.4	23.5	23.0	26.7	20.1
CLIGEN75	3.2	3.2	3.3	3.0	0.5	0.5	0.6	0.4	0.8	0.8	1.6	0.2	4.6	4.4	5.4	4.1	2.3	2.3	2.6	2.1
CLIGEN90	6.6	6.6	6.8	6.4	0.8	0.8	1.1	0.7	0.9	0.8	2.5	-0.1	9.1	9.1	11.8	8.1	5.0	5.0	5.5	4.3
MACA Conventional	60.5	60.3	62.2	57.5	18.5	18.4	20.0	17.1	0.6	0.5	1.2	0.2	108.5	109.7	127.6	92.7	30.2	32.3	35.5	21.1
LARSWG75	12.2	12.3	12.7	11.4	2.1	1.9	2.8	1.6	0.9	0.5	2.7	0.2	18.4	17.5	22.9	15.2	8.8	8.7	9.5	8.0
LARSWG90	27.3	27.6	28.1	26.3	4.3	4.3	5.9	3.4	1.1	0.8	2.1	0.7	40.5	37.6	49.8	35.5	21.3	21.2	22.4	19.9
MACA No Treatment	46.8	46.6	48.7	44.8	11.3	11.3	12.1	10.4	0.2	0.3	0.6	-0.3	72.3	74.5	74.5	65.0	26.5	28.6	29.5	18.8
RCP4.5	51.6	52.0	53.5	48.5	15.8	15.8	22.2	12.9	1.3	1.0	3.9	0.4	116.8	106.7	208.6	83.2	26.0	25.5	31.2	23.2
RCP8.5	53.6	54.1	54.9	51.6	17.3	17.5	20.1	14.3	1.2	1.1	2.0	0.4	116.7	110.2	151.2	95.1	25.4	25.6	27.5	22.6
RCP4.5 treated	71.8	70.7	77.0	67.6	30.7	29.5	47.4	23.4	2.0	1.8	5.6	0.7	213.2	197.6	454.6	134.9	30.0	29.6	35.2	25.0
RCP 8.5 Treated	75.3	76.4	78.9	70.0	31.5	30.4	40.0	26.7	1.7	1.5	3.0	0.7	205.6	188.9	293.8	151.5	28.7	28.3	31.2	27.0
Norwalk, OH																				
Observed	64.2				39				2.5				229.1				31			
GDO	29.0	28.9	32.2	27.1	6.2	6.5	8.3	4.6	0.7	0.7	1.2	0.2	46.2	44.5	55.8	40.1	18.0	17.9	19.5	15.5
CLIGEN75	3.1	3.2	3.2	3.0	0.5	0.5	0.5	0.4	0.5	0.3	1.4	0.1	4.3	4.1	4.8	3.8	2.3	2.3	2.5	2.1
CLIGEN90	6.1	6.2	6.3	6.0	0.9	0.8	1.4	0.7	1.3	1.1	3.6	0.6	9.0	8.5	13.6	7.9	4.9	4.8	5.2	4.6
MACA Conventional	64.7	65.2	66.3	61.6	34.4	35.3	39.6	21.6	2.9	3.0	3.8	1.1	220.7	233.0	258.4	133.7	30.7	31.6	33.5	26.2

LARSWG75	12.4	12.4	12.8	11.8	1.9	1.8	2.4	1.4	0.8	1.1	1.6	-0.1	17.9	18.2	21.2	15.0	9.2	9.2	9.8	8.2
LARSWG90	25.6	25.5	26.5	24.8	3.3	3.3	4.0	2.6	0.8	0.8	1.3	0.5	34.3	34.3	37.7	31.9	20.3	20.3	21.2	19.1
MACA No Treatment	42.6	43.2	43.9	38.5	13.2	14.5	15.4	6.7	2.3	2.7	3.1	0.3	101.6	112.8	112.8	54.5	24.7	24.4	28.3	22.4
RCP4.5	47.7	46.9	52.4	44.6	16.2	15.6	19.8	13.4	2.0	1.8	3.2	1.2	123.3	121.4	166.3	100.7	24.8	24.6	26.8	23.0
RCP8.5	49.4	49.6	53.8	44.2	18.0	18.5	22.7	12.1	2.4	2.5	3.5	1.3	145.0	143.5	200.1	89.8	25.3	24.1	30.8	21.3
RCP4.5 treated	73.8	72.3	84.6	63.2	45.3	47.1	62.4	33.1	3.2	3.2	4.7	1.9	324.0	314.7	461.7	215.3	30.0	29.3	34.4	26.2
RCP 8.5 Treated	77.1	76.5	86.2	63.4	50.8	54.4	61.5	36.0	3.7	3.3	4.9	2.8	381.9	366.1	536.9	255.4	30.0	30.0	35.7	25.3

Supplementary Table S5 Performance evaluation in simulating number of wet days in a month by two different climate projection source (GDO and MACA) and different bias correction methods applied on MACA data for Adrian, MI, Fort Wayne, In, and Norwalk, OH.

Adrian, MI												
	January	February	March	April	May	June	July	August	September	October	November	December
Observed	10	8	10	11	11	10	9	8	9	10	10	11
GDO	(14-16), 15	(13-14), 13	(16-17), 17	(17-19), 18	(18-19), 18	(16-19), 18	(18-20), 19	(16-19), 17	(15-16), 15	(14-16), 15	(15-17), 16	(16-17), 16
MACANoTreatment	(14-15), 15	(11-11), 11	(14-14), 14	(15-15), 15	(15-16), 16	(14-15), 14	(15-16), 15	(14-15), 14	(12-14), 13	(13-14), 14	(12-13), 13	(14-15), 15
MACAConventional	(14-15), 15	(11-11), 11	(14-14), 14	(15-15), 15	(15-16), 16	(14-15), 14	(14-15), 15	(13-14), 13	(12-13), 13	(13-14), 14	(12-13), 13	(14-15), 15
MACACLIGEN75	(27-28), 27	(20-22), 21	(27-29), 29	(28-29), 29	(30-31), 30	(28-29), 29	(29-30), 30	(29-30), 30	(26-28), 28	(27-29), 28	(25-27), 26	(28-30), 29
MACACLIGEN90	(31-31), 31	(28-28), 28	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31
MACALARSWG75	(27-31), 30	(21-27), 25	(29-31), 30	(30-30), 30	(31-31), 31	(28-30), 29	(30-31), 31	(30-31), 30	(26-30), 29	(26-31), 29	(26-29), 29	(28-31), 30
MACALARSWG90	(27-31), 30	(21-27), 25	(29-31), 30	(30-30), 30	(31-31), 31	(28-30), 29	(30-31), 31	(30-31), 30	(26-30), 29	(26-31), 29	(26-29), 29	(28-31), 30
RCP4.5	(15-15), 15	(11-12), 12	(14-15), 15	(15-17), 16	(15-17), 16	(14-16), 14	(15-16), 15	(14-15), 15	(12-15), 14	(13-14), 14	(12-14), 13	(14-15), 15
RCP4.5Treated	(15-15), 15	(11-12), 12	(14-15), 15	(15-17), 16	(15-17), 16	(13-16), 14	(14-15), 14	(13-14), 13	(12-13), 13	(13-14), 14	(12-14), 13	(14-15), 15
RCP8.5	(15-15), 15	(11-12), 12	(13-15), 15	(15-17), 16	(15-18), 16	(14-15), 14	(14-16), 15	(14-15), 15	(13-16), 14	(13-15), 13	(12-13), 13	(14-15), 15
RCP8.5Treated	(15-15), 15	(11-12), 12	(13-15), 15	(15-17), 16	(15-18), 16	(13-15), 14	(13-15), 14	(13-14), 13	(12-14), 13	(13-15), 13	(12-13), 13	(14-15), 15
Fort Wayne, IN												
Observed	12	10	12	13	12	10	10	10	9	10	12	13
GDO	(18-20), 19	(16-18), 17	(19-21), 20	(21-23), 22	(22-23), 22	(21-22), 22	(21-23), 22	(19-22), 20	(16-18), 17	(16-18), 17	(17-20), 18	(19-21), 20
MACANoTreatment	(13-14), 14	(11-11), 11	(14-14), 14	(15-16), 15	(16-17), 16	(15-16), 16	(14-15), 15	(13-14), 14	(10-12), 11	(12-13), 12	(12-13), 12	(14-15), 15
MACAConventional	(13-14), 14	(11-11), 11	(14-14), 14	(15-16), 15	(16-17), 16	(14-15), 15	(14-15), 15	(13-14), 14	(10-12), 11	(12-13), 12	(12-13), 12	(14-15), 15
MACACLIGEN75	(26-27), 27	(20-23), 22	(28-29), 29	(28-29), 29	(31-31), 31	(28-30), 29	(28-30), 29	(28-29), 29	(21-25), 24	(23-26), 25	(23-26), 25	(28-29), 29
MACACLIGEN90	(31-31), 31	(28-28), 28	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31
MACALARSWG75	(25-30), 29	(23-26), 25	(29-31), 30	(28-30), 29	(31-31), 31	(29-30), 30	(30-31), 31	(26-31), 30	(24-28), 27	(24-29), 27	(24-29), 28	(28-31), 30
MACALARSWG90	(31-31), 31	(28-28), 28	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31
RCP4.5	(13-14), 14	(11-12), 11	(14-15), 14	(15-16), 16	(16-18), 17	(14-18), 15	(15-16), 15	(13-15), 14	(11-14), 12	(12-13), 12	(11-13), 12	(14-15), 14
RCP4.5Treated	(13-14), 14	(11-12), 11	(14-15), 14	(15-16), 16	(16-18), 17	(14-18), 15	(14-15), 14	(12-13), 13	(11-13), 11	(12-13), 12	(11-13), 12	(14-15), 14
RCP8.5	(13-14), 14	(11-12), 11	(13-16), 15	(15-17), 16	(16-18), 17	(14-16), 15	(14-15), 15	(13-15), 14	(11-14), 12	(11-13), 12	(11-12), 12	(14-15), 14
RCP8.5Treated	(13-14), 14	(11-12), 11	(13-16), 15	(15-17), 16	(16-18), 17	(14-16), 15	(13-15), 14	(12-13), 13	(11-14), 11	(11-13), 12	(11-12), 12	(14-15), 14

Norwalk, OH												
Observed	11	10	12	13	13	11	10	9	9	10	11	12
GDO	(23-24), 23	(20-21), 20	(23-24), 24	(23-25), 24	(24-26), 25	(22-25), 24	(24-26), 25	(22-24), 23	(20-22), 21	(19-21), 20	(21-22), 22	(23-24), 24
MACANoTreatment	(14-15), 15	(12-13), 12	(15-16), 15	(15-16), 16	(16-17), 17	(15-17), 16	(15-17), 16	(15-16), 16	(13-14), 14	(13-14), 13	(13-14), 14	(15-16), 16
MACAConventional	(14-15), 15	(12-13), 12	(15-16), 15	(15-16), 16	(16-17), 17	(14-15), 14	(14-16), 15	(13-14), 14	(13-14), 13	(13-14), 13	(13-14), 14	(15-16), 16
MACACLIGEN75	(28-30), 29	(23-24), 24	(29-30), 30	(29-29), 29	(31-31), 31	(30-30), 30	(30-30), 30	(30-30), 30	(26-28), 27	(26-28), 27	(27-28), 28	(29-30), 30
MACACLIGEN90	(31-31), 31	(28-28), 28	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31
MACALARSWG75	(29-31), 30	(26-27), 27	(30-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31	(30-31), 31	(26-30), 29	(29-30), 30	(26-30), 29	(29-31), 31
MACALARSWG90	(31-31), 31	(28-28), 28	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31	(31-31), 31	(30-30), 30	(31-31), 31	(30-30), 30	(31-31), 31
RCP4.5	(14-15), 14	(12-13), 13	(14-16), 15	(16-17), 17	(16-18), 17	(15-17), 16	(16-17), 16	(14-17), 16	(13-15), 14	(13-14), 13	(13-14), 14	(15-16), 16
RCP4.5Treated	(14-15), 14	(12-13), 13	(14-16), 15	(16-17), 17	(16-18), 17	(13-15), 14	(14-15), 15	(13-14), 14	(13-15), 14	(13-14), 13	(13-14), 14	(15-16), 16
RCP8.5	(14-15), 14	(12-13), 13	(14-16), 15	(16-18), 17	(16-18), 17	(15-17), 16	(15-18), 16	(15-16), 15	(13-16), 14	(12-14), 13	(13-14), 14	(15-16), 15
RCP8.5Treated	(14-15), 14	(12-13), 13	(14-16), 15	(16-18), 17	(16-18), 17	(13-14), 14	(14-15), 15	(13-14), 14	(13-16), 14	(12-14), 13	(13-14), 14	(15-16), 15

Supplementary Table S6. Performance evaluation in simulating number of dry days in a month by two different climate projection source (GDO and MACA) and different bias correction methods applied on MACA data for Adrian, MI, Fort Wayne, In, and Norwalk, OH.

Adrian, MI												
	January	Februrary	March	April	May	June	July	August	September	October	November	December
Observed	21	20	20	18	19	19	21	22	21	21	18	19
GDONoTreatment	(11-15), 13	(12-14), 12	(11-14), 12	(9-11), 10	(10-12), 10	(9-13), 10	(9-13), 10	(10-13), 11	(11-14), 12	(12-16), 13	(11-13), 11	(11-13), 12
MACANoTreatment	(16-17), 17	(17-18), 17	(17-17), 17	(15-15), 15	(15-16), 16	(15-16), 16	(15-16), 16	(16-17), 17	(16-18), 17	(17-18), 18	(17-18), 17	(16-17), 16
MACAConventional	(16-17), 17	(17-18), 17	(17-17), 17	(15-15), 15	(15-16), 16	(15-16), 16	(16-17), 16	(17-18), 18	(17-18), 17	(17-18), 18	(17-18), 17	(16-17), 16
MACACLIGEN75	(3-4), 4	(6-8), 7	(2-4), 3	(1-2), 1	(0-1), 1	(1-2), 1	(1-2), 1	(1-2), 2	(2-4), 3	(2-4), 3	(3-6), 4	(1-3), 2
MACACLIGEN90	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0
MACALARSWG75	(0-2), 1	(1-3), 2	(0-1), 1	(0-0), 0	(0-0), 0	(0-1), 1	(0-1), 0	(0-1), 1	(0-3), 1	(1-3), 1	(1-2), 1	(0-1), 1
MACALARSWG90	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0
RCP4.5	(16-17), 17	(16-17), 17	(16-17), 16	(13-15), 14	(14-16), 15	(14-16), 16	(16-16), 16	(16-17), 16	(15-18), 16	(17-18), 17	(16-18), 17	(16-17), 16
RCP4.5Treated	(16-17), 17	(16-17), 17	(16-17), 16	(13-15), 14	(14-16), 15	(14-17), 16	(16-17), 17	(17-18), 18	(17-18), 18	(17-18), 17	(16-18), 17	(16-17), 16
RCP8.5	(16-17), 16	(16-17), 17	(16-18), 16	(13-15), 14	(13-16), 15	(15-17), 16	(16-17), 16	(16-17), 17	(14-17), 17	(17-18), 18	(17-18), 17	(16-17), 16
RCP8.5Treated	(16-17), 16	(16-17), 17	(16-18), 16	(13-15), 14	(13-16), 15	(15-17), 16	(16-18), 17	(17-18), 18	(16-18), 17	(17-18), 18	(17-18), 17	(16-17), 16
Fort Wayne, IN												
Observed	19	18	19	17	19	20	21	22	21	21	18	18
GDONoTreatment	(11-13), 12	(10-12), 11	(10-11), 11	(7-9), 8	(8-9), 8	(8-9), 8	(8-10), 9	(9-12), 11	(12-14), 13	(13-15), 14	(10-12), 11	(10-12), 11
MACANoTreatment	(17-18), 18	(17-18), 17	(17-17), 17	(14-15), 15	(14-15), 15	(14-15), 15	(16-17), 16	(17-18), 17	(18-20), 19	(18-19), 19	(17-18), 18	(16-17), 17
MACAConventional	(17-18), 18	(17-18), 17	(17-17), 17	(14-15), 15	(14-15), 15	(15-16), 15	(16-17), 16	(17-18), 17	(18-20), 19	(18-19), 19	(17-18), 18	(16-17), 17
MACACLIGEN75	(4-5), 4	(5-8), 7	(2-3), 3	(1-2), 1	(0-1), 0	(1-2), 1	(1-3), 2	(2-3), 2	(5-9), 7	(5-8), 6	(4-7), 6	(2-3), 2
MACACLIGEN90	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0
MACALARSWG75	(1-5), 2	(2-4), 2	(1-1), 1	(0-1), 0	(0-0), 0	(0-1), 0	(0-1), 0	(1-4), 1	(2-5), 3	(2-6), 3	(1-3), 2	(0-1), 1
MACALARSWG90	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0
RCP4.5	(17-18), 18	(17-17), 17	(16-18), 17	(14-15), 14	(13-15), 14	(12-16), 15	(15-17), 16	(16-18), 17	(17-19), 18	(18-19), 19	(17-19), 18	(16-17), 17
RCP4.5Treated	(17-18), 18	(17-17), 17	(16-18), 17	(14-15), 14	(13-15), 14	(12-16), 15	(17-17), 17	(18-19), 18	(17-20), 19	(18-19), 19	(17-19), 18	(16-17), 17
RCP8.5	(17-18), 18	(16-17), 17	(16-18), 16	(13-15), 14	(13-16), 14	(14-17), 15	(16-17), 16	(16-18), 17	(16-19), 18	(18-20), 19	(18-19), 18	(16-17), 17

RCP8.5Treated	(17-18), 18	(16-17), 17	(16-18), 16	(13-15), 14	(13-16), 14	(14-17), 15	(17-18), 17	(18-19), 18	(16-19), 19	(18-20), 19	(18-19), 18	(16-17), 17
Norwalk, OH												
Observed	19	19	19	17	18	19	21	22	20	21	19	18
GDONoTreatment	(7-8), 7	(7-8), 8	(6-8), 7	(5-7), 6	(5-7), 6	(5-8), 6	(5-7), 6	(7-9), 8	(8-10), 9	(10-12), 11	(7-9), 8	(6-8), 7
MACANoTreatment	(16-17), 17	(16-16), 16	(16-17), 16	(14-15), 14	(14-15), 14	(14-15), 14	(15-16), 15	(15-16), 16	(16-18), 17	(17-18), 18	(16-17), 16	(15-16), 15
MACAConventional	(16-17), 17	(16-16), 16	(16-17), 16	(14-15), 14	(14-15), 14	(16-16), 16	(15-17), 16	(17-18), 17	(16-18), 17	(17-18), 18	(16-17), 16	(15-16), 15
MACACLIGEN75	(2-3), 2	(4-5), 4	(1-2), 1	(1-1), 1	(0-0), 0	(0-0), 0	(1-1), 1	(1-1), 1	(2-4), 3	(3-5), 4	(2-3), 2	(1-2), 1
MACACLIGEN90	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0
MACALARSWG75	(0-1), 1	(1-1), 1	(0-1), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-1), 0	(0-3), 1	(1-2), 1	(1-3), 1	(0-1), 0
MACALARSWG90	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0	(0-0), 0
RCP4.5	(16-17), 17	(15-16), 16	(15-17), 16	(13-14), 14	(13-15), 14	(13-15), 14	(14-16), 15	(14-17), 15	(15-17), 16	(17-18), 18	(16-17), 16	(15-16), 16
RCP4.5Treated	(16-17), 17	(15-16), 16	(15-17), 16	(13-14), 14	(13-15), 14	(15-17), 16	(16-17), 16	(17-18), 17	(15-17), 16	(17-18), 18	(16-17), 16	(15-16), 16
RCP8.5	(16-17), 17	(15-16), 16	(15-17), 16	(12-14), 13	(14-15), 14	(13-15), 14	(13-16), 15	(15-17), 16	(14-17), 16	(17-19), 18	(16-17), 17	(15-16), 16
RCP8.5Treated	(16-17), 17	(15-16), 16	(15-17), 16	(12-14), 13	(14-15), 14	(16-17), 17	(16-17), 16	(17-19), 17	(14-17), 16	(17-19), 18	(16-17), 17	(15-16), 16

Supplementary Table S7. Extreme event analysis/ climate indices analysis for Adrian, MI; Fort Wayne, IN; and Norwalk, OH from the climate projection sources, different bias correction methods, and future climate projections.

Adrian, MI														
	Maximum Dry Length	Maximum Wet Length	Number of dry sequence	No. of wet sequence	No. of days for optimum growth of corn	Snow Days	Pdd	Pww	Pwd	Pdw	Ld	Lw	Td	Tw
Observed	26	9	33	153	51	30	0.7	0.5	0.3	0.5	4	1	1	4
GDO	(13-19), 17	(17-24), 21	(0-4), 2	(397-572), 462	(48-63), 52	(38-55), 42	(0.4-0.5), 0.5	(0.7-0.7), 0.7	(0.5-0.6), 0.5	(0.3-0.3), 0.3	(1.7-1.9), 1.8	(2.1-2.4), 2.2	(13.2-32.5), 20.8	(0.7-0.8), 0.7
MACA No Treatment	(17-29), 22	(16-23), 19	(4-17), 11	(318-450), 387	(57-61), 60	(40-43), 42	(0.6-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.4), 0.3	(0.4-0.4), 0.4	(2.8-3.2), 3	(1.5-1.6), 1.5	(1.9-2.5), 2.1	(1.3-1.5), 1.3
MACA Conventional	(17-32), 24	(15-23), 19	(4-19), 12	(314-446), 381	(28-30), 29	(60-62), 61	(0.6-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.4), 0.3	(0.4-0.4), 0.4	(2.8-3.2), 3	(1.5-1.6), 1.5	(1.9-2.5), 2.1	(1.3-1.5), 1.3
MACA CLIGEN75	(13-36), 23	(175-228), 210	(0-5), 2	(108-170), 142	(0-0), 0	(332-338), 335	(0.3-0.3), 0.3	(0.9-0.9), 0.9	(0.7-0.7), 0.7	(0.1-0.1), 0.1	(1.3-1.5), 1.5	(2.9-3.9), 3.2	(308.4-2016.2), 767.2	(0.7-0.8), 0.7
MACA CLIGEN90	(1-3), 2	(2146-3296), 2845	(0-0), 0	(0-1), 0	(0-0), 0	(365-365), 365	(0-0.1), 0	(1-1), 1	(0.9-1), 1	(0-0), 0	(1-1.1), 1	(9.5-Inf), Inf	(19889840.9-Inf), Inf	(23.3-54.2), 32.3
MACA LARSWG75	(3-4), 3	(209-572), 297	(0-0), 0	(20-58), 34	(73-80), 77	(98-106), 102	(0.1-0.1), 0.1	(1-1), 1	(0.9-0.9), 0.9	(0-0), 0	(1.1-1.2), 1.1	(6.7-12.6), 8.8	(114706.9-6797723.5), 1373547.8	(1.2-2), 1.7
MACA LARSWG90	(1-1), 1	(2460-7901), 5183	(0-0), 0	(0-0), 0	(73-80), 77	(104-110), 108	(NA-NA), NA	(1-1), 1	(NA-NA), NA	(0-0), 0	(NA-NA), NA	(NA-NA), NA	(NA-NA), NA	(NA-NA), NA
RCP4.5	(20-37), 25	(18-29), 21	(15-49), 30	(854-1057), 953	(62-71), 66	(23-37), 31	(0.6-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.4), 0.3	(0.4-0.4), 0.4	(2.8-3.2), 3	(1.5-1.6), 1.5	(1.9-2.5), 2.1	(1.2-1.3), 1.2
RCP4.5 Treated	(21-45), 27	(16-29), 20	(22-58), 33	(834-1024), 931	(28-31), 29	(61-66), 62	(0.6-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.4), 0.3	(0.4-0.4), 0.4	(2.8-3.2), 3	(1.5-1.6), 1.5	(1.9-2.5), 2.1	(1.2-1.3), 1.2
RCP8.5	(20-46), 26	(17-26), 21	(20-61), 33	(870-1082), 973	(58-64), 61	(18-33), 27	(0.6-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.4), 0.3	(0.4-0.4), 0.4	(2.8-3.4), 3.1	(1.4-1.5), 1.5	(1.7-2.5), 2	(1.2-1.3), 1.2
RCP8.5 Treated	(20-46), 28	(17-26), 20	(23-70), 39	(833-1071), 953	(28-30), 29	(60-65), 62	(0.6-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.4), 0.3	(0.4-0.4), 0.4	(2.8-3.4), 3.1	(1.4-1.5), 1.5	(1.7-2.5), 2	(1.2-1.3), 1.2
Fort Wayne, IN														
Observed	30	11	16	166	63	33	0.7	0.5	0.3	0.5	3	1	1	3
GDO	(12-22), 16	(25-38), 30	(0-4), 2	(448-534), 501	(67-76), 72	(51-63), 57	(0.3-0.4), 0.4	(0.8-0.8), 0.8	(0.6-0.7), 0.6	(0.2-0.2), 0.2	(1.5-1.7), 1.6	(2.5-3), 2.6	(52.3-174), 81	(0.5-0.6), 0.5
MACA No Treatment	(22-37), 27	(15-29), 21	(8-23), 16	(310-432), 377	(63-67), 65	(34-37), 36	(0.7-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.3), 0.3	(0.4-0.4), 0.4	(2.9-3.3), 3.2	(1.4-1.5), 1.5	(1.7-2.3), 1.9	(1.3-1.5), 1.4
MACA Conventional	(22-37), 27	(14-29), 21	(309-432), 375	(309-432), 375	(65-67), 66	(42-44), 43	(0.7-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.3), 0.3	(0.4-0.4), 0.4	(2.9-3.3), 3.1	(1.4-1.5), 1.5	(1.7-2.3), 1.9	(1.3-1.5), 1.4

MACA CLIGEN75	(16-43), 26	(157-268), 213	(156-210), 194	(156-210), 194	(0-0), 0	(320-330), 324	(0.3-0.4), 0.4	(0.9-0.9), 0.9	(0.6-0.7), 0.6	(0.1-0.1), 0.1	(1.4-1.6), 1.5	(2.6-3.5), 2.9	(143-918.2), 301	(0.6-0.7), 0.6
MACA CLIGEN90	(1-3), 2	(1666-3247), 2443	(0-2), 0	(0-2), 0	(0-0), 0	(364-365), 365	(0-0.1), 0	(1-1), 1	(0.9-1), 1	(0-0), 0	(1-1.1), 1	(12.3-Inf), Inf	(48975184.5-Inf), Inf	(14-25.8), 19.1
MACA LARSWG75	(3-7), 5	(156-260), 206	(38-96), 70	(38-96), 70	(87-90), 89	(87-96), 92	(0.1-0.2), 0.2	(1-1), 1	(0.8-0.9), 0.8	(0-0), 0	(1.1-1.3), 1.2	(4.1-9.6), 5.8	(3739.5-811202.1), 121360.8	(1-1.2), 1.1
MACA LARSWG90	(1-1), 1	(3656-9801), 5192	(0-0), 0	(0-0), 0	(87-90), 89	(97-101), 99	(0-0), 0	(1-1), 1	(1-1), 1	(0-0), 0	(1-1), 1	(Inf-Inf), Inf	(Inf-Inf), Inf	(69.7-243.5), 124.1
RCP4.5	(22-45), 30	(16-22), 19	(32-73), 45	(836-1039), 943	(64-72), 67	(20-30), 27	(0.7-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.3), 0.3	(0.4-0.4), 0.4	(3-3.4), 3.2	(1.4-1.5), 1.5	(1.7-2.2), 1.9	(1.2-1.4), 1.3
RCP4.5 Treated	(22-45), 30	(16-22), 18	(37-81), 51	(800-1019), 919	(65-69), 67	(43-46), 44	(0.7-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.3), 0.3	(0.4-0.4), 0.4	(3-3.4), 3.2	(1.4-1.5), 1.5	(1.7-2.2), 1.9	(1.2-1.4), 1.3
RCP8.5	(23-41), 31	(15-26), 22	(38-80), 57	(835-1082), 955	(56-64), 61	(16-28), 23	(0.7-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.3), 0.3	(0.4-0.4), 0.4	(3-3.5), 3.3	(1.4-1.5), 1.4	(1.6-2.1), 1.8	(1.2-1.4), 1.3
RCP8.5 Treated	(27-41), 32	(15-26), 22	(43-86), 61	(825-1072), 941	(63-68), 66	(42-45), 43	(0.7-0.7), 0.7	(0.6-0.6), 0.6	(0.3-0.3), 0.3	(0.4-0.4), 0.4	(3-3.5), 3.3	(1.4-1.5), 1.4	(1.6-2.1), 1.8	(1.2-1.4), 1.3
Norwalk, OH														
Observed	25	18	15	183	55	31	0.7	0.5	0.3	0.5	3	1	1	3
GDO	(10-14), 12	(37-50), 44	(0-0), 0	(394-575), 453	(64-74), 69	(63-71), 68	(0.2-0.3), 0.3	(0.9-0.9), 0.9	(0.7-0.8), 0.7	(0.1-0.1), 0.1	(1.3-1.5), 1.4	(3.1-4.4), 3.5	(256-2016), 738	(0.5-0.5), 0.5
MACA No Treatment	(16-29), 21	(14-27), 20	(2-15), 7	(346-473), 410	(62-66), 64	(38-41), 40	(0.6-0.7), 0.6	(0.6-0.6), 0.6	(0.3-0.4), 0.4	(0.4-0.4), 0.4	(2.6-3), 2.9	(1.5-1.6), 1.5	(2.2-3.1), 2.5	(1.1-1.3), 1.2
MACA Conventional	(18-29), 22	(13-27), 19	(322-456), 394	(322-456), 394	(51-54), 52	(50-53), 52	(0.6-0.7), 0.6	(0.6-0.6), 0.6	(0.3-0.4), 0.4	(0.4-0.4), 0.4	(2.6-3), 2.9	(1.5-1.6), 1.5	(2.2-3.1), 2.5	(1.1-1.3), 1.2
MACA CLIGEN75	(11-17), 15	(218-279), 243	(76-116), 100	(76-116), 100	(0-0), 0	(342-346), 345	(0.2-0.3), 0.3	(1-1), 1	(0.7-0.8), 0.7	(0-0), 0	(1.3-1.4), 1.3	(3.4-4.7), 4	(1260.6-8870), 3771.1	(0.9-1), 1
MACA CLIGEN90	(1-1), 1	(3221-5588), 4474	(0-0), 0	(0-0), 0	(0-0), 0	(365-365), 365	(0-0), 0	(1-1), 1	(1-1), 1	(0-0), 0	(1-1), 1	(Inf-Inf), Inf	(Inf-Inf), Inf	(34.9-81.3), 56.4
MACA LARSWG75	(2-5), 3	(229-389), 324	(14-30), 20	(14-30), 20	(75-81), 79	(96-103), 100	(0.1-0.1), 0.1	(1-1), 1	(0.9-0.9), 0.9	(0-0), 0	(1.1-1.1), 1.1	(7.9-13.9), 11	(451723.9-17151795.6), 5586835	(1.8-2.9), 2.2
MACA LARSWG90	(0-1), 1	(0-13410), 4760	(0-0), 0	(0-0), 0	(75-81), 79	(100-106), 103	(NA-NA), NA	(1-1), 1	(NA-NA), NA	(0-0), 0	(NA-NA), NA	(NA-NA), NA	(NA-NA), NA	(NA-NA), NA
RCP4.5	(19-41), 26	(16-25), 21	(12-30), 20	(919-1106), 1019	(66-76), 70	(21-34), 29	(0.6-0.7), 0.7	(0.6-0.7), 0.6	(0.3-0.4), 0.3	(0.3-0.4), 0.4	(2.7-3), 2.9	(1.5-1.6), 1.5	(2.2-3), 2.5	(1.1-1.2), 1.1
RCP4.5 Treated	(19-41), 27	(16-25), 20	(13-33), 24	(881-1078), 986	(50-55), 53	(50-55), 53	(0.6-0.7), 0.7	(0.6-0.7), 0.6	(0.3-0.4), 0.3	(0.3-0.4), 0.4	(2.7-3), 2.9	(1.5-1.6), 1.5	(2.2-3), 2.5	(1.1-1.2), 1.1

RCP8.5	(22-34), 28	(18-28), 22	(17-44), 27	(918-1153), 1029	(59-68), 64	(17-31), 25	(0.6-0.7), 0.7	(0.6-0.7), 0.6	(0.3-0.4), 0.3	(0.3-0.4), 0.4	(2.7-3.2), 2.9	(1.5-1.6), 1.5	(2-2.9), 2.3	(1.1-1.2), 1.1
RCP8.5 Treated	(22-34), 29	(18-27), 21	(24-51), 32	(870-1143), 996	(51-54), 52	(50-54), 52	(0.6-0.7), 0.7	(0.6-0.7), 0.6	(0.3-0.4), 0.3	(0.3-0.4), 0.4	(2.7-3.2), 2.9	(1.5-1.6), 1.5	(2-2.9), 2.3	(1.1-1.2), 1.1

Supplementary Table S8. Performance evaluation of different climate projection sources and bias correction methods using different skill scores and performance coefficients.

Brier Score	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.5	0.5	0.6
MACANoTreatment	0.5	0.5	0.5
MACAConventional	0.5	0.5	0.5
MACACLIGEN75	0.6	0.6	0.6
MACACLIGEN90	0.7	0.6	0.6
MACALARSWG75	0.7	0.6	0.6
MACALARSWG90	0.7	0.6	0.6
Gini	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.8	0.8	0.7
MACANoTreatment	0.8	0.8	0.8
MACAConventional	0.8	0.8	0.8
MACACLIGEN75	0.4	0.4	0.4
MACACLIGEN90	0.3	0.3	0.3
MACALARSWG75	0.4	0.4	0.4
MACALARSWG90	0.3	0.3	0.3
LEPS.0	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.1	0.1	0.1
MACANoTreatment	0.1	0.1	0.1
MACAConventional	0.1	0.1	0.1
MACACLIGEN75	0.1	0.1	0.1
MACACLIGEN90	0.1	0.1	0.1
MACALARSWG75	0.1	0.1	0.1
MACALARSWG90	0.2	0.2	0.2
LEPS.1	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.6	0.5	0.5
MACANoTreatment	0.6	0.5	0.5
MACAConventional	0.6	0.5	0.5

MACACLIGEN75	0.6	0.5	0.5
MACACLIGEN90	0.6	0.5	0.5
MACALARSWG75	0.6	0.5	0.5
MACALARSWG90	0.6	0.5	0.5
HSS	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.0	0.0	0.0
MACANoTreatment	0.0	0.0	0.0
MACAConventional	0.0	0.0	0.0
MACACLIGEN75	0.0	0.0	0.0
MACACLIGEN90	0.0	0.0	0.0
MACALARSWG75	0.0	0.0	0.0
MACALARSWG90	0.0	0.0	0.0
PSS	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.0	0.0	0.0
MACANoTreatment	0.0	0.0	0.0
MACAConventional	0.0	0.0	0.0
MACACLIGEN75	0.0	0.0	0.0
MACACLIGEN90	0.0	0.0	0.0
MACALARSWG75	0.0	0.0	0.0
MACALARSWG90	0.0	0.0	0.0
PC	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.5	0.5	0.4
MACANoTreatment	0.5	0.5	0.5
MACAConventional	0.5	0.5	0.5
MACACLIGEN75	0.4	0.4	0.4
MACACLIGEN90	0.3	0.4	0.4
MACALARSWG75	0.3	0.4	0.4
MACALARSWG90	0.3	0.4	0.4
BIAS	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	1.7	1.8	2.1

MACANoTreatment	1.4	1.2	1.3
MACAConventional	1.4	1.2	1.3
MACACLIGEN75	2.8	2.4	2.6
MACACLIGEN90	3.0	2.7	2.8
MACALARSWG75	2.9	2.6	2.7
MACALARSWG90	3.0	2.7	2.8
ORSS	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.0	0.0	0.0
MACANoTreatment	0.0	0.0	0.0
MACAConventional	0.0	0.0	0.0
MACACLIGEN75	0.1	0.1	0.1
MACACLIGEN90	0.1	0.2	0.1
MACALARSWG75	0.0	0.0	0.0
MACALARSWG90	0.2	0.1	-0.3
EDS	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.3	0.4	0.6
MACANoTreatment	0.2	0.1	0.2
MACAConventional	0.2	0.1	0.2
MACACLIGEN75	0.9	0.8	0.9
MACACLIGEN90	1.0	1.0	1.0
MACALARSWG75	1.0	0.9	1.0
MACALARSWG90	1.0	1.0	1.0
ERR	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.0	0.0	0.0
MACANoTreatment	-0.7	-0.7	-0.7
MACAConventional	0.0	0.0	0.0
MACACLIGEN75	-0.2	-0.2	-0.2
MACACLIGEN90	0.0	0.0	0.0
MACALARSWG75	2.1	2.1	2.1
MACALARSWG90	0.0	0.0	0.0

NSE	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	-0.8	-0.5	-0.4
MACANoTreatment	0.0	0.0	0.0
MACAConventional	-0.1	-0.1	-0.1
MACACLIGEN75	0.0	0.0	0.0
MACACLIGEN90	-1.1	-1.0	-1.0
MACALARSWG75	-0.2	-0.2	-0.2
MACALARSWG90	-0.8	-0.8	-0.6
RC	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.0	0.0	0.0
MACANoTreatment	0.0	0.0	0.0
MACAConventional	0.0	0.0	0.0
MACACLIGEN75	0.0	0.0	0.0
MACACLIGEN90	0.0	0.0	0.0
MACALARSWG75	0.0	0.0	0.0
MACALARSWG90	0.0	0.0	0.0
Cohen's-d effective	Adrian, MI	Fort Wayne, IN	Norwalk, OH
GDONoTreatment	0.1	0.0	0.0
MACANoTreatment	2.1	3.4	2.9
MACAConventional	0.3	0.1	0.2
MACACLIGEN75	0.2	0.5	0.3
MACACLIGEN90	0.1	0.0	0.0
MACALARSWG75	1.2	1.2	1.3
MACALARSWG90	0.1	0.0	0.1

Supplementary Table S9. Performance evaluation in simulating Growth Degree Days (GDD) by two different climate projection sources (GDO and MACA) and different bias correction methods applied on MACA data for Adrian, MI, Fort Wayne, In, and Norwalk, OH.

Adrian, MI				
	1-May	15-May	1-Oct	15-Oct
Observed	60	104	1364	1386
GDO	(47-69), 64	(93-126), 113	(1364-1462), 1449	(1455-1526), 1495
MACANoTreatment	(56-76), 68	(110-135), 125	(1437-1508), 1481	(1494-1570), 1531
MACAConventional	(774-1013), 921	(941-1151), 1056	(1726-2328), 1993	(1666-2266), 2025
MACACLIGEN75				
MACACLIGEN90				
MACALARSWG75	(5-11), 8	(48-61), 54	(1377-1430), 1392	(1386-1457), 1412
MACALARSWG90	(5-11), 8	(48-61), 54	(1377-1430), 1392	(1386-1457), 1412
RCP4.5	(98-142), 118	(174-231), 198	(1708-1954), 1861	(1761-2037), 1930
RCP4.5Treated	(854-1000), 923	(1009-1131), 1065	(1813-2227), 2023	(1947-2374), 2152
RCP8.5	(111-187), 144	(196-285), 236	(1901-2241), 2086	(1984-2347), 2190
RCP8.5Treated	(877-1008), 943	(898-1135), 1039	(1948-2246), 2060	(1946-2307), 2216
Fort Wayne, IN				
Observed	86	148	1615	1648
GDO	(74-95), 86	(138-160), 148	(1627-1676), 1652	(1685-1754), 1720
MACANoTreatment	(77-103), 91	(146-175), 163	(1602-1679), 1650	(1667-1769), 1713
MACAConventional	(976-1127), 1061	(1001-1272), 1110	(1983-2481), 2215	(2050-2461), 2333
MACACLIGEN75				
MACACLIGEN90				
MACALARSWG75	(18-29), 22	(78-99), 86	(1533-1592), 1559	(1558-1635), 1592
MACALARSWG90	(18-29), 22	(78-99), 86	(1533-1592), 1559	(1558-1635), 1592
RCP4.5	(132-180), 152	(219-289), 249	(1872-2178), 2046	(1932-2279), 2133
RCP4.5Treated	(936-1030), 980	(1085-1178), 1130	(2062-2335), 2211	(2231-2519), 2402
RCP8.5	(140-225), 178	(242-344), 287	(2075-2474), 2279	(2160-2599), 2397
RCP8.5Treated	(983-1044), 1017	(1002-1238), 1146	(2088-2296), 2212	(2324-2512), 2406
Norwalk, OH				

Observed	80	129	1493	1516
GDO	(60-90), 82	(115-151), 137	(1503-1588), 1552	(1562-1666), 1615
MACANoTreatment	(58-82), 72	(113-141), 129	(1490-1545), 1515	(1528-1620), 1565
MACAConventional	(860-1124), 1010	(937-1217), 1060	(1889-2399), 2140	(1833-2426), 2160
MACACLIGEN75				
MACACLIGEN90				
MACALARSWG75	(7-11), 9	(49-64), 56	(1400-1456), 1422	(1427-1492), 1453
MACALARSWG90	(7-11), 9	(49-64), 56	(1400-1456), 1422	(1427-1492), 1453
RCP4.5	(109-138), 125	(186-233), 209	(1756-1971), 1894	(1816-2057), 1976
RCP4.5Treated	(922-993), 960	(1046-1165), 1100	(2027-2308), 2164	(2039-2507), 2284
RCP8.5	(126-183), 153	(215-278), 249	(1950-2243), 2115	(2038-2355), 2228
RCP8.5Treated	(931-1022), 968	(955-1164), 1063	(2078-2380), 2201	(2200-2412), 2324

Supplementary Table S10. Descriptive statistics for daily precipitation, mm, for Adrian, MI from the different bias correction methods daily and seasonally.

	Adrian, MI								
	Univariate Statistics	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	Days with no Precipitation (%)	Maximum	Minimum
Daily Precipitation	Observed	2.4	0.0	6.5	4.9	36.0	0.4	66.9	120.4	0.0
	MACANoTreatment	(2.5-2.6), 2.5	(0-0), 0	(5.4-5.7), 5.6	(3.8-4), 3.9	(18.8-21.9), 20.8	(0.4-0.5), 0.5	(53.5-54.1), 53.9	(67.2-71), 69.7	(0-0), 0
	MACAConventional	(2.4-2.5), 2.4	(0-0), 0	(6.5-6.6), 6.6	(5.3-5.6), 5.5	(41.9-50.7), 47.9	(0.4-0.4), 0.4	(53.5-54.1), 53.9	(116.6-134.3), 125.1	(0-0), 0
	MACACLIGEN75	(0.6-0.7), 0.7	(0.5-0.6), 0.5	(0.5-0.5), 0.5	(1.3-1.5), 1.4	(2.5-3.4), 2.9	(1.3-1.3), 1.3	(7.5-9.2), 8.4	(3.9-5.5), 4.7	(0-0), 0
	MACACLIGEN90	(1.9-2), 1.9	(1.7-1.8), 1.8	(1-1.1), 1.1	(0.8-1), 0.9	(0.9-1.8), 1.2	(1.7-1.9), 1.8	(0.1-0.2), 0.1	(7.9-9.6), 8.6	(0-0), 0
	MACALARSWG75	(2.3-2.6), 2.4	(1.8-2.1), 1.9	(1.9-2), 1.9	(1.4-1.7), 1.5	(2.9-4.4), 3.5	(1.2-1.3), 1.2	(2-3.7), 2.6	(13.9-20.1), 18.1	(0-0), 0
	MACALARSWG90	(7.4-7.8), 7.6	(6.7-7.1), 6.8	(4.2-4.5), 4.3	(1-1.1), 1.1	(1.3-2.1), 1.7	(1.7-1.8), 1.7	(0-0), 0	(30.5-40.1), 35.4	(0-0.1), 0
Fall	Observed	2.3	0.0	5.7	4.1	21.0	0.4	65.2	59.4	0.0
	MACANoTreatment	(2.2-2.3), 2.3	(0-0), 0	(5-5.3), 5.2	(3.7-4.1), 3.9	(17.6-23.8), 20.9	(0.4-0.4), 0.4	(54.5-56.4), 55.3	(47.2-65.5), 59.9	(0-0), 0
	MACAConventional	(2.3-2.3), 2.3	(0-0), 0	(5.7-5.9), 5.8	(4.5-4.8), 4.7	(25.8-34.5), 29.9	(0.4-0.4), 0.4	(54.5-56.4), 55.3	(59.5-90.6), 74.7	(0-0), 0
	MACACLIGEN75	(0.5-0.7), 0.6	(0.4-0.6), 0.5	(0.4-0.5), 0.4	(1.2-1.6), 1.4	(1.8-3.8), 2.9	(1.3-1.5), 1.4	(8-11), 9.5	(2.9-3.8), 3.3	(0-0), 0
	MACACLIGEN90	(1.7-1.9), 1.8	(1.6-1.7), 1.6	(0.9-1), 0.9	(0.7-1), 0.9	(0.5-1.7), 1.1	(1.8-2), 1.9	(0.1-0.1), 0.1	(6-8.5), 7	(0-0), 0
	MACALARSWG75	(1.8-2.2), 2	(1.4-1.8), 1.6	(1.5-1.7), 1.6	(1.3-1.9), 1.6	(2.1-6.7), 4.2	(1.2-1.4), 1.3	(2.1-5), 3.3	(10.6-19.8), 14.4	(0-0), 0
	MACALARSWG90	(2.3-7.1), 6.3	(0-6.5), 5.4	(3.5-5.7), 4	(0.9-4.1), 1.4	(0.8-21), 4	(0.4-1.9), 1.6	(0-63.8), 7.1	(24.9-59.4), 33.3	(0-0.4), 0.1
Spring	Observed	3.0	0.0	7.2	4.0	22.7	0.4	63.5	80.3	0.0
	MACANoTreatment	(2.9-3.1), 3	(0-0), 0	(6-6.4), 6.3	(3.4-3.7), 3.5	(14.6-18.4), 16.6	(0.5-0.5), 0.5	(50.5-51.4), 50.8	(56-71), 67	(0-0), 0
	MACAConventional	(3-3), 3	(0-0), 0	(7.3-7.5), 7.4	(4.4-4.8), 4.6	(25.7-34.4), 30.9	(0.4-0.4), 0.4	(50.5-51.4), 50.8	(88.4-115.2), 102.5	(0-0), 0
	MACACLIGEN75	(0.8-0.9), 0.9	(0.6-0.8), 0.7	(0.5-0.6), 0.6	(1-1.4), 1.1	(1.4-3), 1.9	(1.4-1.6), 1.5	(3-3.9), 3.5	(3.7-5.5), 4.5	(0-0), 0
	MACACLIGEN90	(2.3-2.5), 2.4	(2.1-2.3), 2.2	(1-1.1), 1.1	(0.7-1), 0.8	(0.7-2), 1.1	(2-2.3), 2.2	(0-0.1), 0	(7.2-9.1), 8.1	(0-0.3), 0.1
	MACALARSWG75	(2.8-3.3), 3.1	(2.4-2.8), 2.6	(2-2.2), 2.1	(1.2-1.5), 1.4	(2.2-3.6), 2.8	(1.3-1.5), 1.5	(0.7-1.6), 1.1	(13.9-18.7), 16.9	(0-0), 0
	MACALARSWG90	(3-9.6), 8.4	(0-8.9), 7.5	(4.2-7.2), 4.9	(0.8-4), 1.3	(0.8-22.7), 3.6	(0.4-2.1), 1.8	(0-61.3), 6.8	(29.9-80.3), 38.4	(0-0.7), 0.2
Summers	Observed	2.8	0.0	7.9	5.1	38.4	0.4	70.7	120.4	0.0
	MACANoTreatment	(2.9-3), 2.9	(0-0), 0	(6-6.4), 6.2	(3.5-3.8), 3.6	(16.5-19.9), 18.4	(0.5-0.5), 0.5	(52.7-54.3), 53.4	(67.2-67.2), 67.2	(0-0), 0
	MACAConventional	(2.8-2.8), 2.8	(0-0), 0	(7.7-8), 7.9	(5.6-6.2), 5.9	(45.1-60.8), 53	(0.4-0.4), 0.4	(52.7-54.3), 53.4	(116.6-134.3), 125.1	(0-0), 0
	MACACLIGEN75	(0.8-0.9), 0.8	(0.6-0.8), 0.7	(0.5-0.6), 0.6	(1-1.4), 1.2	(1.2-2.8), 2	(1.4-1.6), 1.4	(5-7.3), 5.7	(3.5-5.4), 4.2	(0-0), 0
	MACACLIGEN90	(2.2-2.4), 2.3	(2.1-2.2), 2.1	(1.1-1.2), 1.1	(0.7-1), 0.8	(0.7-1.6), 1	(1.9-2.2), 2.1	(0-0.1), 0.1	(7.7-9.6), 8.4	(0-0.2), 0
	MACALARSWG75	(2.7-3.2), 3	(2.3-2.7), 2.5	(2.1-2.3), 2.2	(1-1.4), 1.2	(0.8-3.1), 2	(1.3-1.4), 1.4	(1-4.4), 2.2	(13.6-20.1), 16.6	(0-0), 0

	MACALARSWG90	(2.8-9.3), 8.3	(0-8.7), 7.5	(4.3-7.9), 4.8	(0.9-5.1), 1.4	(1.3-38.4), 5.7	(0.4-2.2), 1.8	(0-69.4), 7.7	(30-120.4), 43.8	(0-0.4), 0.2
Winters	Observed	1.7	0.0	4.6	4.8	32.8	0.4	68.1	59.7	0.0
	MACANoTreatment	(1.7-1.9), 1.8	(0-0), 0	(4.1-4.5), 4.4	(4-4.8), 4.5	(20.2-31.8), 27.4	(0.4-0.4), 0.4	(55.5-56.4), 56	(41-56.4), 53.4	(0-0), 0
	MACAConventional	(1.7-1.7), 1.7	(0-0), 0	(4.5-4.6), 4.6	(4.8-5.5), 5.2	(29.8-43.6), 37.4	(0.4-0.4), 0.4	(55.5-56.4), 56	(50.8-66.1), 60.7	(0-0), 0
	MACACLIGEN75	(0.4-0.5), 0.4	(0.3-0.3), 0.3	(0.3-0.4), 0.3	(1.5-2.2), 1.7	(3.7-10.5), 5.7	(1.2-1.3), 1.3	(13.6-17.4), 15.1	(2.3-3.9), 3	(0-0), 0
	MACACLIGEN90	(1.3-1.4), 1.3	(1.1-1.3), 1.2	(0.7-0.8), 0.8	(1-1.3), 1.1	(1-3.5), 1.9	(1.6-1.8), 1.7	(0.2-0.3), 0.2	(5.4-8.2), 6.4	(0-0), 0
	MACALARSWG75	(1.4-1.9), 1.6	(1.2-1.5), 1.3	(1.2-1.4), 1.3	(1.4-2), 1.7	(3.1-7), 4.8	(1.2-1.3), 1.2	(2.4-4.8), 3.6	(8.8-12.4), 11	(0-0), 0
	MACALARSWG90	(1.7-5.6), 4.9	(0-4.9), 4.1	(3-4.6), 3.4	(1.1-4.8), 1.6	(1.5-32.8), 5.6	(0.4-1.7), 1.5	(0-66.8), 7.4	(21.1-59.7), 29.8	(0-0.3), 0.1

Supplementary Table S11. Descriptive statistics for daily precipitation, mm, for Fort Wayne, IN from the different bias correction methods daily and seasonally.

	Fort Wayne, IN								
	Univariate Statistics	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	Days with no Precipitation (%)	Maximum	Minimum
Daily Precipitation	Observed	2.5	0.0	6.7	4.7	32.2	0.4	63.5	111.8	0.0
	MACANoTreatment	(2.6-2.7), 2.6	(0-0), 0	(5.8-6), 5.9	(3.9-4.1), 4	(20.5-23.3), 22	(0.4-0.4), 0.4	(54.6-55.5), 54.9	(65-74.5), 72.3	(0-0), 0
	MACAConventional	(2.5-2.5), 2.5	(0-0), 0	(6.7-6.7), 6.7	(5-5.5), 5.3	(35.8-45.1), 40.3	(0.4-0.4), 0.4	(54.6-55.5), 55	(92.7-127.6), 108.5	(0-0), 0
	MACACLIGEN75	(0.7-0.7), 0.7	(0.5-0.6), 0.6	(0.5-0.6), 0.5	(1.2-1.5), 1.3	(2.1-3.4), 2.5	(1.2-1.3), 1.3	(9.6-12.4), 11.2	(4.1-5.4), 4.6	(0-0), 0
	MACACLIGEN90	(2-2.1), 2	(1.9-1.9), 1.9	(1.1-1.1), 1.1	(0.8-1), 0.9	(0.8-1.3), 1.1	(1.8-1.9), 1.8	(0.1-0.3), 0.2	(8.1-11.8), 9.1	(0-0), 0
	MACALARSWG75	(2.4-2.7), 2.5	(1.9-2.3), 2	(2-2.1), 2	(1.4-1.6), 1.4	(2.7-4.2), 3	(1.2-1.3), 1.2	(3.6-5.4), 4.4	(15.2-22.9), 18.4	(0-0), 0
	MACALARSWG90	(7.7-8.2), 7.9	(7-7.5), 7.1	(4.3-4.6), 4.5	(1-1.1), 1	(1.4-2.5), 1.8	(1.7-1.8), 1.8	(0-0), 0	(35.5-49.8), 40.5	(0-0), 0
Fall	Observed	2.3	0.0	6.0	4.4	25.1	0.4	62.9	68.3	0.0
	MACANoTreatment	(2.3-2.5), 2.4	(0-0), 0	(5.3-5.6), 5.5	(3.6-3.9), 3.8	(16.2-20.3), 18.6	(0.4-0.4), 0.4	(57-58.9), 57.8	(56.1-56.6), 56.5	(0-0), 0
	MACAConventional	(2.4-2.4), 2.4	(0-0), 0	(6.4-6.5), 6.4	(4.3-4.7), 4.4	(22.1-27.7), 24.3	(0.4-0.4), 0.4	(59-62), 60.7	(57.2-77.7), 64.6	(0-0), 0
	MACACLIGEN75	(0.5-0.6), 0.6	(0.4-0.5), 0.5	(0.4-0.5), 0.5	(1.2-1.5), 1.4	(1.9-3.2), 2.7	(1.1-1.3), 1.2	(12.6-16.9), 14.8	(2.9-4.2), 3.6	(0-0), 0
	MACACLIGEN90	(1.8-2), 1.9	(1.7-1.9), 1.8	(1-1), 1	(0.6-0.9), 0.8	(0.3-1.3), 1	(1.9-2.1), 1.9	(0.2-0.4), 0.2	(6-8), 7.1	(0-0), 0
	MACALARSWG75	(1.7-2.2), 2	(1.2-1.8), 1.6	(1.6-1.9), 1.8	(1.3-1.8), 1.6	(2.5-5.2), 3.6	(1-1.3), 1.1	(4.7-8), 6.3	(12-15.6), 13.5	(0-0), 0
	MACALARSWG90	(6.8-7.6), 7.3	(6.3-7), 6.7	(3.7-4.2), 4	(0.8-1.1), 0.9	(0.7-2.5), 1.3	(1.7-1.9), 1.8	(0-0.1), 0	(24.7-35.2), 29.5	(0-0.4), 0
Spring	Observed	3.2	0.0	7.7	4.7	35.6	0.4	60.4	111.8	0.0
	MACANoTreatment	(3.2-3.3), 3.2	(0.3-0.3), 0.3	(6.4-6.7), 6.5	(3.4-3.7), 3.6	(14.9-18.7), 17.1	(0.5-0.5), 0.5	(47.8-48.8), 48.3	(57.2-69.9), 65.7	(0-0), 0
	MACAConventional	(2.8-2.8), 2.8	(0-0.1), 0	(6.5-6.6), 6.6	(4.3-4.7), 4.5	(25.1-30), 27.8	(0.4-0.4), 0.4	(50-51.1), 50.5	(74.2-87.6), 79.5	(0-0), 0
	MACACLIGEN75	(0.9-1), 0.9	(0.7-0.9), 0.8	(0.6-0.6), 0.6	(0.9-1.2), 1.1	(1.1-2.5), 1.6	(1.5-1.7), 1.6	(2.2-3.8), 3	(3.7-4.5), 4.2	(0-0), 0
	MACACLIGEN90	(2.3-2.5), 2.4	(2.2-2.4), 2.3	(1.1-1.1), 1.1	(0.7-0.9), 0.8	(0.4-1.3), 0.8	(2.1-2.3), 2.2	(0-0.1), 0	(7.1-9.2), 8.2	(0-0.3), 0.1
	MACALARSWG75	(3.1-3.8), 3.5	(2.7-3.4), 3.1	(2.1-2.3), 2.2	(1-1.4), 1.1	(1.3-3.7), 2	(1.4-1.8), 1.6	(0.5-2.4), 0.9	(14.8-22.1), 16.5	(0-0), 0
	MACALARSWG90	(9-9.8), 9.5	(8.4-9.2), 8.9	(4.3-4.7), 4.5	(0.8-1.1), 0.9	(0.7-3.4), 1.6	(2-2.2), 2.1	(0-0), 0	(32.8-49), 37.5	(0-1.3), 0.4
Summers	Observed	2.8	0.0	7.8	4.1	20.4	0.4	69.1	71.9	0.0
	MACANoTreatment	(2.9-3), 2.9	(0-0), 0	(6.5-6.8), 6.7	(3.8-4.2), 4	(19-23.5), 21.7	(0.4-0.5), 0.4	(55.7-57.6), 56.5	(65-74.5), 72.1	(0-0), 0
	MACAConventional	(3.1-3.1), 3.1	(0-0), 0	(8.3-8.4), 8.3	(5.1-5.8), 5.4	(34.5-47.6), 40.9	(0.4-0.4), 0.4	(51.6-53), 52	(92.7-127.6), 108.5	(0-0), 0
	MACACLIGEN75	(0.7-0.8), 0.8	(0.5-0.7), 0.6	(0.5-0.6), 0.6	(1.1-1.4), 1.2	(1.7-3.3), 2.3	(1.2-1.3), 1.3	(10.5-14.2), 11.7	(3.6-5.4), 4.5	(0-0), 0
	MACACLIGEN90	(2.2-2.4), 2.3	(2-2.2), 2.2	(1.2-1.3), 1.2	(0.7-0.9), 0.8	(0.4-1.3), 0.8	(1.8-2), 1.9	(0.1-0.3), 0.2	(7.7-11.8), 8.7	(0-0), 0
	MACALARSWG75	(2.5-3.1), 2.8	(2-2.8), 2.4	(2.1-2.3), 2.2	(1.1-1.5), 1.3	(1.8-4), 2.6	(1.2-1.4), 1.3	(3.1-7.3), 5.1	(15.2-22.9), 17.9	(0-0), 0

	MACALARSWG90	(8.4-9.5), 8.8	(7.5-8.6), 8	(4.7-5), 4.8	(0.9-1.1), 1	(0.9-2.7), 1.7	(1.8-1.9), 1.8	(0-0.1), 0	(30.7-49.8), 38.5	(0-0.5), 0.1
Winters	Observed	1.9	0.0	4.7	4.6	33.8	0.4	61.6	77.0	0.0
	MACANoTreatment	(1.9-2), 1.9	(0-0), 0	(4.5-4.8), 4.7	(4.1-4.6), 4.5	(23-31.5), 28.7	(0.4-0.4), 0.4	(56.6-58.1), 57.2	(52.1-57), 56.3	(0-0), 0
	MACAConventional	(1.9-1.9), 1.9	(0-0), 0	(4.9-5), 4.9	(5-5.4), 5.2	(35-42.9), 39.6	(0.4-0.4), 0.4	(56.1-57.1), 56.7	(63.5-71.6), 66.4	(0-0), 0
	MACACLIGEN75	(0.4-0.5), 0.5	(0.4-0.4), 0.4	(0.3-0.4), 0.4	(1.3-1.7), 1.5	(2.7-4.6), 3.5	(1.2-1.4), 1.2	(12.5-16.8), 15.1	(2.6-3.4), 3.1	(0-0), 0
	MACACLIGEN90	(1.4-1.6), 1.5	(1.2-1.5), 1.4	(0.8-0.9), 0.9	(0.8-1.1), 1	(0.5-2.2), 1.4	(1.6-1.9), 1.7	(0.1-0.3), 0.2	(5.4-8.5), 7.2	(0-0), 0
	MACALARSWG75	(1.4-2), 1.6	(1.1-1.7), 1.3	(1.3-1.4), 1.4	(1.7-2), 1.8	(5-6.5), 5.4	(1.1-1.4), 1.2	(3.9-7.7), 5.1	(10.7-13.9), 11.9	(0-0), 0
	MACALARSWG90	(5.5-6), 5.8	(4.7-5.5), 5.1	(3.3-3.5), 3.5	(0.9-1.2), 1.1	(1-3), 1.8	(1.6-1.8), 1.7	(0-0.1), 0	(21.8-35.9), 27.7	(0-0.3), 0.1

Supplementary Table S12. Descriptive statistics for daily precipitation, mm, for Norwalk, OH from the different bias correction methods daily and seasonally.

	Norwalk, OH									
	Univariate Statistics	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	Days with no Precipitation (%)	Maximum	Minimum
Daily Precipitation	Observed	2.6	0.0	7.0	7.5	133.0	0.4	64	229.1	0.0
	MACANoTreatment	(2.6-2.7), 2.7	(0-0), 0	(5.4-5.7), 5.6	(3.4-4), 3.9	(14.3-26.9), 23.8	(0.5-0.5), 0.5	(51-51.7), 51.4	(54.5-112.8), 101.6	(0-0), 0
	MACAConventional	(2.6-2.6), 2.6	(0-0), 0	(6.9-7), 7	(5.6-8.2), 7.3	(48.4-166.3), 122.6	(0.4-0.4), 0.4	(51-51.7), 51.4	(133.7-258.4), 220.7	(0-0), 0
	MACACLIGEN75	(0.7-0.8), 0.8	(0.6-0.7), 0.7	(0.5-0.6), 0.5	(1.1-1.3), 1.2	(1.7-2.7), 2.2	(1.4-1.5), 1.4	(5.2-6.3), 5.7	(3.8-4.8), 4.3	(0-0), 0
	MACACLIGEN90	(2-2.1), 2	(1.8-2), 1.9	(1-1), 1	(0.7-1), 0.9	(0.7-2.2), 1.2	(1.9-2.1), 2	(0-0.1), 0.1	(7.9-13.6), 9	(0-0), 0
	MACALARSWG75	(2.6-2.9), 2.7	(2.1-2.5), 2.3	(1.9-2), 2	(1.4-1.6), 1.5	(2.8-4.1), 3.3	(1.3-1.4), 1.4	(1.3-2.2), 1.8	(15-21.2), 17.9	(0-0), 0
	MACALARSWG90	(7.6-8.2), 7.9	(6.9-7.5), 7.2	(4.2-4.5), 4.3	(0.8-1), 0.9	(0.8-1.4), 1.1	(1.8-1.9), 1.8	(0-0), 0	(31.9-37.7), 34.3	(0-0.3), 0.1
Fall	Observed	2.3	0.0	5.5	4.0	21.3	0.4	63.6	57.4	0.0
	MACANoTreatment	(2.3-2.4), 2.4	(0-0), 0	(5.1-5.3), 5.2	(3.6-3.8), 3.7	(16.3-18.6), 17.2	(0.4-0.5), 0.5	(53.2-54.5), 53.8	(46.1-47.3), 47.1	(0-0), 0
	MACAConventional	(2.2-2.3), 2.2	(0-0), 0	(5.5-5.5), 5.5	(4.2-4.4), 4.3	(22.8-25.6), 24.3	(0.4-0.4), 0.4	(53.2-54.5), 53.8	(53.1-61.4), 56.4	(0-0), 0
	MACACLIGEN75	(0.6-0.7), 0.7	(0.4-0.6), 0.5	(0.4-0.5), 0.5	(1-1.4), 1.3	(1.6-3.3), 2.2	(1.3-1.5), 1.4	(7.2-9.4), 8.1	(2.9-4.5), 3.5	(0-0), 0
	MACACLIGEN90	(1.9-2), 1.9	(1.7-1.8), 1.8	(0.9-1), 0.9	(0.7-0.9), 0.8	(0.4-1.5), 1	(2-2.2), 2.1	(0-0.1), 0.1	(5.6-8.2), 7	(0-0), 0
	MACALARSWG75	(1.9-2.4), 2.2	(1.5-2.1), 1.8	(1.5-1.7), 1.6	(1.3-1.7), 1.6	(2.5-5.4), 3.9	(1.2-1.5), 1.3	(2.1-4.7), 2.8	(11.2-14.5), 12.7	(0-0), 0
	MACALARSWG90	(6.8-7.4), 7.1	(6.1-6.8), 6.5	(3.8-4), 3.9	(0.9-1.1), 1	(0.9-1.8), 1.3	(1.7-1.9), 1.8	(0-0), 0	(25.6-33.5), 29.7	(0-0.7), 0.2
Spring	Observed	3.2	0.0	7.2	3.7	19.9	0.4	60	87.6	0.0
	MACANoTreatment	(3.2-3.3), 3.2	(0.4-0.5), 0.4	(5.9-6.1), 6	(2.8-3.2), 3.1	(9.3-14.2), 12.5	(0.5-0.5), 0.5	(46.1-47.4), 46.9	(44.1-70.5), 63.3	(0-0), 0
	MACAConventional	(3.2-3.2), 3.2	(0.1-0.2), 0.1	(7.6-7.9), 7.8	(4.2-6.7), 5.6	(23-94.7), 58.8	(0.4-0.4), 0.4	(46.1-47.4), 46.9	(74.8-187), 146.7	(0-0), 0
	MACACLIGEN75	(0.9-1.1), 1	(0.8-1), 0.9	(0.6-0.6), 0.6	(0.8-1), 0.9	(0.6-1.7), 1.2	(1.6-1.8), 1.7	(1-1.6), 1.3	(3.8-4.7), 4.1	(0-0), 0
	MACACLIGEN90	(2.3-2.5), 2.4	(2.2-2.4), 2.3	(1-1), 1	(0.6-0.8), 0.7	(0.4-1.1), 0.7	(2.3-2.5), 2.4	(0-0), 0	(6.9-8), 7.4	(0.2-0.3), 0.2
	MACALARSWG75	(3.5-3.9), 3.7	(3.2-3.6), 3.4	(2.1-2.2), 2.1	(1.1-1.3), 1.2	(1.7-3.3), 2.6	(1.6-1.8), 1.7	(0.1-0.7), 0.4	(14.5-20.1), 17	(0-0), 0
	MACALARSWG90	(9.3-9.8), 9.5	(8.6-9.2), 8.9	(4.2-4.4), 4.3	(0.8-1), 0.8	(0.6-1.4), 0.9	(2.1-2.3), 2.2	(0-0), 0	(28-32.9), 30.8	(0.1-1), 0.6
Summers	Observed	3.1	0.0	9.5	8.7	140.5	0.3	68.7	229.1	0.0
	MACANoTreatment	(3-3.1), 3	(0-0), 0	(6-6.6), 6.4	(3.2-4.5), 4.2	(13.3-38.6), 31.6	(0.5-0.5), 0.5	(50.3-52), 51.2	(54.5-112.8), 101.6	(0-0), 0
	MACAConventional	(3.1-3.1), 3.1	(0-0), 0	(8.9-9.1), 9	(5.8-9.7), 8.2	(47.1-195.9), 135.9	(0.3-0.4), 0.3	(50.3-52), 51.2	(133.7-258.4), 220.7	(0-0), 0
	MACACLIGEN75	(0.8-1), 0.9	(0.8-0.9), 0.8	(0.5-0.6), 0.5	(0.9-1.3), 1.1	(1.2-3.4), 2.2	(1.5-1.8), 1.6	(4-6.1), 4.9	(3.6-4.8), 4	(0-0), 0
	MACACLIGEN90	(2.1-2.4), 2.2	(1.9-2.3), 2.1	(1-1.1), 1.1	(0.7-1.2), 0.9	(0.7-4.8), 1.6	(2-2.4), 2.1	(0-0.1), 0.1	(7.5-13.6), 9	(0-0.2), 0
	MACALARSWG75	(3-3.5), 3.2	(2.6-3), 2.7	(2-2.3), 2.2	(1.1-1.5), 1.3	(1.6-4), 2.5	(1.3-1.6), 1.5	(0.9-3.6), 1.8	(12.7-21.2), 16.2	(0-0), 0

	MACALARSWG90	(8.9-9.6), 9.3	(8.3-9.2), 8.8	(4.3-4.7), 4.5	(0.6-0.8), 0.7	(0.2-1.2), 0.8	(2-2.1), 2.1	(0-0.1), 0	(30.4-37.7), 33.9	(0-0.7), 0.4
Winters	Observed (MACA)	1.8	0.0	4.6	4.5	28.0	0.4	63.8	55.9	0.0
	MACANoTreatment	(1.9-2), 2	(0-0), 0	(4.3-4.7), 4.6	(4-4.5), 4.3	(20.5-26.5), 24.4	(0.4-0.4), 0.4	(53.1-54.7), 53.8	(44.5-51.6), 50.8	(0-0), 0
	MACAConventional	(1.8-1.8), 1.8	(0-0), 0	(4.6-4.7), 4.6	(4.6-5.1), 4.8	(27.2-35.1), 31.7	(0.4-0.4), 0.4	(53.1-54.7), 53.8	(49.2-63.7), 57.4	(0-0), 0
	MACACLIGEN75	(0.5-0.6), 0.5	(0.4-0.5), 0.4	(0.3-0.4), 0.4	(1.2-1.5), 1.4	(2.4-4), 3.1	(1.4-1.6), 1.5	(6.8-9.5), 8.3	(2.5-3.1), 2.7	(0-0), 0
	MACACLIGEN90	(1.5-1.6), 1.5	(1.3-1.5), 1.4	(0.7-0.8), 0.8	(0.8-1), 0.9	(0.8-1.4), 1.1	(1.8-2), 1.9	(0.1-0.1), 0.1	(5.3-7), 6.2	(0-0), 0
	MACALARSWG75	(1.7-2), 1.9	(1.4-1.8), 1.6	(1.2-1.4), 1.3	(1.5-1.7), 1.5	(3.1-5.1), 3.7	(1.3-1.5), 1.4	(1.7-2.9), 2.3	(9.3-13.3), 11.1	(0-0), 0
	MACALARSWG90	(5.5-6.1), 5.8	(4.9-5.5), 5.2	(3.1-3.4), 3.3	(1-1.4), 1.2	(1.3-4.2), 2.5	(1.7-1.8), 1.8	(0-0), 0	(23.5-34.3), 28.3	(0.1-0.5), 0.3

Supplementary Table S13. Descriptive statistics for daily precipitation, mm, on seasonal basis for Fort Wayne, IN from the MACA climate projections for two different future climate scenarios (RCP 4.5 and RCP 8.5), treated with power transformation bias correction method and unbiased dataset for period from 2006-2099 compared with observed data.

FALL

Adrian, MI									
Treatment	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	No. of days with no Precipitation (%)	Maximum	Minimum
Observed	2.3	0.0	5.7	4.1	21.0	0.4	65.2	59.4	0.0
RCP4.5	(2.3-2.7), 2.4	(0-0), 0	(5.4-6.3), 5.8	(3.5-4.9), 4.3	(14.5-39.4), 27	(0.4-0.4), 0.4	(53.9-56.1), 55	(52.1-117.3), 77.3	(0-0), 0
RCP4.5Treated	(2.2-2.7), 2.5	(0-0), 0	(6-7.5), 6.7	(4-6.7), 5.3	(20.4-84.4), 43	(0.4-0.4), 0.4	(53.9-56.1), 55	(69.5-193.6), 108.5	(0-0), 0
RCP8.5	(2.1-2.8), 2.4	(0-0), 0	(5.4-6.3), 5.9	(3.7-5.3), 4.6	(18.2-43.5), 30	(0.4-0.4), 0.4	(54-56.7), 55.8	(63.9-95.5), 79.8	(0-0), 0
RCP8.5Treated	(2.1-2.9), 2.5	(0-0), 0	(6.1-7.5), 6.8	(4.4-6.6), 5.6	(26.3-66), 46.1	(0.3-0.4), 0.4	(54-56.7), 55.8	(81.6-136.2), 105.4	(0-0), 0
Fort Wayne, IN									
Observed	2.3	0.0	6.0	4.4	25.1	0.4	62.9	68.3	0.0
RCP4.5	(2.3-2.8), 2.5	(0-0), 0	(5.5-6.5), 6	(3.4-4.7), 4.2	(13.6-37.9), 24.6	(0.4-0.4), 0.4	(56.4-59), 57.9	(58.6-122.8), 76.8	(0-0), 0
RCP4.5Treated	(2.3-2.8), 2.5	(0-0), 0	(6.1-7.5), 6.7	(3.9-5.9), 5	(19.6-60.9), 36.8	(0.4-0.4), 0.4	(56.4-59), 57.9	(75.9-155.4), 97.9	(0-0), 0
RCP8.5	(2-2.9), 2.5	(0-0), 0	(5.3-6.5), 6.1	(3.7-5.2), 4.5	(19.5-47.8), 31.1	(0.4-0.4), 0.4	(57-59.9), 58.7	(70.7-136.6), 97.5	(0-0), 0
RCP8.5Treated	(2-2.9), 2.5	(0-0), 0	(5.9-7.4), 6.9	(4.5-6.5), 5.5	(31.1-72.3), 47.1	(0.3-0.4), 0.4	(57-59.9), 58.7	(89.3-174.9), 126.3	(0-0), 0
Norwalk, OH									
Observed	2.3	0.0	5.5	4.0	21.3	0.4	63.6	57.4	0.0
RCP4.5	(2.3-2.7), 2.5	(0-0), 0	(5.5-6.2), 5.8	(3.6-4.3), 4	(16.9-26.6), 21.5	(0.4-0.4), 0.4	(52.7-54.7), 53.7	(56.7-79.9), 69.8	(0-0), 0
RCP4.5Treated	(2.2-2.6), 2.4	(0-0), 0	(5.8-6.9), 6.2	(4.2-5), 4.7	(26.4-36.8), 31.6	(0.4-0.4), 0.4	(52.7-54.7), 53.7	(66.6-113.2), 87	(0-0), 0
RCP8.5	(2.1-2.9), 2.5	(0-0), 0	(5.2-6.3), 5.8	(3.5-4.3), 4.1	(15.6-25), 22.1	(0.4-0.5), 0.4	(53.3-55.4), 54.5	(57.6-77), 68	(0-0), 0
RCP8.5Treated	(2-2.8), 2.4	(0-0), 0	(5.3-7), 6.3	(4.1-5.2), 4.8	(23.6-38.7), 32.6	(0.4-0.4), 0.4	(53.3-55.4), 54.5	(64.3-100.3), 87	(0-0), 0

SPRING

Adrian, MI									
Treatment	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	No. of days with no Precipitation (%)	Maximum	Minimum
Observed	3.0	0.0	7.2	4.0	22.7	0.4	63.5	80.3	0.0
RCP4.5	(3-3.4), 3.2	(0-0.3), 0.1	(6.1-7.4), 6.7	(3.4-4.6), 3.9	(15.3-35.6), 23.3	(0.5-0.5), 0.5	(46.3-51.1), 49.6	(69.5-125.6), 94.7	(0-0), 0
RCP4.5Treated	(2.9-3.5), 3.2	(0-0.2), 0.1	(6.9-9.1), 8.2	(4.4-7.4), 5.5	(27.1-113.1), 53.1	(0.4-0.4), 0.4	(46.3-51.1), 49.6	(100.8-249.7), 158.8	(0-0), 0
RCP8.5	(3-3.5), 3.2	(0-0.3), 0.2	(6.4-7.4), 6.9	(3.6-4.5), 3.9	(17.5-33.3), 23.3	(0.5-0.5), 0.5	(47.7-51.4), 49.6	(83-122.1), 100.1	(0-0), 0
RCP8.5Treated	(3-3.6), 3.3	(0-0.2), 0.1	(7.3-9.3), 8.5	(4.7-6.3), 5.4	(33.3-68.3), 47.9	(0.4-0.4), 0.4	(47.7-51.4), 49.6	(120.7-214.8), 158.9	(0-0), 0

Fort Wayne, IN									
Observed	3.2	0.0	7.7	4.7	35.6	0.4	60.4	111.8	0.0
RCP4.5	(3.2-3.7), 3.4	(0-0.4), 0.3	(6.6-7.5), 7.1	(3.4-4.2), 3.8	(15.6-29.3), 21.8	(0.5-0.5), 0.5	(44.7-50.2), 47.5	(78-124.5), 92.4	(0-0), 0
RCP4.5Treated	(3.2-3.8), 3.5	(0-0.2), 0.1	(7.8-9.4), 8.5	(4.3-6.6), 5.3	(26-89.2), 45.6	(0.4-0.4), 0.4	(44.7-50.2), 47.5	(106-223.1), 145.5	(0-0), 0
RCP8.5	(3.2-3.7), 3.4	(0-0.4), 0.3	(6.7-7.6), 7.2	(3.7-4.3), 4	(18.3-31.5), 23.4	(0.5-0.5), 0.5	(44.3-51.1), 48.3	(72-110.2), 93.7	(0-0), 0
RCP8.5Treated	(3.2-3.8), 3.5	(0-0.2), 0.1	(7.9-9.3), 8.7	(4.7-6.4), 5.3	(29.5-71.8), 43.8	(0.4-0.4), 0.4	(44.3-51.1), 48.3	(109.3-188.9), 141.3	(0-0), 0
Norwalk, OH									
Observed	3.2	0.0	7.2	3.7	19.9	0.4	60	87.6	0.0
RCP4.5	(3.1-3.6), 3.4	(0.4-0.5), 0.4	(6-6.7), 6.4	(3-3.7), 3.3	(10.8-23.6), 16.3	(0.5-0.5), 0.5	(43.8-47.5), 45.9	(58.6-113.8), 86	(0-0), 0
RCP4.5Treated	(3-3.6), 3.4	(0.1-0.2), 0.1	(7.5-9.2), 8.6	(4.4-12.9), 7.3	(27.4-361.7), 135.1	(0.4-0.4), 0.4	(43.8-47.5), 45.9	(108.4-340.2), 235	(0-0), 0
RCP8.5	(3.2-3.7), 3.4	(0.3-0.5), 0.4	(6.2-7.1), 6.6	(3.1-3.7), 3.3	(12.1-20.5), 15.6	(0.5-0.5), 0.5	(43.7-48.2), 46.1	(61.4-91.6), 80.6	(0-0), 0
RCP8.5Treated	(3.1-3.9), 3.4	(0.1-0.2), 0.1	(7.8-9.9), 8.8	(4.9-7.4), 6.3	(37.7-117.3), 83.5	(0.4-0.4), 0.4	(43.7-48.2), 46.1	(136.6-274.2), 222	(0-0), 0

SUMMER

Adrian, MI									
	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	No. of days with no Precipitation (%)	Maximum	Minimum
Observed	2.8	0.0	7.9	5.1	38.4	0.4	70.7	120.4	0.0
RCP4.5	(2.6-3.2), 2.9	(0-0), 0	(5.9-6.9), 6.3	(3.6-4.9), 4	(19.3-40), 25.3	(0.4-0.5), 0.5	(51.3-54.9), 52.7	(65.7-127.3), 91.4	(0-0), 0
RCP4.5Treated	(2.5-3), 2.8	(0-0), 0	(7.4-9.6), 8.3	(5.9-10.2), 7.3	(50.8-200.8), 93.4	(0.3-0.4), 0.3	(51.3-54.9), 52.7	(113.6-302.6), 191.2	(0-0), 0
RCP8.5	(2.7-3), 2.9	(0-0), 0	(5.9-6.9), 6.4	(3.6-4.6), 4	(18.7-33), 23.6	(0.4-0.5), 0.5	(52.2-54.8), 53.6	(75.4-104.4), 87.2	(0-0), 0
RCP8.5Treated	(2.6-3), 2.8	(0-0), 0	(7.6-9.4), 8.4	(6.2-8.1), 7	(60-132.4), 81.3	(0.3-0.4), 0.3	(52.2-54.8), 53.6	(155.3-258), 181.3	(0-0), 0
Fort Wayne, IN									
Observed	2.8	0.0	7.8	4.1	20.4	0.4	69.1	71.9	0.0
RCP4.5	(2.6-3.3), 3	(0-0), 0	(6.2-7.4), 6.8	(3.8-6.5), 4.6	(19.9-106.4), 36.5	(0.4-0.5), 0.4	(53.7-57.1), 55.1	(81.9-208.6), 107.5	(0-0), 0
RCP4.5Treated	(2.5-3.4), 3	(0-0), 0	(8.4-10.1), 9.3	(5.6-15.3), 7.8	(43.7-544.6), 127.4	(0.3-0.3), 0.3	(53.7-57.1), 55.1	(134.9-454.6), 208.7	(0-0), 0
RCP8.5	(2.6-3.1), 2.9	(0-0), 0	(5.9-7.5), 6.9	(4.1-5.1), 4.6	(22.4-46.7), 32.2	(0.4-0.4), 0.4	(54.5-57.4), 56.3	(77.8-151.2), 106.4	(0-0), 0
RCP8.5Treated	(2.5-3.2), 3	(0-0), 0	(7.6-10.5), 9.4	(5.8-8.8), 7.2	(47.5-149.8), 85.2	(0.3-0.3), 0.3	(54.5-57.4), 56.3	(151.5-293.8), 204.8	(0-0), 0
Norwalk, OH									
Observed	3.1	0.0	9.5	8.7	140.5	0.3	68.7	229.1	0.0
RCP4.5	(2.7-3.3), 3	(0-0.3), 0.2	(6-7.2), 6.5	(4-5.4), 4.6	(28-66.7), 40	(0.4-0.5), 0.5	(49.1-53.5), 50.5	(100.7-166.3), 123.3	(0-0), 0
RCP4.5Treated	(2.7-3.4), 3.2	(0-0.1), 0	(8.4-12.2), 9.8	(8.2-13.6), 10.1	(120.1-387.6), 207.3	(0.3-0.4), 0.3	(49.1-53.5), 50.5	(214-461.7), 306.9	(0-0), 0
RCP8.5	(2.9-3.3), 3	(0-0.3), 0.1	(6.2-7.3), 6.8	(4.1-6.7), 5.2	(26.7-99.4), 55.1	(0.4-0.5), 0.5	(49.3-53), 50.9	(89.8-200.1), 145	(0-0), 0
RCP8.5Treated	(2.9-3.5), 3.2	(0-0.1), 0	(8.6-11.8), 10.5	(8-17.2), 12.6	(124.3-604.5), 324.5	(0.3-0.3), 0.3	(49.3-53), 50.9	(255.4-536.9), 381.9	(0-0), 0

WINTER

Adrian, MI									
	Mean	Median	Std. Dev.	Skewness	Kurtosis	CV	No. of days with no Precipitation (%)	Maximum	Minimum
Observed (MACA)	1.7	0.0	4.6	4.8	32.8	0.4	68.1	59.7	0.0
RCP4.5	(1.8-2.1), 2	(0-0), 0	(4.5-5.2), 4.9	(4.4-5.2), 4.7	(26.9-42.2), 32.7	(0.4-0.4), 0.4	(53.9-56.2), 54.9	(53.6-103.5), 72.5	(0-0), 0
RCP4.5Treated	(1.7-2), 1.9	(0-0), 0	(4.6-5.5), 5.2	(5.1-6.4), 5.7	(36.3-70), 48.8	(0.4-0.4), 0.4	(53.9-56.2), 54.9	(70.5-130), 89.2	(0-0), 0
RCP8.5	(1.9-2.3), 2.1	(0-0), 0	(4.6-5.6), 5.1	(4.6-5.1), 4.8	(31.5-40.1), 34.4	(0.4-0.4), 0.4	(53.8-56.9), 54.9	(64.2-92.1), 79.7	(0-0), 0
RCP8.5Treated	(1.8-2.1), 2	(0-0), 0	(5-5.9), 5.5	(5.4-6.3), 5.8	(41.3-66.2), 52.3	(0.4-0.4), 0.4	(53.8-56.9), 54.9	(78.3-114.3), 100.1	(0-0), 0
Fort Wayne, IN									
Observed (MACA)	1.9	0.0	4.7	4.6	33.8	0.4	61.6	77.0	0.0
RCP4.5	(1.9-2.3), 2.1	(0-0), 0	(4.9-5.5), 5.2	(4.2-6.1), 4.7	(24.1-67.3), 34.8	(0.4-0.4), 0.4	(55.7-57.8), 56.6	(64.3-102), 76	(0-0), 0
RCP4.5Treated	(1.9-2.2), 2.1	(0-0), 0	(5.1-5.9), 5.5	(4.7-7.1), 5.4	(29.8-88.2), 45.4	(0.4-0.4), 0.4	(55.7-57.8), 56.6	(71.1-117.9), 88.4	(0-0), 0
RCP8.5	(2-2.4), 2.2	(0-0), 0	(5-5.7), 5.4	(4-5.4), 4.7	(21.3-51), 34.4	(0.4-0.4), 0.4	(55-58.1), 56.3	(60.5-109.8), 78.9	(0-0), 0
RCP8.5Treated	(1.9-2.3), 2.2	(0-0), 0	(5.3-6.1), 5.7	(4.5-6.3), 5.4	(26.5-69.4), 45.1	(0.4-0.4), 0.4	(55-58.1), 56.3	(66.5-127.8), 90.7	(0-0), 0
Norwalk, OH									
Observed (MACA)	1.8	0.0	4.6	4.5	28.0	0.4	63.8	55.9	0.0
RCP4.5	(2.1-2.3), 2.2	(0-0), 0	(4.9-5.3), 5.1	(4.1-5.3), 4.6	(22.7-41.4), 30.4	(0.4-0.4), 0.4	(52.3-54.5), 53.2	(53.9-97), 74.2	(0-0), 0
RCP4.5Treated	(1.9-2.1), 2	(0-0), 0	(5-5.6), 5.3	(4.7-6.2), 5.4	(29.3-62.2), 43.9	(0.4-0.4), 0.4	(52.3-54.5), 53.2	(64-116.6), 90.9	(0-0), 0
RCP8.5	(2-2.5), 2.3	(0-0), 0	(4.9-5.7), 5.4	(4-5.3), 4.6	(20.1-41.9), 29.6	(0.4-0.5), 0.4	(52.3-54.6), 53.3	(55.5-89.5), 71.8	(0-0), 0
RCP8.5Treated	(2-2.3), 2.1	(0-0), 0	(5.2-6), 5.6	(4.4-6.2), 5.2	(25.9-59.5), 40.5	(0.4-0.4), 0.4	(52.3-54.6), 53.3	(63.9-108.6), 87.7	(0-0), 0

Supplementary Table S14. Different descriptive statistics computed for nine different climate model projections for precipitation under medium and high emission scenarios (RCP 4.5 and RCP 8.5) for eight different stations in WLEB.

	Adrian	BowlingGreen	Bucyrus	Defiance	FortWayne	Lima	Norwalk	Sandusky	Adrian	BowlingGreen	Bucyrus	Defiance	FortWayne	Lima	Norwalk	Sandusky
	Mean								Mean							
Observed	2.5	2.4	2.7	2.5	2.6	2.7	2.7	2.4	2.5	2.4	2.7	2.5	2.6	2.7	2.7	2.4
CCSM4	2.5	2.4	2.7	2.6	2.6	2.7	2.6	2.2	2.5	2.4	2.8	2.6	2.7	2.8	2.6	2.2
ESM2G	2.6	2.5	2.9	2.6	2.7	2.8	2.8	2.3	2.8	2.6	3.0	2.8	2.9	2.9	2.9	2.4
ESM2M	2.7	2.6	2.9	2.7	2.8	2.9	2.8	2.4	3.1	2.6	3.0	2.7	2.8	2.9	2.9	2.4
IPSLALR	2.6	2.5	2.8	2.6	2.7	2.8	2.7	2.3	2.6	2.5	2.8	2.7	2.7	2.8	2.7	2.3
IPSLAMR	2.6	2.5	2.8	2.6	2.7	2.8	2.8	2.3	2.5	2.3	2.7	2.5	2.6	2.6	2.6	2.2
MICROESM	2.7	2.6	3.0	2.7	2.8	2.9	2.8	2.3	2.7	2.5	2.9	2.6	2.7	2.8	2.8	2.3
MICROESMCHEM	2.7	2.6	3.0	2.7	2.7	2.8	2.8	2.3	2.7	2.6	3.0	2.7	2.7	2.8	2.9	2.3
NORESM1	2.5	2.4	2.9	2.6	2.6	2.7	2.7	2.2	2.7	2.6	3.1	2.8	2.8	2.9	2.9	2.3
BCCCSM	2.5	2.4	3.1	2.7	2.6	2.9	2.6	2.3	2.7	2.6	3.2	2.9	2.8	3.1	2.8	2.5
	Skewness								Skewness							
Observed	4.9	5.3	6.4	7.0	4.8	4.8	7.1	6.1	4.9	5.3	6.4	7.0	4.8	4.8	7.1	6.1
CCSM4	8.1	6.4	7.4	7.2	5.8	5.3	7.6	7.4	6.2	6.1	6.1	7.0	7.3	5.8	7.8	7.6
ESM2G	7.7	5.8	7.0	6.2	6.7	5.5	8.4	8.5	6.6	6.7	9.0	8.0	5.8	6.3	13.2	8.0
ESM2M	6.6	6.5	6.7	6.2	5.6	5.8	9.3	12.3	7.1	10.0	8.5	7.9	6.0	6.2	11.7	8.8
IPSLALR	6.8	5.7	5.9	6.3	7.8	5.3	11.0	24.3	6.4	5.9	5.7	6.8	6.5	5.2	7.3	9.1
IPSLAMR	5.7	6.0	5.1	6.2	5.7	4.9	6.7	6.9	6.0	6.2	5.5	6.9	6.5	5.3	9.9	8.8
MICROESM	6.3	6.3	6.0	7.0	6.9	5.9	12.4	7.2	6.4	6.2	5.2	6.8	6.2	5.3	10.2	8.4
MICROESMCHEM	6.5	6.1	5.6	6.6	5.7	4.8	9.0	7.7	6.1	6.2	5.2	6.5	5.8	4.8	11.4	9.1
NORESM1	5.5	5.8	5.9	6.5	5.9	5.3	9.6	9.0	5.6	6.4	8.1	7.6	6.2	7.2	9.0	6.9
BCCCSM	6.4	6.1	6.4	7.3	5.6	5.8	7.2	8.8	6.6	6.7	7.8	8.9	5.7	5.6	11.9	8.2
	Standard Deviation								Standard Deviation							
Observed	6.6	6.6	7.1	7.0	6.9	7.1	7.1	6.9	6.6	6.6	7.1	7.0	6.9	7.1	7.1	6.9
CCSM4	7.1	6.7	7.3	7.6	7.1	6.9	7.0	6.3	6.8	6.7	7.3	7.6	7.5	7.1	7.1	6.2
ESM2G	7.6	7.2	7.9	7.6	7.7	7.3	8.1	6.8	7.9	7.6	8.5	8.4	7.8	7.7	8.8	7.1
ESM2M	7.6	7.4	8.0	7.9	7.6	7.5	8.0	7.1	8.3	7.9	8.6	8.1	7.6	7.7	8.5	7.0
IPSLALR	7.3	7.0	7.4	7.7	7.4	7.1	7.7	7.3	7.4	7.2	7.7	8.1	7.6	7.3	7.7	7.0
IPSLAMR	6.9	7.1	7.3	7.6	7.4	7.1	7.3	6.4	7.1	7.0	7.2	7.7	7.5	6.9	7.5	6.5
MICROESM	7.4	7.3	7.7	8.0	7.7	7.5	8.5	6.4	7.5	7.2	7.4	7.8	7.3	7.2	8.3	6.5
MICROESMCHEM	7.5	7.4	7.5	7.8	7.3	7.1	8.0	6.4	7.5	7.5	7.6	8.1	7.4	7.2	8.7	6.8

NORESM1	6.8	6.8	7.4	7.6	7.1	7.1	7.6	6.4	7.3	7.4	8.2	8.3	7.6	7.7	7.9	6.6
BCCCSM	7.1	6.8	8.0	8.2	7.1	7.6	7.2	6.8	7.7	7.4	8.8	8.9	7.7	8.2	8.2	7.3
	Maximum								Maximum							
Observed	120.4	114.0	220.5	254.0	111.8	129.0	229.1	152.7	120.4	114.0	220.5	254.0	111.8	129.0	229.1	152.7
CCSM4	302.6	195.7	248.4	210.6	126.2	158.7	314.7	196.4	173.3	182.8	174.9	182.5	234.6	217.4	284.0	231.9
ESM2G	268.7	152.2	243.5	167.6	231.0	147.7	282.6	252.2	215.2	246.2	378.7	264.5	174.8	215.5	536.9	232.0
ESM2M	197.6	215.8	208.8	168.6	123.7	184.2	340.2	425.2	328.1	366.7	290.3	328.3	171.0	215.4	400.2	253.3
IPSLALR	249.7	147.7	205.5	191.3	326.5	201.1	399.5	644.5	172.6	163.7	158.5	168.8	222.0	156.3	255.4	334.5
IPSLAMR	172.5	215.2	155.1	214.8	154.3	182.7	268.6	208.9	184.9	192.5	153.2	238.9	173.4	173.0	339.6	243.8
MICROESM	211.7	189.6	200.0	241.7	268.8	235.1	461.7	225.9	214.8	157.6	147.1	230.5	159.2	185.2	342.4	303.3
MICROESMCHEM	193.6	186.7	197.0	192.7	159.8	136.1	301.6	242.9	157.5	142.8	146.2	156.9	180.5	144.5	432.9	287.6
NORESM1	169.3	164.1	162.8	204.6	181.7	139.8	332.1	265.6	160.7	217.6	288.1	226.1	220.9	309.7	366.1	177.3
BCCCSM	164.2	199.2	250.9	276.6	120.1	211.9	215.3	276.0	182.5	257.5	313.0	431.9	137.0	215.2	479.8	264.0

Supplementary Table S15. Different descriptive statistics computed for nine different climate model projections for maximum temperature under medium and high emission scenarios (RCP 4.5 and RCP 8.5) for eight different stations in WLEB

	Adrian	BowlingGreen	Bucyrus	Defiance	FortWayne	Lima	Norwalk	Sandusky	Adrian	BowlingGreen	Bucyrus	Defiance	FortWayne	Lima	Norwalk	Sandusky
	Mean								Mean							
Observed	15.0	15.5	15.1	15.4	15.5	15.9	15.0	14.4	15.0	15.5	15.1	15.4	15.5	15.9	15.0	14.4
CCSM4	17.6	17.9	17.8	17.9	18.0	18.4	17.5	17.1	18.7	19.0	18.8	19.0	19.1	19.5	18.5	18.1
ESM2G	17.0	17.3	17.2	17.3	17.4	17.9	16.9	16.5	18.0	18.3	18.2	18.3	18.3	18.8	17.9	17.5
ESM2M	16.7	17.0	16.9	17.0	17.0	17.5	16.6	16.2	18.5	17.9	17.8	17.9	17.9	18.5	17.5	17.1
IPSLALR	17.8	18.1	18.0	18.1	18.1	18.6	17.7	17.3	18.7	19.0	18.9	19.1	19.1	19.5	18.6	18.2
IPSLAMR	17.6	17.9	17.7	17.9	17.9	18.4	17.4	17.1	18.9	19.1	18.9	19.2	19.2	19.6	18.6	18.2
MICROESM	18.4	18.5	18.2	18.6	18.8	18.9	18.0	17.7	20.0	20.2	19.7	20.3	20.4	20.6	19.5	19.2
MICROESMCHEM	18.5	18.7	18.4	18.8	19.0	19.1	18.2	17.9	20.0	20.1	19.7	20.3	20.4	20.6	19.4	19.1
NORESM1	17.9	18.2	18.0	18.2	18.2	18.7	17.7	17.4	19.0	19.2	19.0	19.3	19.3	19.7	18.8	18.4
BCCCSM	17.6	17.9	17.8	17.9	17.9	18.4	17.5	17.1	18.7	18.9	18.8	18.9	18.9	19.4	18.5	18.1
	Skewness								Skewness							
Observed	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4	-0.3	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4	-0.3	-0.2
CCSM4	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.1	0.0
ESM2G	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
ESM2M	-0.2	-0.2	-0.3	-0.2	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
IPSLALR	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.3	-0.2	-0.3	-0.3	-0.2	-0.2
IPSLAMR	-0.2	-0.2	-0.3	-0.2	-0.3	-0.3	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
MICROESM	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
MICROESMCHEM	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
NORESM1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1
BCCCSM	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.5	-0.5	-0.6	-0.5	-0.6	-0.6	-0.6	-0.6
	Standard Deviation								Standard Deviation							
Observed	11.6	11.8	11.6	11.9	11.8	11.5	11.5	11.2	11.6	11.8	11.6	11.9	11.8	11.5	11.5	11.2
CCSM4	11.9	12.0	11.8	12.0	12.0	11.8	11.5	11.1	12.0	12.1	11.9	12.1	12.1	11.9	11.6	11.2
ESM2G	11.5	11.6	11.4	11.7	11.6	11.4	11.1	10.7	11.7	11.8	11.6	11.8	11.8	11.6	11.3	10.9
ESM2M	11.6	11.7	11.4	11.7	11.6	11.5	11.2	10.8	11.9	12.0	11.7	12.0	11.9	11.8	11.4	11.1
IPSLALR	11.6	11.7	11.5	11.8	11.7	11.5	11.2	10.8	12.1	12.1	11.9	12.2	12.1	11.9	11.6	11.3
IPSLAMR	11.7	11.8	11.6	11.8	11.7	11.6	11.3	10.9	12.0	12.1	11.9	12.1	12.0	11.9	11.6	11.2
MICROESM	11.0	11.0	10.9	11.1	11.1	10.8	10.7	10.3	11.3	11.5	11.3	11.6	11.7	11.4	10.9	10.5
MICROESMCHEM	10.8	10.9	10.8	11.0	11.1	10.7	10.6	10.2	11.2	11.4	11.2	11.5	11.6	11.3	10.8	10.4

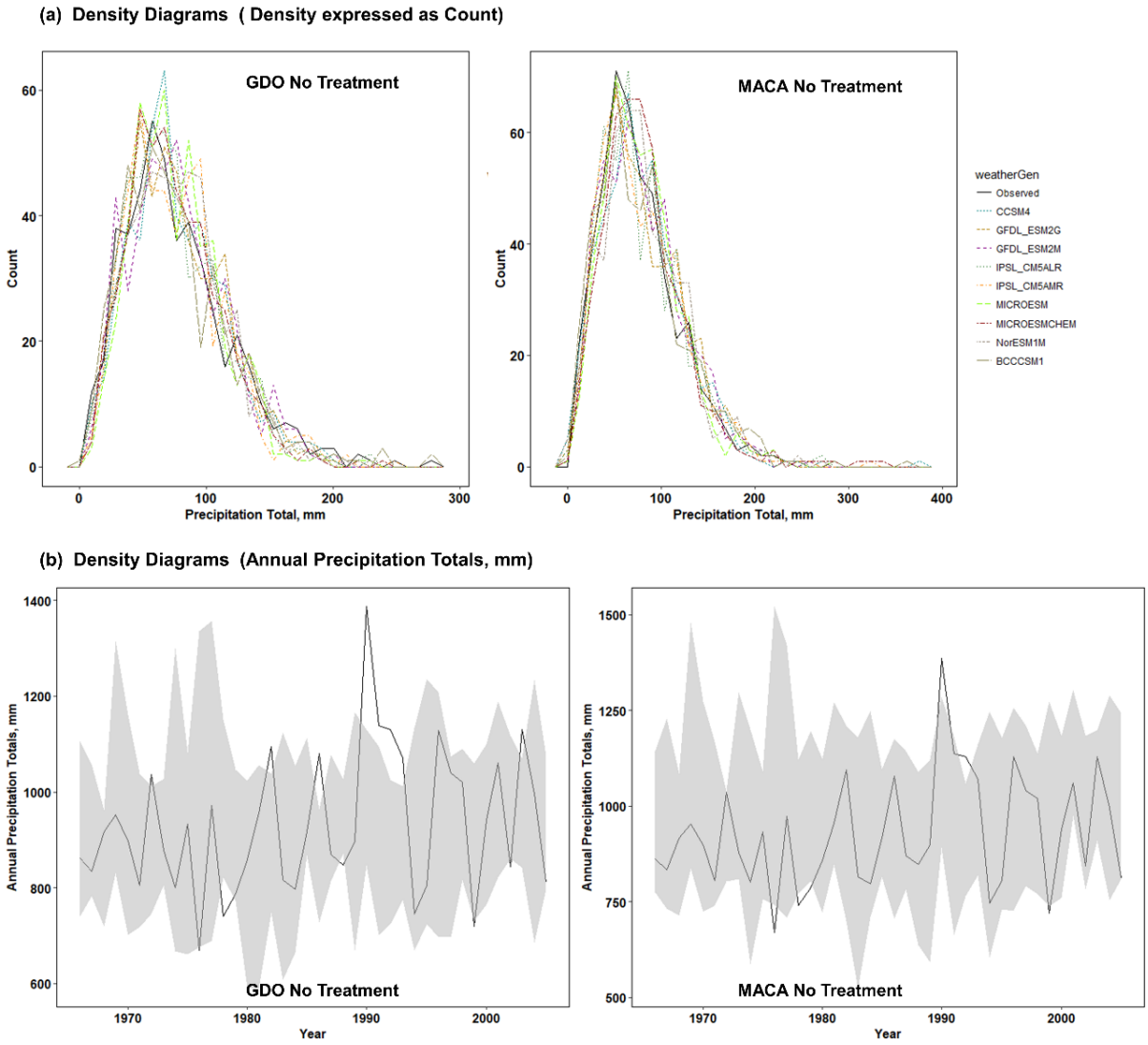
NORESM1	11.9	12.1	11.8	12.1	12.1	11.9	11.5	11.1	11.8	11.9	11.7	12.0	11.9	11.7	11.3	10.9
BCCCSM	11.6	11.7	11.6	11.8	11.7	11.6	11.3	10.9	12.0	12.2	12.0	12.2	12.2	12.0	11.7	11.3
	Maximum								Maximum							
Observed	40.0	40.0	38.9	41.7	41.1	39.4	39.4	39.4	40.0	40.0	38.9	41.7	41.1	39.4	39.4	39.4
CCSM4	46.5	45.9	46.3	46.8	48.6	46.7	43.9	42.7	49.3	48.5	48.2	49.9	50.9	49.1	46.0	46.4
ESM2G	48.7	48.9	49.1	48.3	50.2	48.9	47.9	46.7	52.3	50.3	50.9	51.0	52.9	50.7	48.3	48.3
ESM2M	48.4	47.9	47.9	48.1	48.5	47.5	45.9	45.3	51.5	49.7	51.2	50.2	51.6	50.6	48.9	46.9
IPSLALR	42.8	44.8	45.3	43.7	46.6	48.1	44.1	43.8	52.6	52.8	54.3	52.8	54.7	53.2	52.2	51.6
IPSLAMR	45.6	43.8	42.8	44.8	46.5	43.7	41.7	41.2	51.7	49.9	48.5	50.3	50.3	48.7	47.9	47.2
MICROESM	43.4	42.4	41.4	43.0	46.6	42.0	41.0	40.2	49.1	47.2	46.2	48.1	52.9	47.8	44.8	44.4
MICROESMCHEM	42.7	42.8	43.2	43.1	45.9	43.2	41.0	40.4	46.2	47.0	46.1	47.3	52.2	50.4	44.8	42.8
NORESM1	51.2	49.8	48.6	51.2	53.9	51.4	46.5	45.7	52.6	51.8	53.5	53.9	56.5	54.0	49.3	48.0
BCCCSM	42.9	43.5	44.7	44.4	45.2	45.1	42.8	41.7	47.1	47.5	47.6	48.1	50.0	47.7	45.3	44.8

Supplementary Table S16. Different descriptive statistics computed for nine different climate model projections for minimum temperature under medium and high emission scenarios (RCP 4.5 and RCP 8.5) for eight different stations in WLEB.

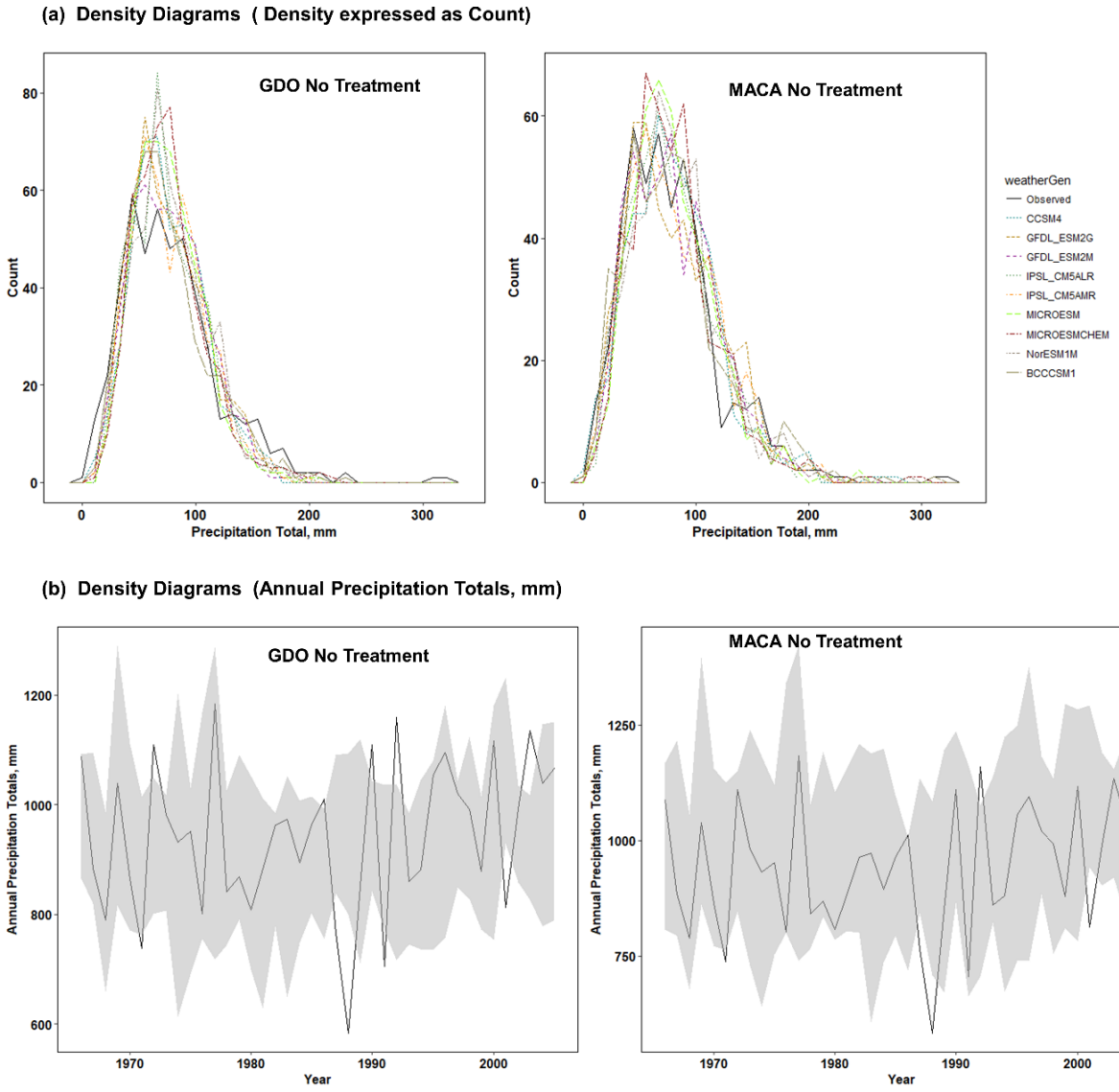
	Adrian	BowlingGreen	Bucyrus	Defiance	FortWayne	Lima	Norwalk	Sandusky	Adrian	BowlingGreen	Bucyrus	Defiance	FortWayne	Lima	Norwalk	Sandusky
	Mean								Mean							
Observed	3.3	4.5	4.0	4.1	4.8	5.5	4.5	5.9	3.3	4.5	4.0	4.1	4.8	5.5	4.5	5.9
CCSM4	5.2	6.1	6.1	6.0	6.6	7.1	6.3	7.9	6.3	7.1	7.0	7.0	7.5	8.0	7.2	8.9
ESM2G	5.1	6.1	6.0	6.0	6.6	7.1	6.2	7.8	6.1	7.1	7.0	6.9	7.5	8.0	7.2	8.8
ESM2M	4.9	5.8	5.7	5.7	6.3	6.8	5.9	7.6	7.5	6.7	6.6	6.5	7.1	7.6	6.8	8.4
IPSLALR	6.0	6.9	6.8	6.8	7.4	7.9	7.0	8.7	7.0	8.0	7.8	7.8	8.5	8.9	8.0	9.7
IPSLAMR	6.0	6.9	6.8	6.8	7.4	7.9	7.0	8.6	7.2	8.1	7.9	8.0	8.6	9.0	8.1	9.8
MICROESM	6.9	7.8	7.5	7.7	8.3	8.7	7.7	9.4	8.0	8.8	8.6	8.7	9.3	9.6	8.9	10.6
MICROESMCHEM	6.9	7.8	7.6	7.7	8.4	8.8	7.8	9.5	8.1	8.9	8.7	8.8	9.4	9.8	9.0	10.7
NORESM1	5.6	6.5	6.4	6.4	7.0	7.5	6.6	8.3	6.7	7.5	7.4	7.4	8.0	8.5	7.6	9.3
BCCCSM	5.8	6.7	6.5	6.6	7.2	7.6	6.8	8.4	7.0	7.8	7.7	7.7	8.3	8.8	7.9	9.6
	Skewness								Skewness							
Observed	-0.3	-0.3	-0.3	-0.3	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.3	-0.3	-0.3
CCSM4	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
ESM2G	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1
ESM2M	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
IPSLALR	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
IPSLAMR	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
MICROESM	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1
MICROESMCHEM	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
NORESM1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
BCCCSM	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
	Standard Deviation								Standard Deviation							
Observed	10.0	10.1	10.1	10.4	10.3	10.3	10.1	10.2	10.0	10.1	10.1	10.4	10.3	10.3	10.1	10.2
CCSM4	9.5	9.6	9.6	9.8	9.9	9.8	9.5	9.6	9.6	9.8	9.8	10.0	10.1	10.0	9.6	9.8
ESM2G	9.5	9.6	9.6	9.8	9.9	9.8	9.4	9.6	9.7	9.8	9.8	10.0	10.1	10.0	9.7	9.8
ESM2M	9.7	9.8	9.8	10.0	10.0	10.0	9.7	9.8	10.3	10.0	10.0	10.2	10.3	10.2	9.9	10.0
IPSLALR	9.7	9.7	9.7	9.9	10.0	9.9	9.6	9.8	10.2	10.2	10.2	10.4	10.5	10.3	10.1	10.2
IPSLAMR	9.8	9.9	9.9	10.1	10.1	10.0	9.8	9.9	10.1	10.2	10.2	10.4	10.5	10.4	10.1	10.2
MICROESM	9.0	9.2	9.2	9.4	9.7	9.5	9.0	9.1	9.2	9.5	9.5	9.7	9.9	9.8	9.2	9.4
MICROESMCHEM	9.0	9.2	9.2	9.4	9.7	9.5	9.0	9.1	9.2	9.4	9.4	9.7	9.9	9.7	9.2	9.3

NORESM1	9.5	9.7	9.7	9.9	10.0	9.9	9.5	9.7	9.5	9.7	9.7	9.9	10.0	9.9	9.5	9.6
BCCCSM	9.1	9.3	9.3	9.5	9.5	9.5	9.1	9.3	9.4	9.6	9.7	9.8	9.9	9.9	9.5	9.6
	Maximum								Maximum							
Observed	24.4	25.6	24.4	28.3	25.6	31.7	26.1	31.7	24.4	25.6	24.4	28.3	25.6	31.7	26.1	31.7
CCSM4	26.3	27.5	26.9	27.6	28.1	27.9	27.3	27.4	30.1	29.9	30.0	30.6	31.0	32.4	29.7	30.6
ESM2G	27.4	28.1	26.8	28.4	30.6	28.8	26.6	26.8	30.1	30.6	30.4	30.4	31.9	31.5	29.7	30.3
ESM2M	26.5	27.5	28.3	27.0	29.1	29.1	27.6	27.3	32.2	31.3	31.8	30.8	31.2	31.5	30.8	30.9
IPSLALR	28.0	28.5	28.3	28.9	30.4	29.4	28.0	28.6	33.1	33.5	33.1	34.0	34.7	34.9	33.4	33.6
IPSLAMR	28.8	30.1	29.2	29.2	29.7	30.2	28.8	29.3	33.1	34.1	33.8	33.9	34.9	34.4	34.0	34.5
MICROESM	28.1	29.0	28.4	28.5	29.6	28.8	27.5	28.2	30.6	30.8	30.4	31.2	32.3	31.7	30.2	30.9
MICROESMCHEM	27.2	27.5	27.3	27.8	29.4	28.1	27.6	28.8	30.1	30.3	30.8	31.0	32.2	31.8	29.8	31.1
NORESM1	27.0	27.4	26.6	27.8	29.9	28.7	25.7	27.5	29.9	30.7	29.2	31.0	32.4	31.0	29.2	30.4
BCCCSM	27.7	27.9	27.0	28.1	29.1	29.0	27.1	28.4	30.8	31.7	30.0	30.2	31.4	31.0	30.2	30.8

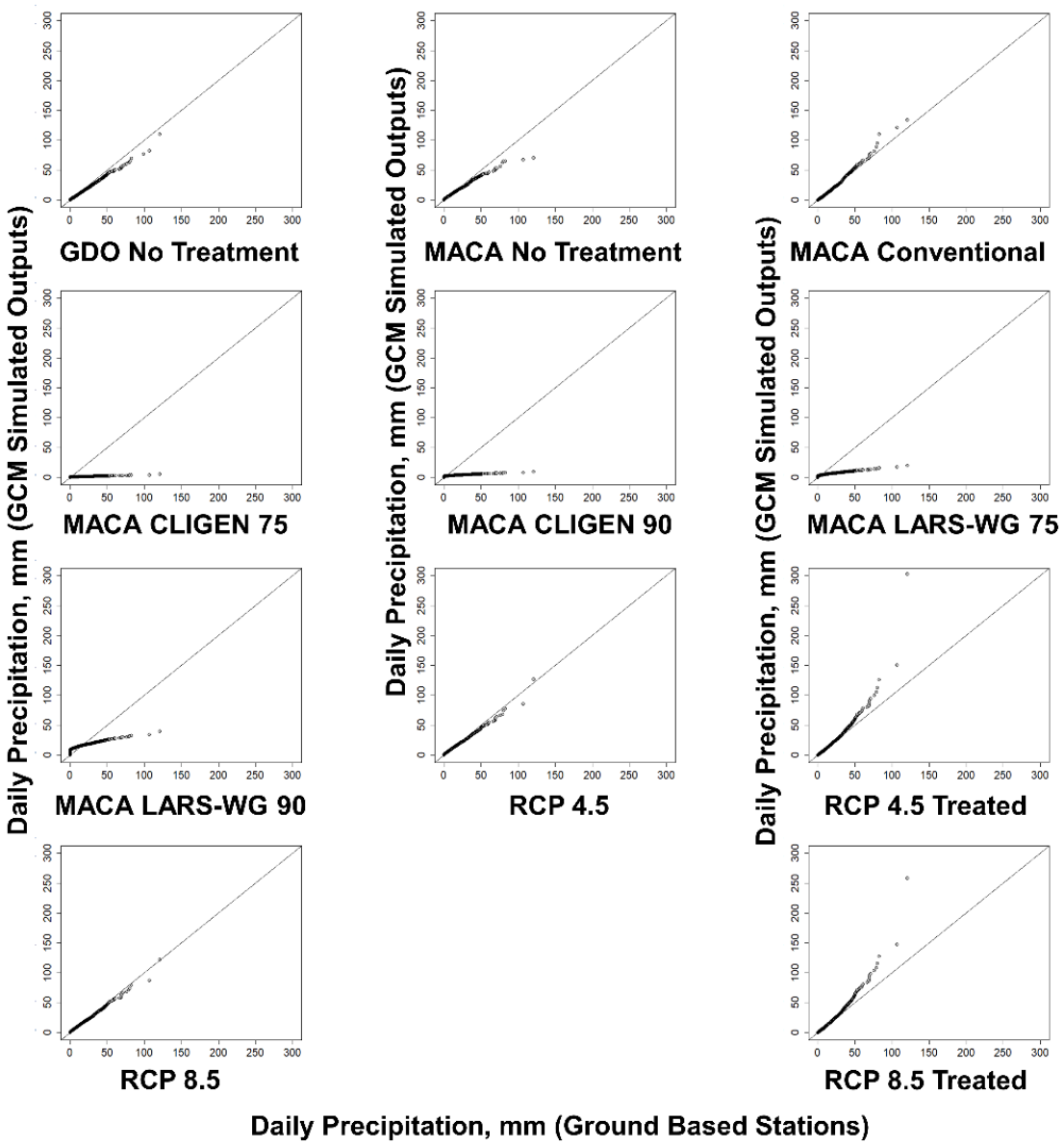
FIGURES



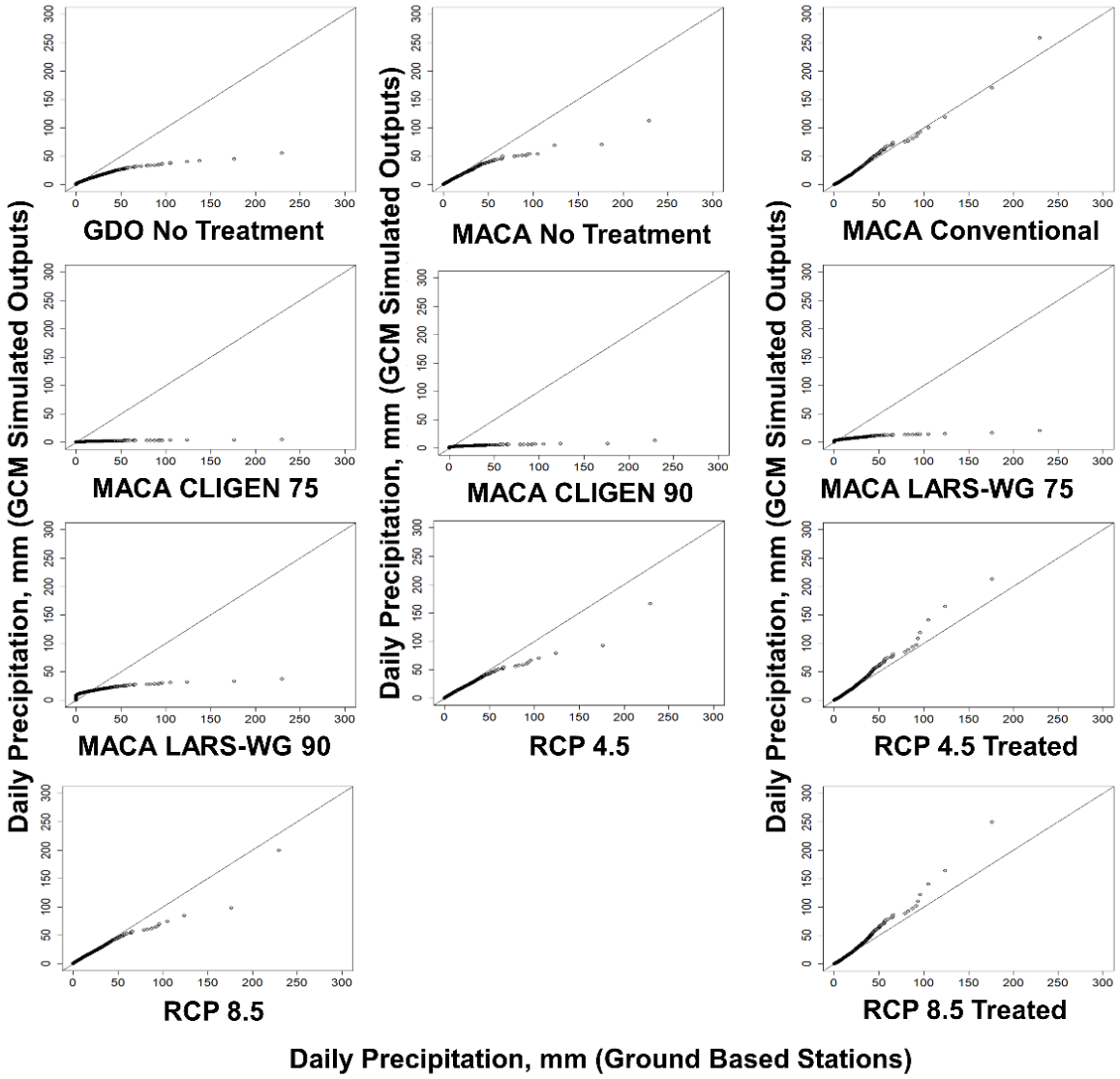
Supplementary Figure S1 (A) (a) Density distribution charts for Fort Wayne, IN for count of monthly precipitation totals, mm, in each year (b) Distribution of annual precipitation totals, mm, with range bound from different climate model outputs. (For the period from 1966-2015 for GDO (right frame) and 1966-2005 for MACA (left frame))



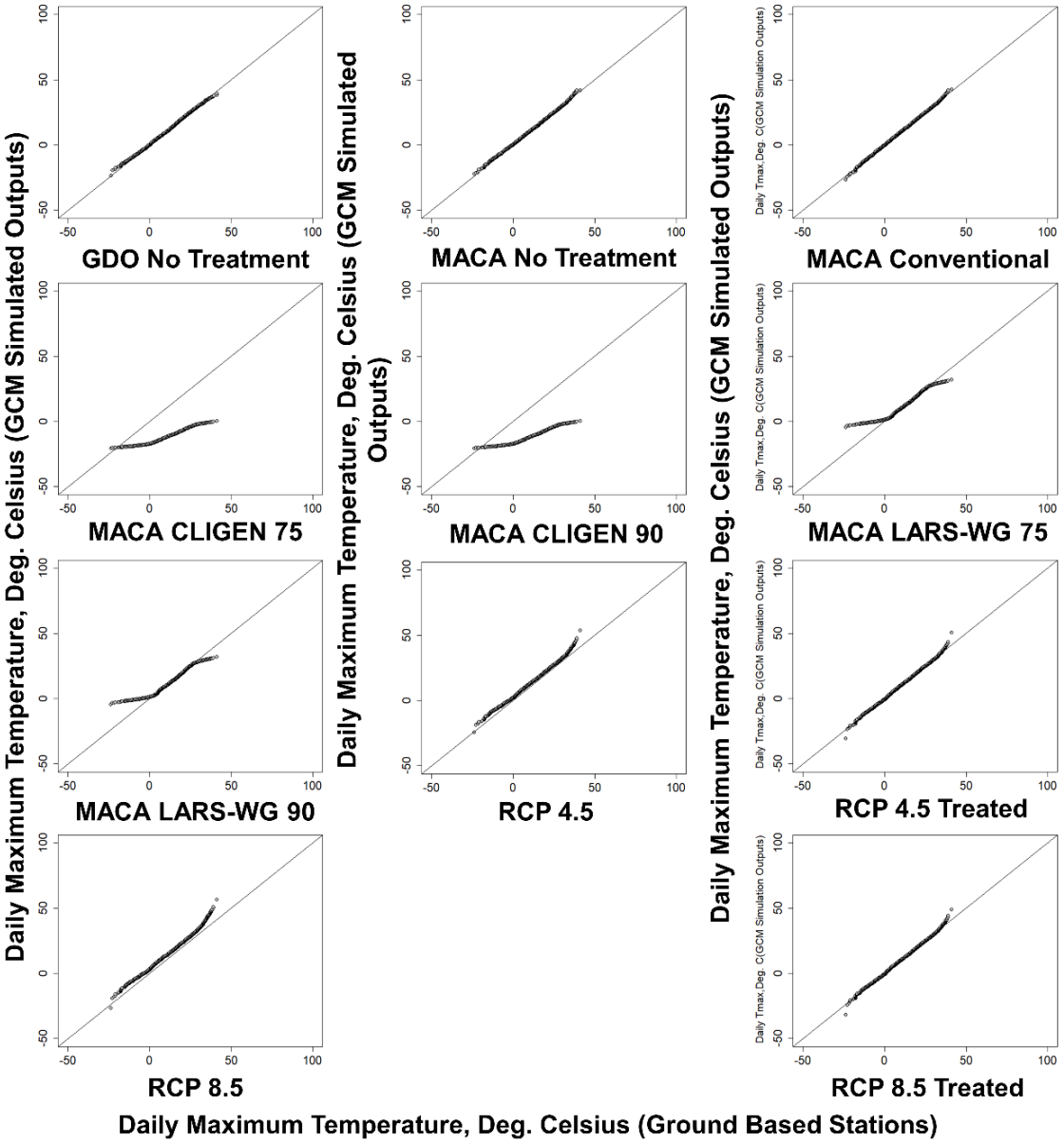
Supplementary Figure S1 (B) (a) Density distribution charts for Norwalk, OH for count of monthly precipitation totals, mm, in each year (b) Distribution of annual precipitation totals, mm, with range bound from different climate model outputs. (For the period from 1966-2015 for GDO (right frame) and 1966-2005 for MACA (left frame))



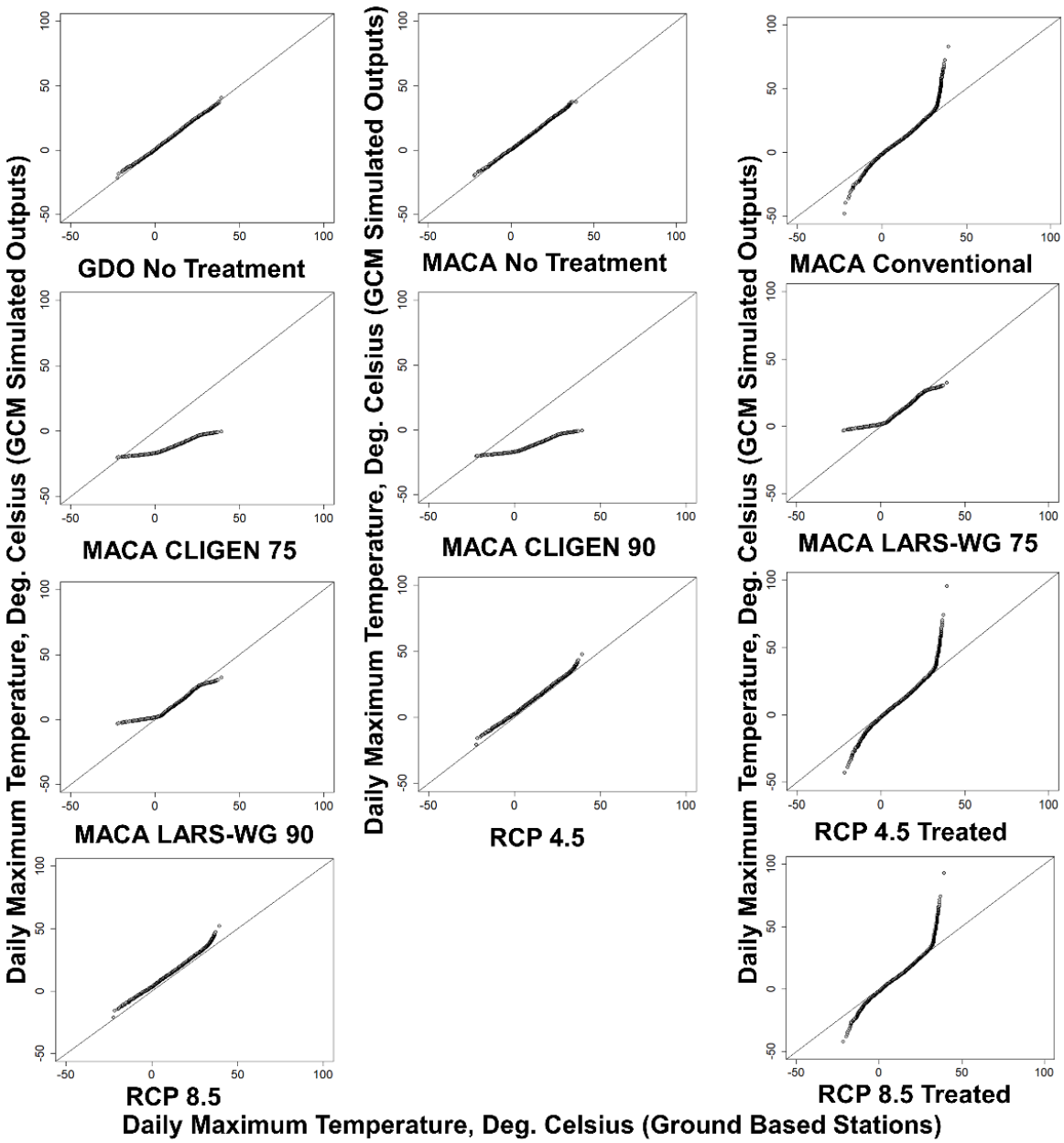
Supplementary Figure S2 (A) Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily precipitation, mm and to present the future climatic scenarios (2006-2099) for Adrian, MI.



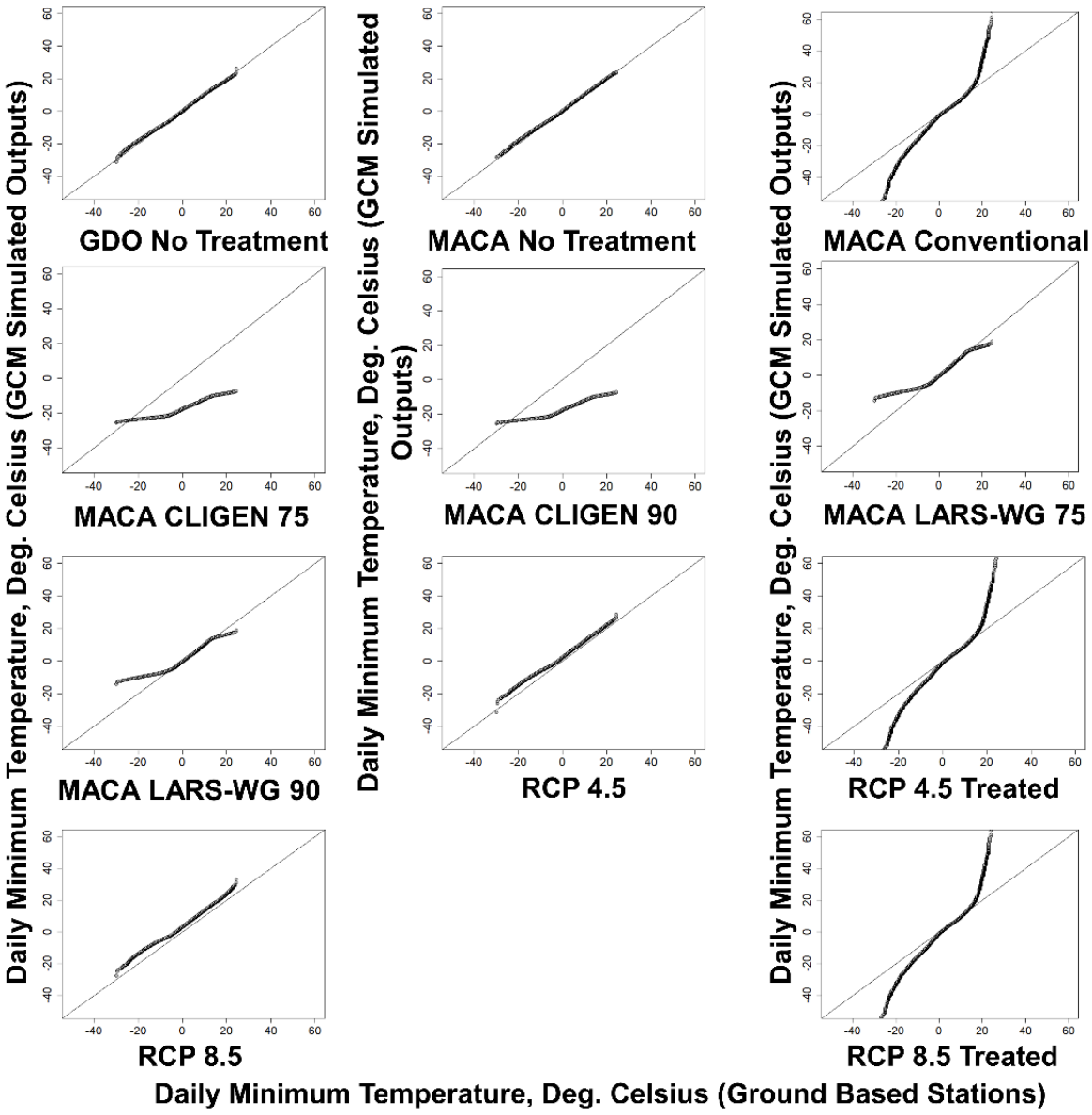
Supplementary Figure S2 (B) Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily precipitation, mm and to present the future climatic scenarios (2006-2099) for Norwalk, OH.



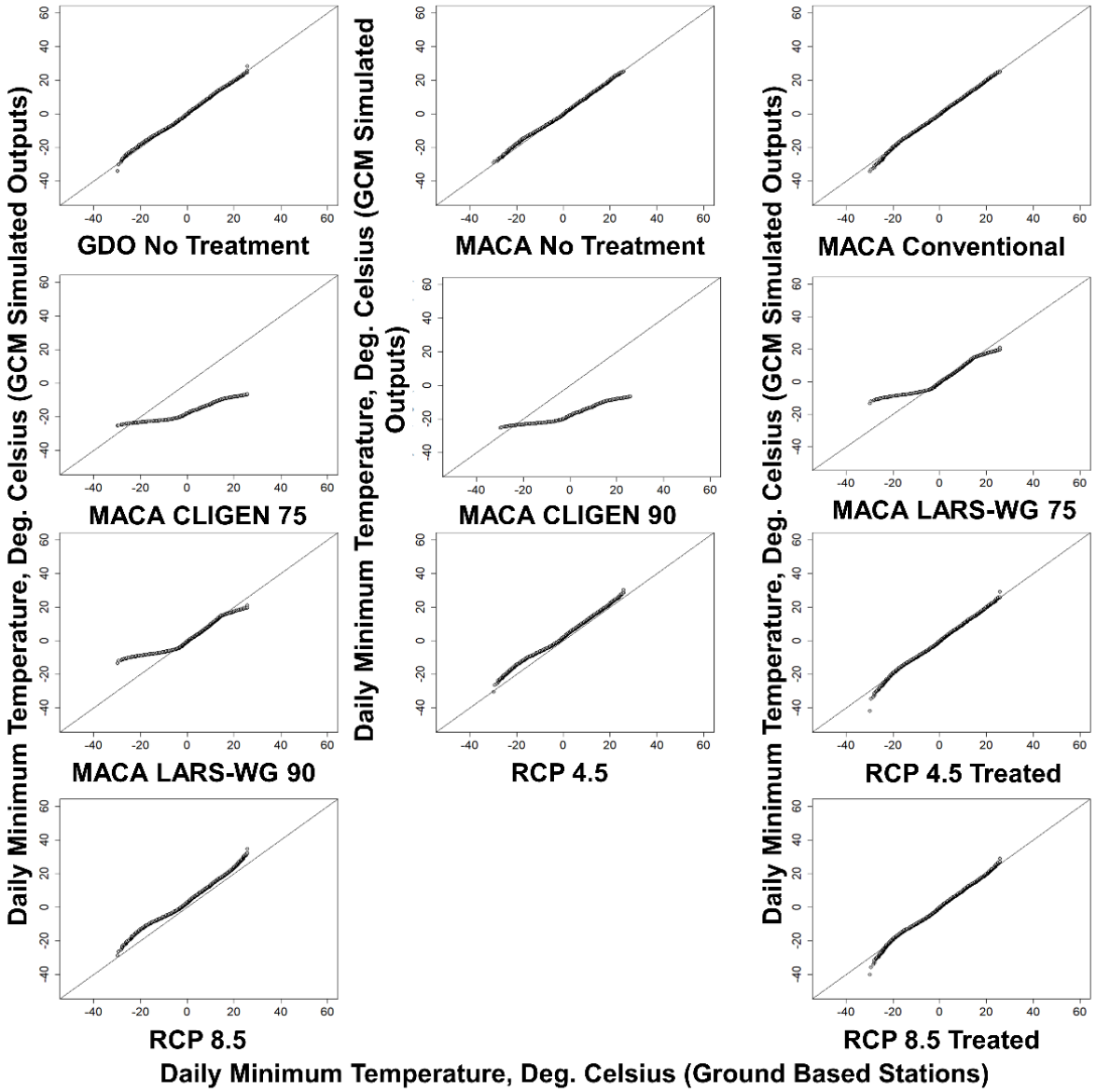
Supplementary Figure S2 (C) Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily maximum temperature, °C and to present the future climatic scenarios (2006-2099) for Fort Wayne, IN.



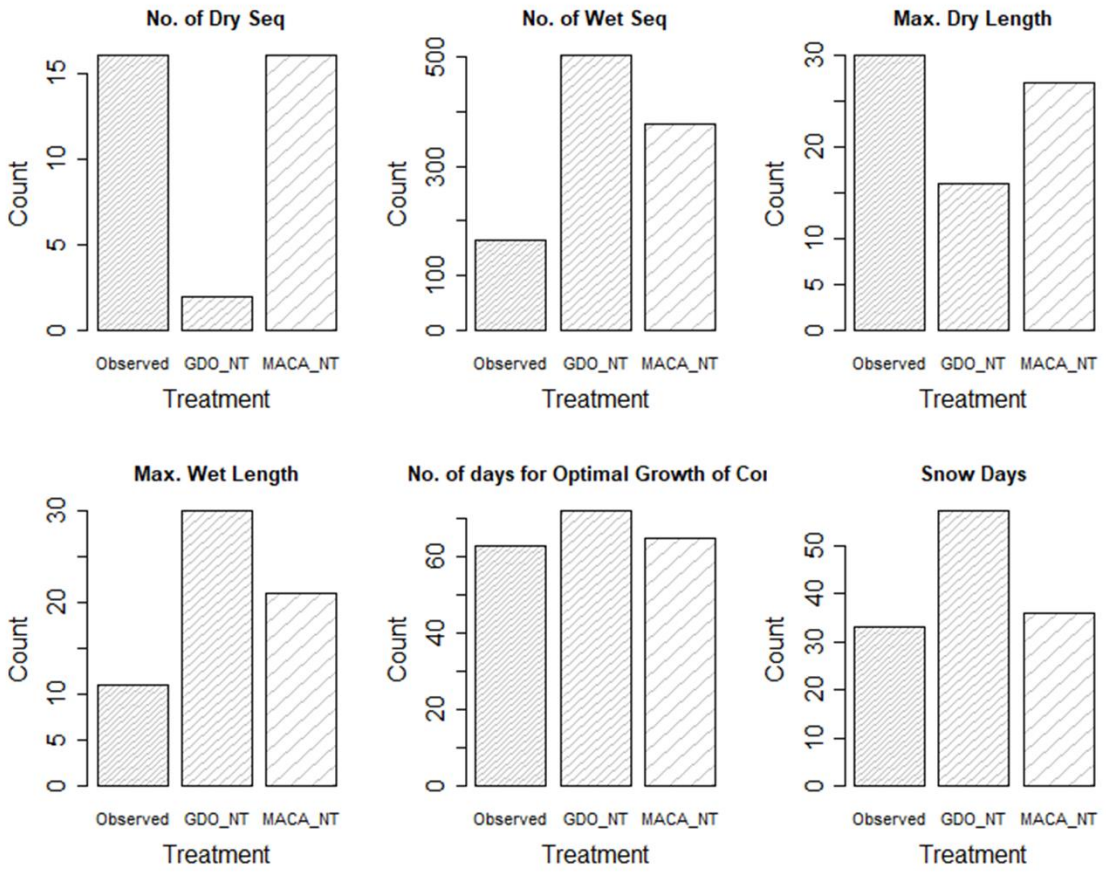
Supplementary Figure S2 (D) Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily maximum temperature, °C and to present the future climatic scenarios (2006-2099) for Norwalk, OH.



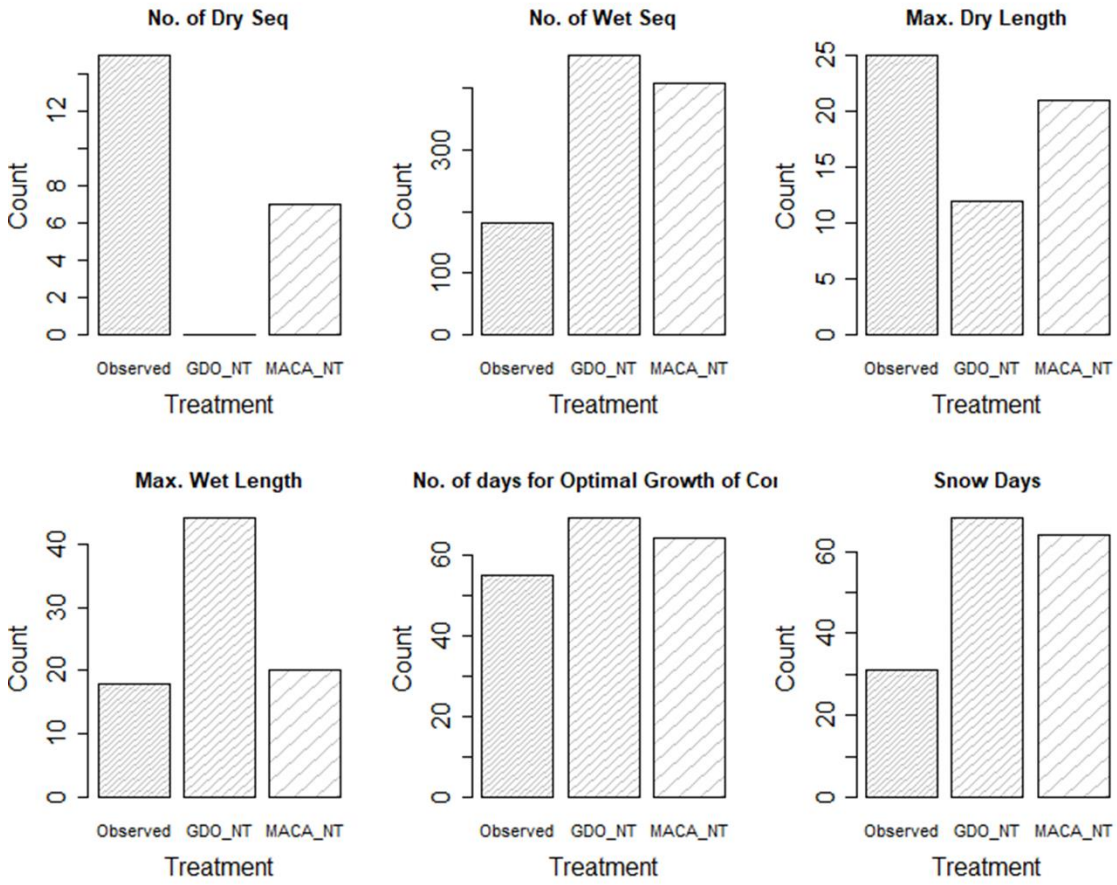
Supplementary Figure S2 (E) Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily minimum temperature, °C and to present the future climatic scenarios (2006-2099) for Adrian, MI.



Supplementary Figure S2 (F) Q-Q Plots to evaluate the performance of different bias correction methods for period between 1966 and 2005 to reduce the bias in simulating values for daily minimum temperature, °C and to present the future climatic scenarios (2006-2099) for Fort Wayne, IN



Supplementary Figure S3 (A) Comparison of GDO and MACA climate projection sources for different climate indices for Fort Wayne IN between 1966 and 2005 (GDO_NT: GDO No Treatment; MACA_NT: MACA No Treatment).



Supplementary Figure S3 (B) Comparison of GDO and MACA climate projection sources for different climate indices for Norwalk, OH between 1966 and 2005 (GDO_NT: GDO No Treatment; MACA_NT: MACA No Treatment).