

# **Report Addendum**

Corrections to Final Report for  
CRC Project CM-138-16-2

## **Comparison of Ambient Temperatures from ‘Doner Report’ to Modern Day Ambient Temperatures for the Same Geographic Areas**

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## Introduction

In CRC Project CM-138-16-2, DRI analyzed meteorological data from two 20-year periods to determine when (month), where, and to what extent ambient temperatures have changed throughout the U.S. The period of 1950-1969 was called the Doner Era; the period of 1996-2015 was called the Modern Era. This analysis was done using three temperature metrics: (1) 90<sup>th</sup> percentile 1-hr maximum temperature, (2) 10<sup>th</sup> percentile 1-hr minimum temperature, and (3) 10<sup>th</sup> percentile 6-hr minimum temperature. Our intent was to acquire data from the same weather stations as used by John P. Doner in his 1972 report, and to utilize data processing methods similar to those employed by Doner.

After completing this project, it was discovered that the methodology we used to determine 6-hr minimum temperature ( $T_{\min}$ ) values differed from that used by Doner. Specifically, we used the mean temperature of the coldest 6-hour period within a day, whereas Doner used the maximum temperature of the coldest 6-hour period. Consequently, 6-hr  $T_{\min}$  values calculated by DRI are biased low compared to values calculated by Doner. To address this discrepancy, we repeated our analysis of the 10<sup>th</sup> percentile 6-hr  $T_{\min}$  metric for both the Doner Era and the Modern Era. This report addendum summarizes our re-analysis efforts and results.

## Data Analysis Methodology

The final report for CRC Project CM-138-16-2 describes the methodology used to select the weather stations included in the study, acquire relevant temperature data from these stations, and apply data acceptance criteria to eliminate incomplete or unreliable records. A given station was included in our analysis only if it met a 50% data completeness threshold during both the Doner Era and the Modern Era. A total of 209 stations met this requirement for the 6-hr  $T_{\min}$  metric.

To calculate 6-hr  $T_{\min}$  values, each 24-hour day was first defined as consisting of nineteen 6-hr moving time windows from midnight to midnight. Each of these 19 time windows included 6 1-hour temperature measurements. The “coldest 6-hr period” within the day was then defined as that window having the lowest mean temperature. While not entirely certain, we believe this also is the method used by Doner to define the coldest 6-hr period within each day.

Once the coldest 6-hr period was determined for each station and day, Doner selected the maximum temperature within this window as the 6-hr  $T_{\min}$  value. In DRI’s original analysis, the mean temperature within this 6-hr window was selected as the 6-hr  $T_{\min}$  value. In our re-analysis, the maximum temperature was selected, consistent with the Doner methodology. The remaining data analysis was performed as described in the Final Report. Briefly, all 6-hr  $T_{\min}$  data from a given station during each 20-year period were binned by month, and cumulative frequency distributions of the data were used to select the 10<sup>th</sup> percentile 6-hr  $T_{\min}$  value for each month. (As in the original study, periods of Sept. 1-15 and Sept. 16-30 were also analyzed.) Differences in these 10<sup>th</sup> percentile 6-hr  $T_{\min}$  values were then determined between the Doner Era and the Modern Era.

## Results

Results from our original analysis of 10<sup>th</sup> percentile 6-hr  $T_{\min}$  values are included in tabular form in the Final Report for CRC Project CM-138-16-2. Specifically, Table II-3 in the report includes 10<sup>th</sup>

percentile 6-hr  $T_{\min}$  values for each station and month during the Doner Era, Table II-6 includes similar values for the Modern Era, and Table II-9 includes differences in these values between the Doner and Modern Eras. In our re-analysis, we have created revised versions of these three tables, which are included as part of this Report Addendum.

Simple graphical comparisons of the 10<sup>th</sup> percentile 6-hr  $T_{\min}$  values calculated using the two analysis methods are shown in the x-y scatter plots of Figures 1a, and 1b. Figure 1a shows values from the 209 stations by month during the Doner Era; Figure 1b shows similar values during the Modern Era. As is apparent from these figures, the calculated temperature values are consistently higher when using the new, re-analysis method.

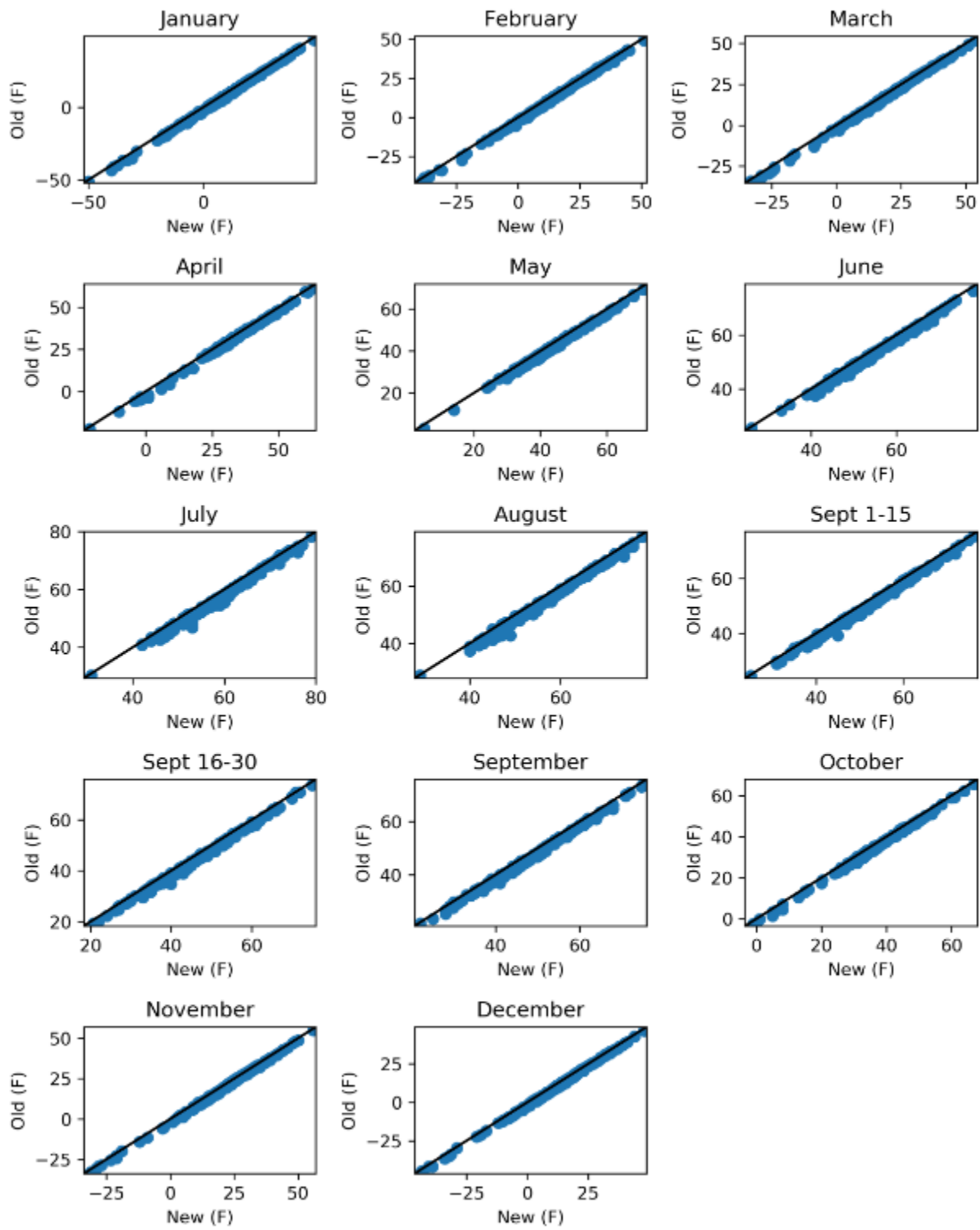
In Figure 1c, an x-y scatter plot is used to show differences in 10<sup>th</sup> percentile 6-hr  $T_{\min}$  values between the Doner and Modern Eras when calculated by the old and new analysis methods. This “difference of differences” analysis shows the data points to be nearly equally scattered around the 1:1 equivalence line, meaning that the overall changes in temperature between the two time periods are nearly identical, regardless of which analysis approach is used.

Another way to display the effects of changing the definition of 6-hr  $T_{\min}$  is shown in Figure 2. Figure 2a shows differences in the 10<sup>th</sup> percentile 6-hr  $T_{\min}$  values for each station during the Doner Era as calculated by the two analysis methods. For each month (and half month in Sept.), the re-analysis method gives a value nearly 2 °F higher than the original method. The average temperature difference of the 14 time periods shown in Figure 2a is 1.90 °F, with a standard deviation of 0.05 °F. Figure 2b shows differences in 10<sup>th</sup> percentile 6-hr  $T_{\min}$  values for the same stations during the Modern Era. Again, the re-analysis method gives values approximately 2 °F higher than the original method. In this case, the average difference is 2.03 °F, with a standard deviation of 0.16 °F.

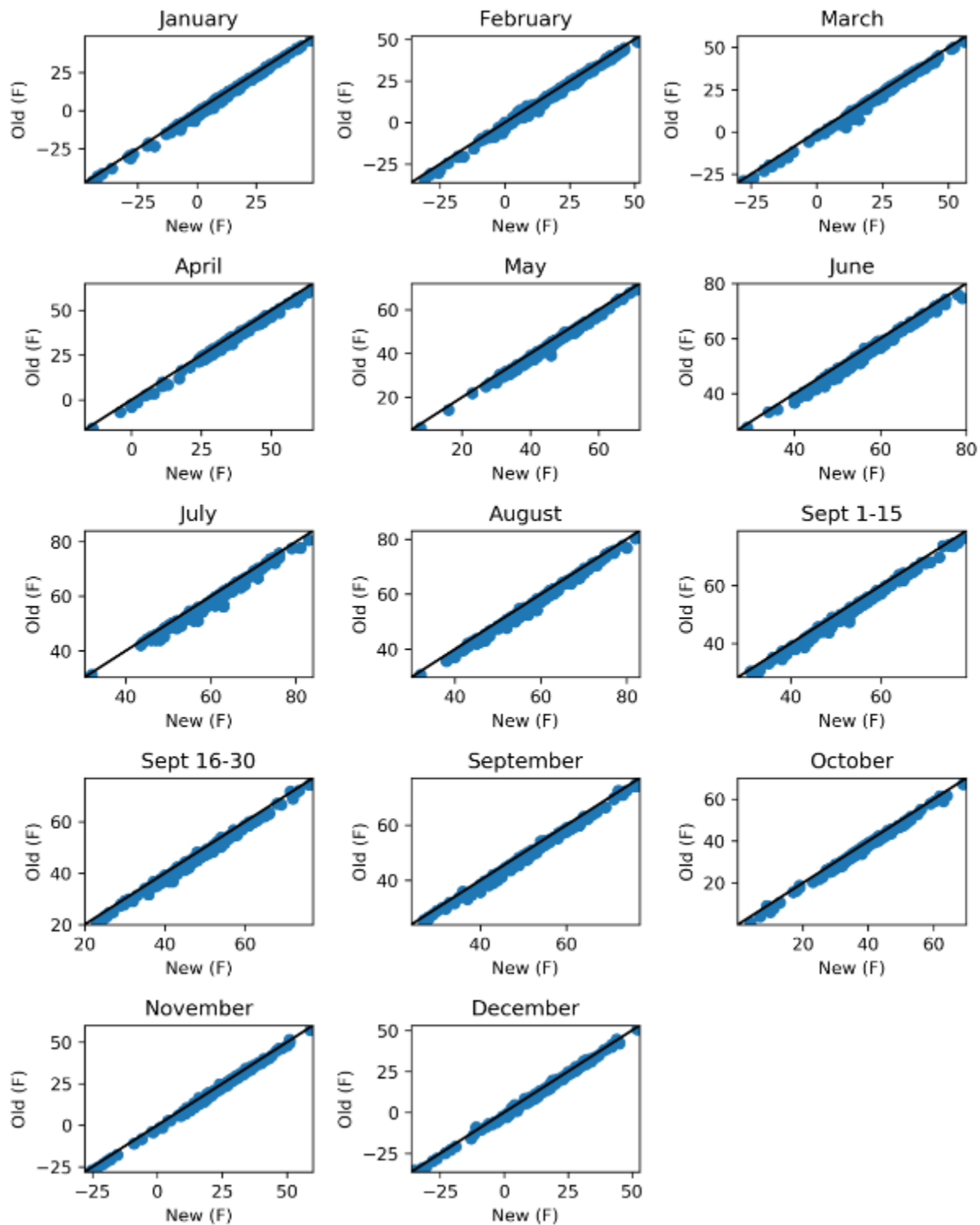
Figure 2c shows differences in 10<sup>th</sup> percentile 6-hr  $T_{\min}$  values between the Doner and Modern Eras for each station when calculated using the two different definitions of 6-hr  $T_{\min}$ . This “difference of differences” analysis shows that very similar results are calculated, regardless of which method is used. The average difference of the 14 time periods shown in Figure 2c is 0.13 °F, with the re-analysis method showing a slightly larger temperature increase between the Doner and Modern Eras.

Finally, Figure 3 shows checkerboard plots depicting differences in 10<sup>th</sup> percentile 6-hr  $T_{\min}$  values between the Doner and Modern Eras by month and PADD. The top checkerboard plot was developed from our original analysis, using the mean temperature of the coldest 6-hr period. The bottom plot was developed from our re-analysis, using the maximum temperature of the coldest 6-hr period. While some differences can be seen between these two plots, they are very minor and do not change any of the conclusions stated in the original Final Report.

**Figure 1a. 10<sup>th</sup> Percentile 6-hr  $T_{\min}$  values for each station during the Doner Era (1950-1969).**  
 Old method (using mean of coldest 6-hr period) on y-axis; New method (using maximum of coldest 6-hr period) on x-axis.

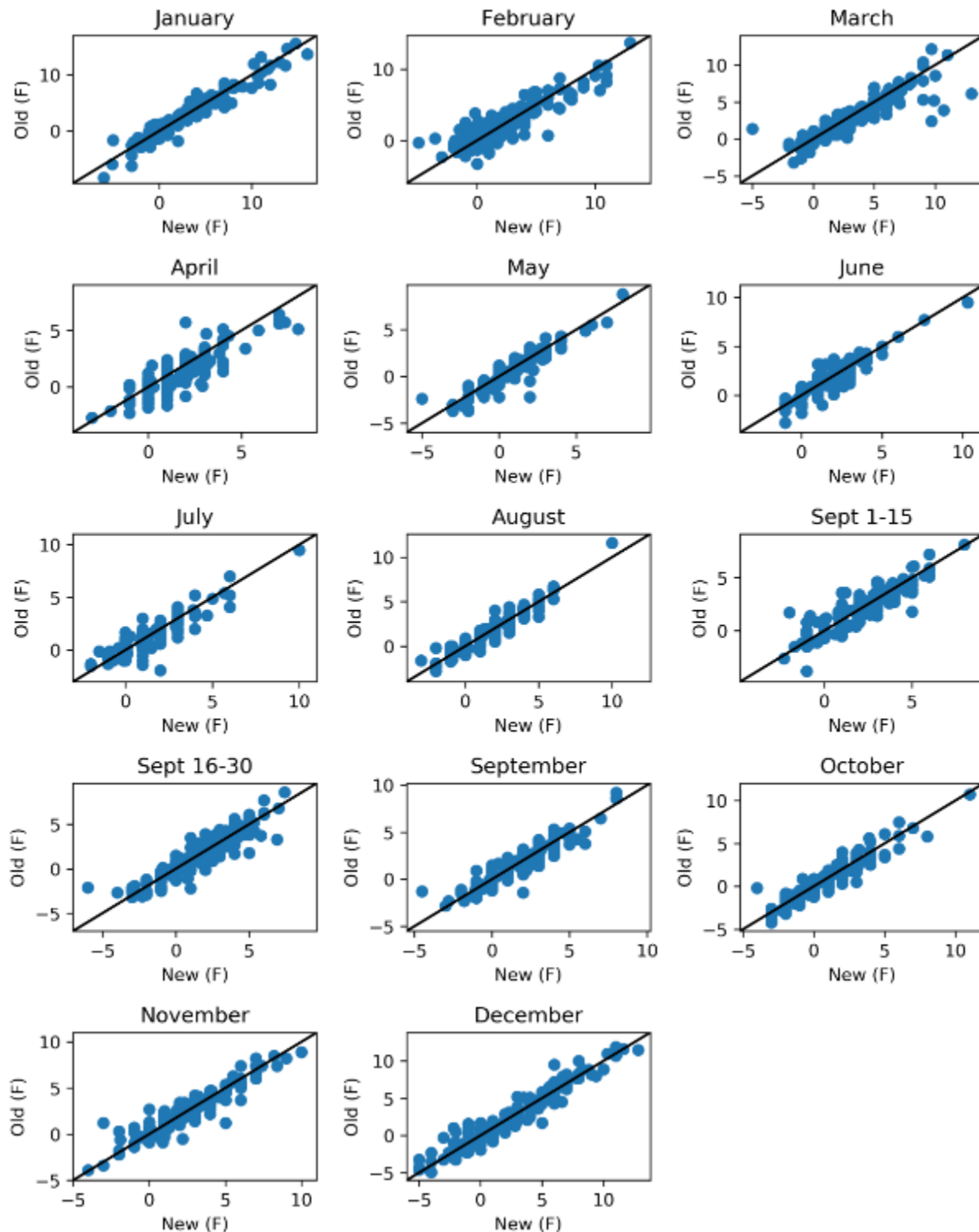


**Figure 1b. 10<sup>th</sup> Percentile 6-hr  $T_{min}$  values for each station during the Modern Era (1996-2015).**  
 Old method (using mean of coldest 6-hr period) on y-axis; New method (using maximum of coldest 6-hr period) on x-axis.

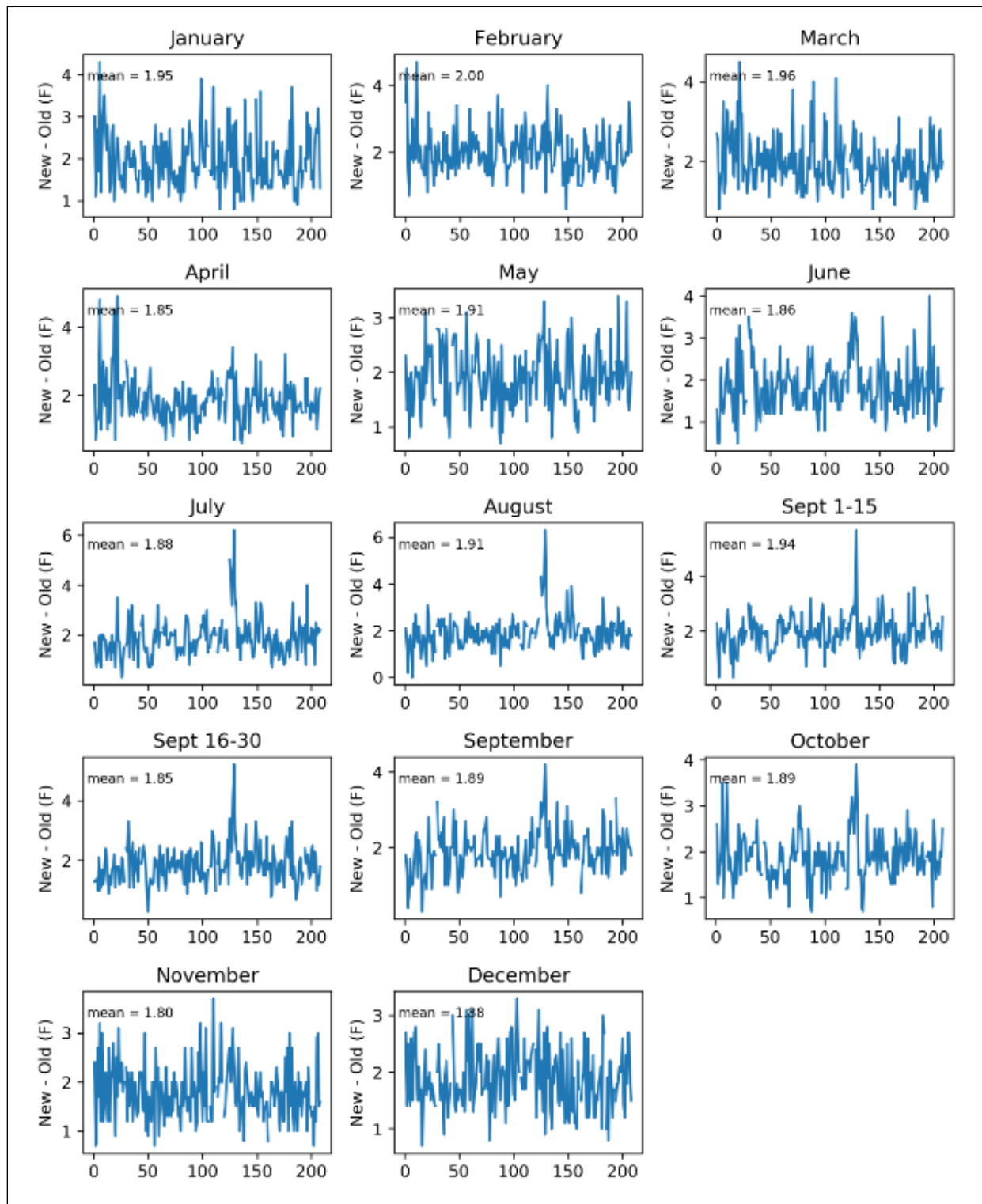


**Figure 1c. Differences in 10<sup>th</sup> Percentile 6-hr  $T_{min}$  values between the Doner and Modern Eras for each station** (shown as Modern - Doner).

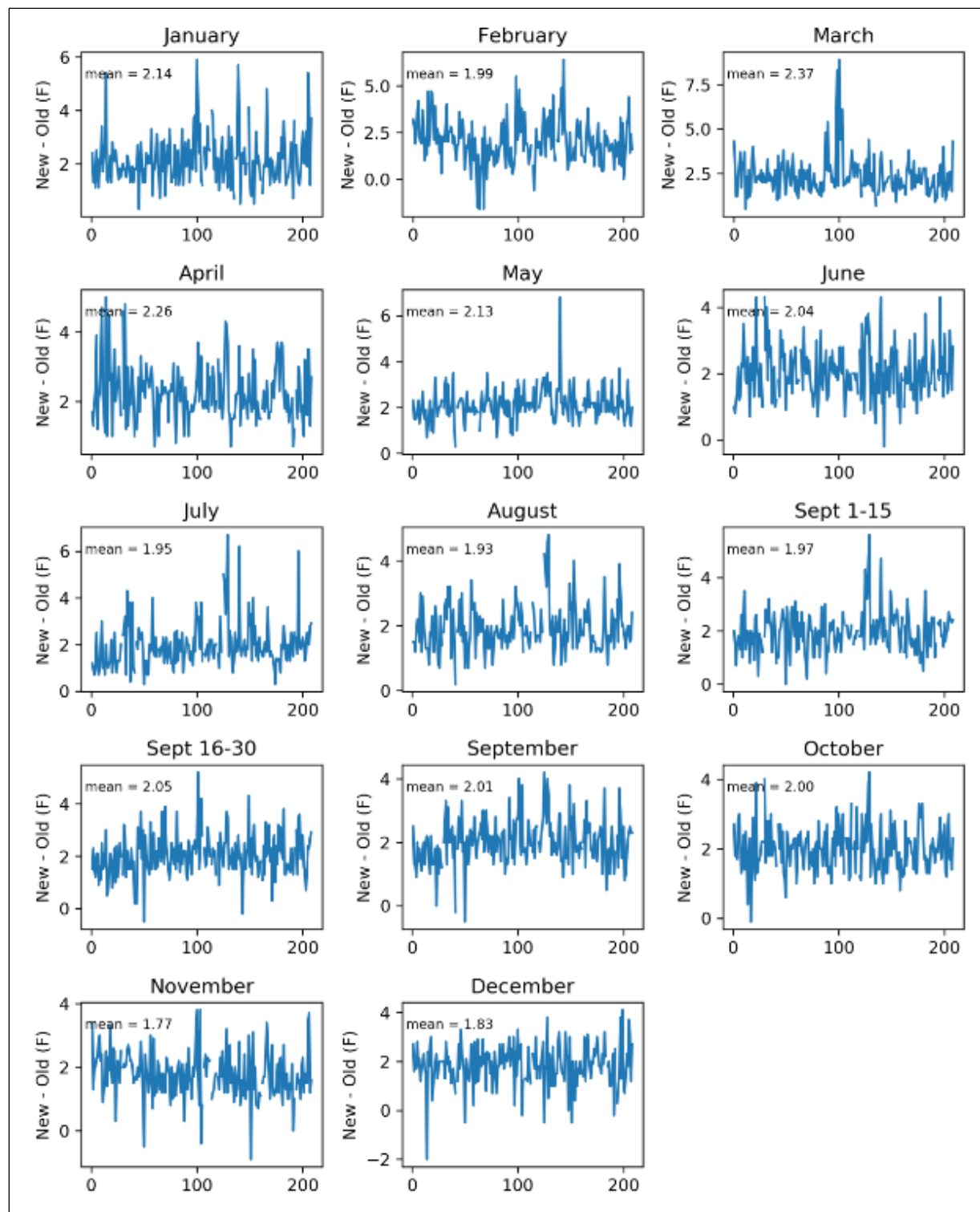
Old method (using mean of coldest 6-hr period) on y-axis; New method (using maximum of coldest 6-hr period) on x-axis.



**Figure 2a. Doner Era Differences in 10<sup>th</sup> Percentile 6-hr  $T_{min}$  values for 209 stations when calculated by new method (using maximum of coldest 6-hr period) compared to old method (using mean of coldest 6-hr period)**

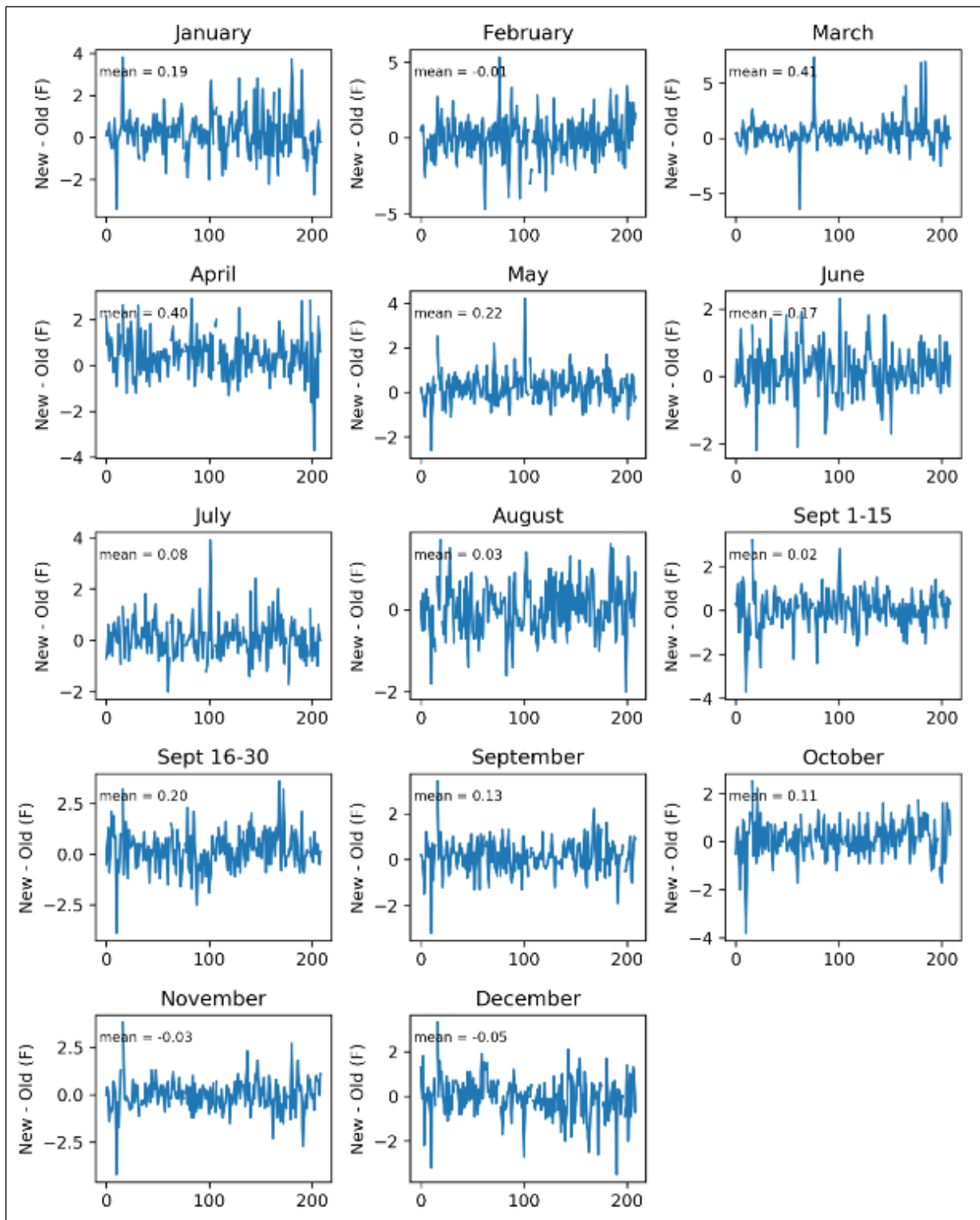


**Figure 2b. Modern Era Differences in 10<sup>th</sup> Percentile 6-hr  $T_{min}$  values for 209 stations when calculated by new method (using maximum of coldest 6-hr period) compared to old method (using mean of coldest 6-hr period)**



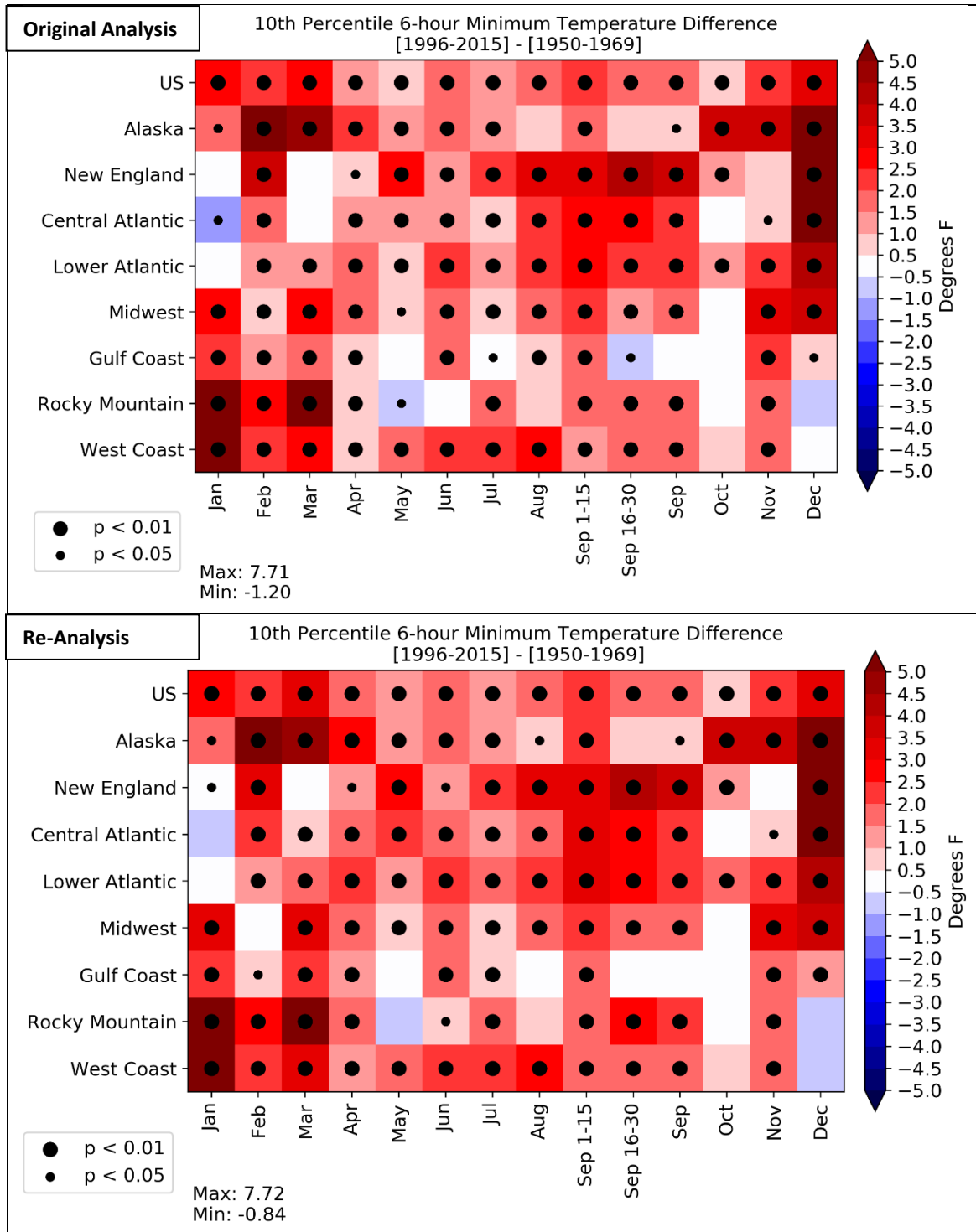


**Figure 2c. Differences in 10<sup>th</sup> Percentile 6-hr  $T_{min}$  values between the Doner and Modern eras for 209 stations when calculated by new method (using maximum of coldest 6-hr period) compared to old method (using mean of coldest 6-hr period)**



**Figure 3. Differences in 10<sup>th</sup> percentile 6-hr  $T_{min}$  values between Doner Era (1950-1969) and Modern Era (1996-2015) by month and PADD.**

- Top chart based on original analysis method (using mean of coldest 6-hr period); Bottom chart based on re-analysis method (using maximum of coldest 6-hr period)
- Note: “p” refers to the statistical p-value. For grid cells showing no dot,  $p > 0.05$



**Table II-3 Revised. Doner Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1950-1969)**

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
ANCHORAGE ELMENDORF AFB	PAED	AK	61.2531	-149.794	192		-2	2											
ANCHORAGE INTL AP	PANC	AK	61.1689	-150.028	120	-5	-1	3.2	25	36.5	46	51	47	41	35	37	20	2	-7
ANNETTE ISLAND AP	PANT	AK	55.0389	-131.579	109	19	27	30	35	41	46	51	52	49	45	46.7	39	29	25
BARROW POST ROGERS AP	PABR	AK	71.2833	-156.781	31	-35	-38	-33	-21	5	26	31	29	25	20.7	22	-1	-19	-31.3
BETHEL AP	PABE	AK	60.785	-161.829	102	-20	-21	-16	-2	27.5	39.4	46	45	38	31	33	16	-3	-20.8
BETTLES AP	PABT	AK	66.54	-151.31	643	-38.9	-39	-29	-4	25	43	45	40	31	22	25	0.2	-29	-43.4
BIG DELTA AP	PABI	AK	63.9944	-145.721	1277	-31	-31	-18	9	32	44	48	42	34	27	29	8	-21	-34
COLD BAY AP	PACD	AK	55.2208	-162.733	78	16	16	16	23	33	39	44	45	44	40	41	33	26	19
CORDOVA M K SMITH AP	PACV	AK	60.4889	-145.451	31	2	8	9	25	32	42	46	44	37	34	35	27	14	5.2
FAIRBANKS INTL AP	PAFA	AK	64.8039	-147.876	432	-40	-36	-25	7	33	45.3	49	43	34.8	28	31	6	-28	-39
GULKANA AP	PAGK	AK	62.1592	-145.459	1562	-33	-22.8	-18	10.1	30	41	45	40	32	27	29.8	5	-21	-32
HOMER AP	PAHO	AK	59.6419	-151.491	64	5	7	8	25	32	41	44	43	39	34.4	36.9	25	13	3
ILIAMNA AP	PAIL	AK	59.7494	-154.909	143	-14	-13	-5	14	32	41	46	46	40	34	36	20.3	3.9	-12
JUNEAU INTL AP	PAJN	AK	58.3567	-134.564	16	4	10	18	28	36	44	47	46	39	37	39	30	15	7.7
KING SALMON AP	PAKN	AK	58.6828	-156.656	67	-15	-15	-8	15	30	40	45	44	36	30	34	15	0.9	-17
KODIAK AP	PADQ	AK	57.7511	-152.486	80	18	18	19	28	36	43	47.9	48	45	40	42	30	25	17
KOTZEBUE RALPH WEIN AP	PAOT	AK	66.8667	-162.633	30	-29	-32	-24	-10	14	33	42	43	35	29	30	8	-12	-29
MCGRATH AP	PAMC	AK	62.9575	-155.61	333	-37.2	-36	-24	1	29	43	48	43	34	26	29	5.1	-23.4	-40.4
NOME MUNI AP	PAOM	AK	64.5111	-165.44	13	-18	-22.9	-17	-2	24	35	42	42	34	29	31	15	-2.6	-19
NORTHWAY AP	PAOR	AK	62.9617	-141.938	1713	-50	-38.8	-26	5.8	30	44	47	40	31	27	28	1	-31	-43
SITKA AIRPORT	PASI	AK	57.0481	-135.365	14	19	25	28	33	39	44	49	50	46	43	44	37	28	23
TALKEETNA AP	PATK	AK	62.32	-150.095	350	-16	-12	-8.7	17.9	31	43	48	43	34	30	32	13	-9	-20
TANANA CALHOUN MEM AP	PATA	AK	65.1744	-152.107	222	-40	-38.9	-29	1	30	44	47	42	32	24	28	5	-27	-43
YAKUTAT STATE AP	PAYA	AK	59.5119	-139.671	33	10	15	17	27	34	42	47	45	39	36	37	29	19	11.2
BIRMINGHAM AP	KBHM	AL	33.5656	-86.745	615	24	27	33	42	54	65	70	68	62	57	59	43	32	26
MONTGOMERY AP	KMGM	AL	32.2997	-86.4075	202	28	31	38	46	57	68	71.5	71	65	60	62	46	35	29
MOBILE RGNL AP	KMOB	AL	30.6883	-88.2456	215	31	34	41	49	61	69	72	72	68	64	66	50	39	33
FT SMITH RGNL AP	KFSM	AR	35.3331	-94.3625	449	19	26.9	31	42	53	64	69	67	59.3	55	56.7	43	29	23
LITTLE ROCK AP ADAMS FLD	KLIT	AR	34.7272	-92.2389	258	23	28	34	45	55	65	70.9	68	62	56.4	59	45	32	25
DAVIS MONTHAN AFB	KDMA	AZ	32.1664	-110.883	2704	35	36	40											
PHOENIX SKY HARBOR INTL AP	KPHX	AZ	33.4278	-112.004	1107	35	39	44	52	59	68.7	77	76	72	66	68	55	41.8	37
PRESCOTT LOVE FLD	KPRC	AZ	34.6517	-112.421	5042	19	22	27	35	41	53	62	60	55	50	51	40	26	23
WINSLOW MUNI AP	KINW	AZ	35.0281	-110.721	4886	10	19	25	35	43	54	65	61	57.7	51	52	39	23.5	15
ARCATA EUREKA AP	KACV	CA	40.9781	-124.109	200	35	36	37	39	43	47	49	50	48.4	45	47	44.1	39	36
BAKERSFIELD AP	KBFL	CA	35.4344	-119.054	489	33	38	41	47	53	60.8	68	66	62.4	60	61	52	41.8	35
BARSTOW DAGGETT AP	KDAG	CA	34.8536	-116.787	1917	30	36	39	47	53	62	72	69	65.3	61	62	51	37	32
FRESNO YOSEMITE INTL AP	KFAT	CA	36.78	-119.719	333	31	35	38	45	50	56	63.3	61	58	56	57	48	37	32
OAKLAND METRO INTL AP	KOAK	CA	37.7214	-122.221	6	37	41	43	46	50	53	55	55	56	54	55	51	44	39
PASO ROBLES MUNI AP	KPRB	CA	35.6697	-120.628	810	28	32	35	40	45	50	53	52	51	49	50	43	34	29

Table II-3 Revised. Doner Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1950-1969)

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
RED BLUFF MUNI AP	KRBL	CA	40.1519	-122.254	353	32	37	40	45	50.8	58	66	63	60	58	59	50	39	35
SACRAMENTO EXECUTIVE AP	KSAC	CA	38.5069	-121.495	15	32	37.9	40	44	48	53	57	56	55	54	54	49	39	34
SAN FRANCISCO INTL AP	KSFO	CA	37.6197	-122.365	8	38	42	43.9	46	48	51	52	53	54	52	53	50	44	40
UKIAH MUNI AP	KUKI	CA	39.1258	-123.201	601	29.9	33	35	40	44	50	55	55	51	49.1	50	43	35	32
TRAVIS FLD AFB	KSUU	CA	38.2667	-121.933	59		39	42											
COLORADO SPRINGS MUNI AP	KCOS	CO	38.81	-104.688	6181	7	11.7	16	26	39	49	57	55	45	43	44	33	17	14
GRAND JUNCTION WALKER FLD	KGJT	CO	39.1342	-108.54	4858	10.3	17	25	35	45	56	66	62	55	49	52	39	24	15
LA JUNTA MUNI AP	KLHX	CO	38.0494	-103.512	4194	5.2	13	21	32	44.9	55	63	62	52	48	49.5	37	19	13
PUEBLO MEM AP	KPUB	CO	38.29	-104.498	4720	3	13	19	30.8	43	54	60	59	51	46	48	34	19	12
WILMINGTON NEW CASTLE CO AP	KILG	DE	39.6728	-75.6008	79	16	18	26.2	37	47	57	63	60.9	54	48	51	40	30	18
JACKSONVILLE NAS	KNIP	FL	30.2333	-81.6667	20	38	40	45	55	65	72	75	75	72	70	71	57	46	38
ORLANDO EXECUTIVE AP	KORL	FL	28.5453	-81.3331	108	40	45	48	56	65	71	73	74	73	71	72	60	49	41
PENSACOLA FOREST SHERMAN NAS	KNPA	FL	30.35	-87.3167	28	33	35.9	42	54	62	71	74	74	70	65.2	68	52	41	34
TALLAHASSEE RGNL AP	KTLH	FL	30.3931	-84.3533	55	32	36	41	49	60	69	72	72	69.4	66.3	67.8	49	38	32
WEST PALM BEACH INTL AP	KPBI	FL	26.6847	-80.0994	19	48	51	53.4	61	68	73	75	75	75	75	75	67	56	48
ATLANTA HARTSFIELD INTL AP	KATL	GA	33.63	-84.4417	1010	25	28	33	44	54	64	68	67	61.1	56.3	59	45.6	34	27
DES MOINES INTL AP	KDSM	IA	41.5339	-93.6531	957	-3	3	15	31	44	56	62	59	51	46	48	35	18	2
MASON CITY MUNI AP	KMCW	IA	43.1544	-93.3269	1225	-9	-2.5	9	28	41	51	58	55	46	42	44	32	11	-5
SIOUX CITY GATEWAY AP	KSUX	IA	42.3914	-96.3792	1095	-5	1	12.4	30	45	55.2	61	58	50	44	46	33	16	1
BOISE AIR TERMINAL	KBOI	ID	43.5667	-116.241	2814	12	19	26	33	40	48	56	54	49	42	45	35	24	20
IDAHO FALLS FANNING FLD	KIDA	ID	43.5164	-112.067	4729	-3	3	13	28	35	44	51.5	49	41.2	35	38	28	14	6
CHICAGO MIDWAY AP	KMDW	IL	41.7861	-87.7522	612	2	8	20	34	43	54	62	60	55	47	50	38	23	8
CHICAGO OHARE INTL AP	KORD	IL	41.995	-87.9336	662	-1	6	19	31	41	51.3	59	56	50	45	46	35	21	4
MOLINE QUAD CITY INTL AP	KMLI	IL	41.4653	-90.5233	592	-0.6	5	16.4	32	44	55.5	61	58	50	43	47	35	19.8	4
PEORIA GTR PEORIA AP	KPIA	IL	40.6675	-89.6839	650	1	6	19	32				59	52	44	48	37	20	3
SPRINGFIELD CAPITAL AP	KSPI	IL	39.8453	-89.6839	594	5	11	21	34	46	57	63	59	52	46	49	37	22	8.2
EVANSVILLE REGIONAL AP	KEVV	IN	38.0442	-87.5206	400	14	18.7	27	37.3	48	59	64	61	53	47	49	37	25	15
FT WAYNE INTL AP	KFWA	IN	40.9706	-85.2064	791	6.4	8.3	20	30	43	54	60	56	49	42	46	35	24	8
INDIANAPOLIS INTL AP	KIND	IN	39.7317	-86.2789	790	8	12	22.5	33	45	56	62	59	52	46.2	48	36.1	24	10
SOUTH BEND MICHIANA RGNL AP	KSBN	IN	41.7072	-86.3164	773	5	8.8	19	31	41	52	58	55.1	49	44	46	36	23	10
DODGE CITY RGNL AP	KDDC	KS	37.7686	-99.9678	2582	6.3	15	20	33	47	58	64	63	54	49	51	39	22	13
GOODLAND RENNER FLD	KGLD	KS	39.3675	-101.693	3656	3	11	16	27	41	52	60	58	48	42	45	33	18	10
RUSSELL MUNI AP	KRSL	KS	38.8761	-98.8092	1858	4	12	18.2	32.4	46	57	65	63	53	48.3	50	38	20	10
TOPEKA MUNI AP	KTOP	KS	39.0725	-95.6258	876	6	14	21	34	47	59	64	62	52	48	50	37	23	11
WICHITA MID-CONTINENT AP	KICT	KS	37.6472	-97.4294	1321	9	16	24	36	51	61	68	66	56	52.2	54	41	25.3	14.7
CINCINNATI NORTHERN KY AP (COVINGTON)	KCVG	KY	39.0431	-84.6717	869	11.1	15	24	34.7	46	56	62	59.2	53	47.5	50	38	26	14
LEXINGTON BLUEGRASS AP	KLEX	KY	38.0408	-84.6058	980	14	16.3	25	35	47	58	64	61	54.4	49	52	39	25.9	16
BATON ROUGE RYAN AP	KBTR	LA	30.5372	-91.1469	64	31	35	41	49.7	61	69	72	72	66	63	64.6	49	38	32

Table II-3 Revised. Doner Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1950-1969)

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
NEW ORLEANS INTL AP	KMSY	LA	29.9928	-90.2508	4	35.2	38.9	44	53	63	70	74	74	70	67	68	54	42	37
SHREVEPORT RGNL AP	KSHV	LA	32.4469	-93.8242	254	27.2	32.2	37	47.6	59	68	73	72	65	60	62	49	35	30
BEDFORD HANSCOM FLD	KBED	MA	42.47	-71.2894	133	7	7	19.9	31	40	50	56	53	47.9	40	43	34	25	10
BOSTON LOGAN INTL AP	KBOS	MA	42.3606	-71.0106	12	12	14	23	36	45	55	62	60	55	48.9	51	41	31	17
NANTUCKET MEM AP	KACK	MA	41.2531	-70.0608	45	19	19	26.3	36	43	53	60	60	55	50	52	43	34.8	22
BALTIMORE WASH INTL AP	KBWI	MD	39.1667	-76.6833	156	17	17.3	27	38	47.6	57.1	64	61	55	48	51	40	30	19
PATUXENT RIVER NAS	KNHK	MD	38.3	-76.4167	39	21	23	30	41	51	61	68	66	60	56	58	47	35	24
CARIBOU MUNI AP	KCAR	ME	46.8706	-68.0172	624	-11	-8	4	24	34	45	51	47	40.3	34	37	28	18.9	-4
PORTLAND INTL JETPORT	KPWM	ME	43.6497	-70.3003	45	3	3	15	29	38	49	55	51	45	38	40	32	24	7
FLINT BISHOP INTL AP	KFNT	MI	42.9667	-83.7494	770	4	5.3	15	28	38	49	55	52	45	40	42.7	33	22	8.4
HANCOCK HOUGHTON CO AP	KCMX	MI	47.1686	-88.4889	1074	-2	-1	7	24	32.2	44	51	49	44	38	40	31	16	5
SAULT STE MARIE SANDERSON FLD	KANJ	MI	46.4794	-84.3572	722	-5	-5	6	23	32	43	48	47	43	37.8	39	31	18	1
TRAVERSE CITY CHERRY CPTL AP	KTVC	MI	44.7408	-85.5825	618	6	5	12.4	27	35	46	53	51	45	42	43	34	22	11.4
DULUTH INTL AP	KDLH	MN	46.8369	-92.1833	1433	-15	-8	1	22	33	44	51	49	43	37	39	30	9	-8.6
MINNEAPOLIS/ST PAUL AP	KMSP	MN	44.8831	-93.2289	872	-11	-3	7	28	42	52	59	56	49	43	44	34	13	-3
ST CLOUD RGNL AP	KSTC	MN	45.5433	-94.0514	1032	-15	-8.7	2	25	38	49	56	53	45	38	40.8	30.1	10	-7.7
KANSAS CITY DOWNTOWN AP	KMKC	MO	39.1208	-94.5969	742	8	15.2	23	36	49	60.4	67	65	56	52	54	42	26	12
SPRINGFIELD RGNL AP	KSGF	MO	37.2397	-93.3897	1259	11	17	25	35	48	58	64	62	55	50	51	39	23	16
ST LOUIS LAMBERT INTL AP	KSTL	MO	38.7525	-90.3736	531	10	15	24	36.4	48	60	66	63	56	50	52.4	41	25	14
VICHY ROLLA NATIONAL AP	KVIH	MO	38.1311	-91.7683	1127	10	16	23	35	48	58	65	62	55	51	52	40	23.9	14
BILLINGS LOGAN INTL AP	KBIL	MT	45.8069	-108.542	3581	-8	4.5	10	27	40	48	56	55	43.9	39	41	31	13	5
CUT BANK MUNI AP	KCTB	MT	48.6033	-112.375	3838	-17	-5	-1.9	21	34	43	49	47	38	33.3	35	24	6	-6
DILLON AP	KDLN	MT	45.2575	-112.554	5200	-7	4	8	24	33	42	49	47	38.2	34	36	26	10	5.2
GREAT FALLS INTL AP	KGTF	MT	47.4733	-111.382	3664	-13	0	5.3	24.6	37	45	53	52	40.2	36	38	29	10.6	-1.8
HELENA RGNL AP	KHLN	MT	46.6056	-111.964	3828	-15	2	8	25	37	44	52	50	39	35.1	37	26	9.5	2
LEWISTOWN MUNI AP	KLWT	MT	47.0492	-109.458	4145	-14.7	-1	5	21.4	34	42	49	48	38	32.9	35	26	9	1
MILES CITY F WILEY FLD	KMLS	MT	46.4267	-105.883	2624	-14	-4	4	26	40	50	57	55	43	38	41	31	9	-1.9
MISSOULA INTL AP	KMSO	MT	46.9208	-114.093	3192	-4.8	11	17	29	36	44	49	48	40.3	36	38	29	15	9
ASHEVILLE RGNL AP	KAVL	NC	35.4319	-82.5375	2117	17	20	26	34	44	54	58.1	57	50	45	47	33	24	18
CHARLOTTE DOUGLAS AP	KCLT	NC	35.2236	-80.9553	728		28	32	41.7	54	63								
CHERRY POINT MCAS	KNKT	NC	34.9	-76.8833	29	28	30	35	45	55	64	70	69	64	59	61	48	37	28.9
PIEDMONT TRIAD INTL AP (Formerly Greensboro)	KGSO	NC	36.0975	-79.9436	890	20	23	29	38	50	60	65	63	56	50	52	40	29	21
RALEIGH DURHAM INTL AP	KRDU	NC	35.8922	-78.7819	416	22	25	31	40	51	60	66	63	57	53	54	41	31	23
BISMARCK MUNI AP	KBIS	ND	46.7825	-100.757	1651	-16	-8	1	24	36	48	55	52	42	38	38	29	5	-7.7
FARGO HECTOR INTL AP	KFAR	ND	46.9253	-96.8111	900	-17	-9	0	25	37	49	56	54	45	39	41	29.3	6	-10
MINOT INTL AP	KMOT	ND	48.2553	-101.273	1665	-17.7	-10	-2	23	35	47	54	52	42	35	38	29	3	-10
BELLEVUE OFFUTT AFB (OMAHA OFFUTT AFB)	KOFF	NE	41.1167	-95.9167	1047			16											

**Table II-3 Revised. Doner Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1950-1969)**

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
GRAND ISLAND AP	KGRI	NE	40.9611	-98.3136	1840	-2	6	13.8	30	43.9	54	61	58	49	44	45.4	34	17	5
NORTH PLATTE RGNL AP	KLBF	NE	41.1214	-100.669	2778	-2	6	12.3	27	40	52	59	57	47	41	43	29	15	5
OMAHA EPPLEY AIRFIELD	KOMA	NE	41.3103	-95.8992	982	-2	5	16	33	46	57	64	60.8	52	47	49	36	20	6
SCOTTSBLUFF HEILIG AP	KBFF	NE	41.8706	-103.593	3945	-1	9	12	26	39	49.8	57	55	45	40.2	42	31	15	8.1
CONCORD MUNI AP	KCON	NH	43.1953	-71.5011	346	1.1	1.3	15	29	37	48	54	49.1	43	36	39	30	22	4.3
PORTSMOUTH PEASE AFB	KPSM	NH	43.0833	-70.8167	100	5.2	6												
ATLANTIC CITY INTL AP	KACY	NJ	39.4494	-74.5672	60	16	18	26	36	46	56	63	60	55	48	51	40	31	18
NEWARK INTL AP	KEWR	NJ	40.6825	-74.1694	7	16	16.7	26	37	47	58	66	63	57	50.3	52	42	33	19
FARMINGTON RGNL AP	KFMN	NM	36.7436	-108.229	5495	7	17		33	43	54	62	59	54.3	47	49	37	23	12.8
LAS VEGAS MUNI AP	KLVS	NM	35.6542	-105.143	6866	13	13	19	28	39	50	55	55	49	45	46	35	19	15.7
ROSWELL IND AIR PK	KROW	NM	33.3075	-104.508	3649	20	23	31	43	53	64			61.4	55	58	45	29.9	23
ELKO RGNL AP	KEKO	NV	40.8289	-115.789	5030	-1	8	18	26	34	42	53	47	40	33	37	27	13	7
FALLON NAAS	KNFL	NV	39.4167	-118.717	3934	14	21	26	33	40.6	49	60	55	50	44	46	34	21	16
LAS VEGAS MCCARRAN AP	KLAS	NV	36.0719	-115.163	2180	29	33.2	38	47.8	55	67	76	74	67.3	62	64	51	37	31
LOVELOCK DERBY FLD	KLOL	NV	40.0681	-118.569	2902	8	17	22	31	39	49	59	54	47	43	44	33	18	12
RENO TAHOE INTL AP	KRNO	NV	39.4839	-119.771	4410	8	17	22	27	35	44	53	49	45	40	41	31	19	14
TONOPAH	KTPH	NV	38.0511	-117.09	5395	12	18	22.1	31	38.2	48.9	58	54	48	45	46	36	21	18
ALBANY AP	KALB	NY	42.7431	-73.8092	312	2.9	4	17	32	41	52	57	53	47	41	44	33	24	8
BINGHAMTON GREATER AP	KBGM	NY	42.2067	-75.98	1595	4.2	5	14	28	38	48.9	55	53	47	40.3	43	34	24	7.3
MASSENA INTL AP	KMSS	NY	44.9358	-74.8456	214	-6	-5	9.4	28	38	49	55	50	44	37	40	31	22	-0.3
NEW YORK JFK INTL AP	KJFK	NY	40.6386	-73.7622	11	17	18	27	38	48	58	66	63	59	52	54	44	34	20
NEW YORK LAGUARDIA AP	KLGA	NY	40.7789	-73.8808	11	18	18	27	38	48	59	66	65	59	53.4	55	45	35	20
NIAGARA FALLS INTL AP	KIAG	NY	43.1083	-78.9381	585				30	39	51	58	56	48	42.4	45	36	27	13
ROCHESTER GTR INTL AP	KROC	NY	43.1167	-77.6767	539	8	6	16	30	40	50	56	53	48	42	44	36	26	12
SYRACUSE HANCOCK INTL AP	KSYR	NY	43.1111	-76.1039	413	3	5.5	16	31	40	51	57	55	49	43	45.7	36	26	11
WATERTOWN INTL AP	KART	NY	43.9922	-76.0217	318	-1	-1	12.3	29	38	49	56	53	46	39.4	42	34	24	1
WESTHAMPTN GABRESKI AP	KFOK	NY	40.8436	-72.6322	67	14	15	24.6	34	44	54	61	58	54	49	51	39	30	17.2
CLEVELAND HOPKINS INTL AP	KCLE	OH	41.405	-81.8528	770	10	12	21	32	42	52	58	57	52	45	49	38	26	13
COLUMBUS PORT COLUMBUS INTL AP	KCMH	OH	39.9914	-82.8808	810	11	14	22.3	33	44	54	60	58	51	45	47	36	25	11.2
DAYTON INTL AP	KDAY	OH	39.9061	-84.2186	1000	10	13	21	32	44	55	62	59	52	47	48	38	25	11
YOUNGSTOWN RGNL AP	KYNG	OH	41.2544	-80.6739	1180	9	10	18	29.9	40	50	56	54	48	43	45	36	24	11
GAGE AP	KGAG	OK	36.2967	-99.7689	2191	10	17.3	24	35	49.3	60	66	66	54	53	53	39.2	24	16
OKLAHOMA CITY WILL ROGERS AP	KOKC	OK	35.3886	-97.6003	1285	14	22	29	40	53	62.3	69	67	59	56	57	45	29	21
TULSA INTL AP	KTUL	OK	36.1994	-95.8872	650	15	22	29	41	53	63.4	69	67	59	55	57	44	29	20
ASTORIA RGNL AP	KAST	OR	46.1569	-123.883	9		32		38	42	48.9	51	52	49	46	47	41	34	33
BAKER CITY MUNI AP	KBKE	OR	44.8428	-117.809	3361	4.4	11	22	30	36	43	48	46	40.3	35	37	27	17	12
MEDFORD ROGUE VLY AP	KMFR	OR	42.3811	-122.872	1297	24	27	31	35	42	47	53.3	53	48	43	45	36	28	26.5
PENDLETON E OR RGNL AP	KPDT	OR	45.6983	-118.855	1486	7.3	26	30	37	43	50	56	56	51	46	48	38	26	23
PORTLAND INTL AP	KPDX	OR	45.5958	-122.609	19	25.4	32	34	40	45	51	55	55	52	47	49	42	33	32

**Table II-3 Revised. Doner Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1950-1969)**

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
REDMOND ROBERTS FLD	KRDM	OR	44.2558	-121.139	3043	10	19.9	22	26.8	33	41	46	45	40	34	37	29	20	19
SALEM MCNARY FLD	KSLE	OR	44.905	-123.001	205	25	30	32	36	42	48	51	51	48	43	45	39	30	30
ALLENTOWN INTL AP	KABE	PA	40.6508	-75.4492	390	12	12	22	34	44	55	60	57	51	44	47	36	27	14
ERIE INTL AP	KERI	PA	42.08	-80.1825	730	11	10	19	30	40	50	57	56	51	46	48	40	28	14.4
HARRISBURG CPTL CY AP	KCXY	PA	40.2172	-76.8514	340	16	15	26	36	47	56.4	62	59	54	47	49	39	29	16
PHILADELPHIA INTL AP	KPHL	PA	39.8683	-75.2311	10	16	18	27	38	47	58	64	61	55.9	48	52	40	31	19
PITTSBURGH INTL AP	KPIT	PA	40.4847	-80.2144	1203	11	11.3	20	31	42	52	58	56	50	44	47	37.3	25	12
WILKES-BARRE INTL AP	KAVP	PA	41.3336	-75.7269	930	10	8.3	18	31	42	52	57	55	49	42	45	35.1	25	11.2
WILLIAMSPORT	KIPT	PA	41.2433	-76.9217	520							57					35		
PROVIDENCE T F GREEN AP	KPVD	RI	41.7219	-71.4325	60	12	12	23.2	35	43	53	60	57	52	44	46	37	29	15
CHARLESTON INTL AP	KCHS	SC	32.8986	-80.0408	40	29	31	36.8	46	57	65	70	68	63	60	62	46.9	36	30
GREENVILLE DWTN AP	KGMU	SC	34.8461	-82.3461	1048	26	29	32	43	54	64	68	67	61	55.4	58.9	46	34	27
HURON RGNL AP	KHON	SD	44.3981	-98.2231	1280	-11	-5.8	4	26	39	51	57	55	46	39.8	42	30	11	-5
PIERRE RGNL AP	KPIR	SD	44.3814	-100.286	1742	-8	-1	5.3	26	40	52	59	57	47.3	42.3	44	32	12	-0.6
RAPID CITY REGIONAL AP	KRAP	SD	44.0433	-103.054	3160	-4	2.1	7.2	25	40	50	57	55.1	45	39	41	31	13	3.2
SIOUX FALLS FOSS FLD	KFSD	SD	43.5769	-96.7536	1428	-10	-3	7	27	40.2	52	58	56	47	40	43	31	12	-3
CHATTANOOGA LOVELL AP	KCHA	TN	35.0311	-85.2014	671	21	23.6	31	39	50	61	67	65	58.2	53	55	40	30	22
KNOXVILLE MCGHEE TYSON AP	KTYS	TN	35.8181	-83.9858	962	21	24	31	39	51	62	66	65	59.1	54	56	42	30	23
ABILENE RGNL AP	KABI	TX	32.4111	-99.6817	1790	22	28	33	45	56	66	71	70.5	62.1	58	60	49	33	28
AMARILLO INTL AP	KAMA	TX	35.2294	-101.704	3604	13	19	25	35	48	58.4	65	64	55	52	53	41.3	26	19
AUSTIN-CAMP MABRY	KATT	TX	30.3208	-97.7603	670	30	35	40	50	61.6	69	75	74	68	64	65	53.5	39	34
BROWNSVILLE INTL AP	KBRO	TX	25.9142	-97.4231	24	42	44	51	60	68	74	76	76	73	70	71	61	48	44
CORPUS CHRISTI NAS	KNGP	TX	27.6833	-97.2833	18	41	44.4	51	63	71	78	79	78	76	72	74.8	64	50	44
EL PASO INTL AP	KELP	TX	31.8111	-106.376	3918	26	30	36	49	57	68	70	70	65	60	62	49	35	28
LUBBOCK INTL AP	KLBB	TX	33.6656	-101.823	3254	17	20.2	28	39	51	61	67	66	58	54	55	43	27	21.3
LUFKIN ANGELINA CO AP	KLFK	TX	31.2361	-94.7544	288	27	33	37	47	60	67.9	72	70	63	60	61	46.4	35	30
MIDLAND INTL AP	KMAF	TX	31.9475	-102.209	2862	22.4	27	33.4	43.7	55	66	70	70	63	59	60	49	32	28
SAN ANGELO MATHIS FLD	KSJT	TX	31.3517	-100.495	1916	25	30	35	47	58	68	71.1	71	65	61	62	49	35	29
WICHITA FALLS MUNI AP	KSPS	TX	33.9786	-98.4928	1017	20	27	32	44	56	65.1	72	70	62	58	60	48	32	25
CEDAR CITY MUNI AP	KCDC	UT	37.7086	-113.094	5586	8	13	20	29	37	48	60	58	50.3	43	45	33	17	13
SALT LAKE CITY INTL AP	KSLC	UT	40.7781	-111.969	4225	12	16.4	23	33	40	50	61	57	49.9	42	46	36	23	17
QUANTICO MCAS	KNYG	VA	38.5	-77.3	10	16.3	19	27	38	48	58	65	62	55.9	50	52	40	30	
RICHMOND INTL AP	KRIC	VA	37.505	-77.3203	164	19	22	28.5	38.7	49	58	65	62	56	49	52	39	31	20
ROANOKE RGNL AP	KROA	VA	37.3169	-79.9742	1175	19	22	28	38	49	58	63	62	54	47.4	51	40.2	29	20
WASHINGTON REAGAN AP	KDCA	VA	38.8483	-77.0342	10	20.2	22	30	40	51	60	67	65	59	52	55	45	33	22
BURLINGTON INTL AP	KBTB	VT	44.4681	-73.1503	330	-3.5	-4	11	29	35.4	49	55	51	45	38	41	32	23	3
MOSES LAKE GRANT CO AP	KMWH	WA	47.2078	-119.319	1196	7	21	27	36	44	52	58	56	50	45	47	36	24	18
OLYMPIA AP	KOLM	WA	46.9733	-122.903	188	23	29	30	34	39	46	49	49	44.3	41	43	37	30	30
SEATTLE TACOMA INTL AP	KSEA	WA	47.4444	-122.314	370	26	32	33	38	43	49	53	53	51	47	49	42	34	32

**Table II-3 Revised. Doner Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1950-1969)**

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
SPOKANE INTL AP	KGEG	WA	47.6214	-117.528	2353	3.4	17.1	24.4	32	39	46.4	53	52	47	41	43	34	22.8	17
TACOMA MCCHORD AFB	KTCM	WA	47.15	-122.483	322		29	30											
THE DALLES MUNI AP (Formerly DALESPORT)	KDLS	WA	45.6194	-121.166	235	15	27.3	31	39	45	53	58.3	57	52	47.4	50	38	28	25
WHIDBEY ISLAND NAS	KNUW	WA	48.35	-122.667	47	25	32	34	39	45	49	51	52	49	46	47	42	34	32
YAKIMA AIR TERMINAL	KYKM	WA	46.5683	-120.543	1064	7	20.9	26	33	40	49	53	51	44	40	42	32	21	19
EAU CLAIRE RGNL AP	KEAU	WI	44.8664	-91.4878	885	-13	-6	6	26	39	50	56	53	46.2	40	42	31	13	-5
GREEN BAY A S INTL AP	KGRB	WI	44.4794	-88.1367	687	-6	-1	10	28	37.3	48	54	52	44	39	41	33	16	0.3
LA CROSSE MUNI AP	KLSE	WI	43.8789	-91.2528	678	-7	-1	10	29	43	52	59	56	49	43	45	34	15	-1.6
MADISON DANE RGNL AP	KMSN	WI	43.1406	-89.3453	866	-5	1	13	29	39.1	51	57	54	47	40	43	34	16	1
MILWAUKEE MITCHELL AP	KMKE	WI	42.955	-87.9044	670	-1	6	17	31	40	49	58	58	50	45	47	36.4	19	4
CHARLESTON YEAGER AP	KCRW	WV	38.3794	-81.59	910	14	17	26	35	45	54	60	58	53	46	49	36.2	26	16
ELKINS RANDOLPH CO AP	KEKN	WV	38.8853	-79.8528	1979	9	11	20	29	39	48	52	51	45	39	42	30	21	11
MARTINSBURG E WV RGNL AP	KMRB	WV	39.4019	-77.9844	534	14.9	15	24	35	46	54.4	60	57	51	43	47	36	25	15
CASPER NATRONA CO AP	KCPR	WY	42.8975	-106.473	5313	-0.9	7	12	23.2	36	46	54	52	41	35.4	39	30	12	9
CHEYENNE MUNI AP	KCYS	WY	41.15	-104.817	6130	6	10	11	23	35	45	54	51.6	42.5	36	39	30	16	11
ROCK SPRINGS AP	KRKS	WY	41.5944	-109.053	6741	0	5	11	23	32.8	42	53.1	50	41	35	38	29	12	6
SHERIDAN CO AP	KSHR	WY	44.7694	-106.969	3945	-10	2	8	24.9	38	46	54	52	42	36	38	30	9	4



**Table II-6 Revised. Modern Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1996-2015)**

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
ANCHORAGE ELMENDORF AFB	PAED	AK	61.2531	-149.794	192		3	9											
ANCHORAGE INTL AP	PANC	AK	61.1689	-150.028	120	-2	6	11	25	38	47	52	50	44.4	36	39	26	9	4.6
ANNETTE ISLAND AP	PANT	AK	55.0389	-131.579	109	24.8	28	31	36	42	48	52	53	49	46	47	39	31	27
BARROW POST ROGERS AP	PABR	AK	71.2833	-156.781	31	-29	-29	-27.8	-14	7.8	29	32	32	31	26	28	10	-9	-21
BETHEL AP	PABE	AK	60.785	-161.829	102	-20.4	-12	-9	5	28	42	46	45	40	31	33	18	-2	-12
BETTLES AP	PABT	AK	66.54	-151.31	643	-44	-31	-20	0	27	45	47	38	32	23	27	4	-23	-30.6
BIG DELTA AP	PABI	AK	63.9944	-145.721	1277	-27	-18	-11	11	33	46	49	43	35.6	27	29	11	-15.5	-23
COLD BAY AP	PACD	AK	55.2208	-162.733	78	13.6	17	15	25	32	40	45	47	44	40	42	34	26.9	19
CORDOVA M K SMITH AP	PACV	AK	60.4889	-145.451	31	6	10.6	14	25	33.2	42	46	45	38.8	33	35	28	13	10.2
FAIRBANKS INTL AP	PAFA	AK	64.8039	-147.876	432	-36	-25	-14	11	34	49	51	44	36	29	31	9	-19.6	-28
GULKANA AP	PAGK	AK	62.1592	-145.459	1562	-28	-18	-14	13	32	43	47	40	32	25	27	10	-21	-26.4
HOMER AP	PAHO	AK	59.6419	-151.491	64	4	10	13	27	34.7	44	47	46	44	36	39	28.2	14	11
ILIAMNA AP	PAIL	AK	59.7494	-154.909	143	-13	-2	0	18	33	43	48	47	43	35	37	23	4	-5
JUNEAU INTL AP	PAJN	AK	58.3567	-134.564	16	12	15	19	29	38	46	49	48	43	40	42	33	22	16
KING SALMON AP	PAKN	AK	58.6828	-156.656	67	-18	-4	-3	17	31	41	46	44	39	32	34	19	1	-11
KODIAK AP	PADQ	AK	57.7511	-152.486	80	16	19	20	28	36	44	49	48.2	44	37.2	40.8	31	23	18
KOTZEBUE RALPH WEIN AP	PAOT	AK	66.8667	-162.633	30	-28.6	-22	-18	-4.1	16	34	44	43	38	30	32.5	13	-6	-19
MCGRATH AP	PAMC	AK	62.9575	-155.61	333	-40	-25.6	-17	8	32	46	48	42	35	29	30	9	-18.1	-31
NOME MUNI AP	PAOM	AK	64.5111	-165.44	13	-21	-16	-11	0	23	36	43.5	41	36	29.8	32	17	2	-13
NORTHWAY AP	PAOR	AK	62.9617	-141.938	1713	-42	-31	-24	6	30	44	47	42	33	25	27	7	-25.3	-35
SITKA AIRPORT	PASI	AK	57.0481	-135.365	14	26	27.8	29	34	40	47	51	52	48	45	46.6	39	32	28
TALKEETNA AP	PATK	AK	62.32	-150.095	350	-11.5	-3	1	21	34	46	50	45	38	31	33	19	-1.6	-9
TANANA CALHOUN MEM AP	PATA	AK	65.1744	-152.107	222	-42	-28.6	-20	2	30	47	48	40	33	25.6	28	10	-18	-32
YAKUTAT STATE AP	PAYA	AK	59.5119	-139.671	33	11	14	15	26	34	44	48	46	40	35	36	30	19	16
BIRMINGHAM AP	KBHM	AL	33.5656	-86.745	615	24	29	36	45	54	67	71	69	64	56	59.8	45	35	29
MOBILE RGNL AP	KMOB	AL	30.6883	-88.2456	215	30	34	40.8	50	59	70	73	72	70	61	64	49	40	34
MONTGOMERY AP	KMGM	AL	32.2997	-86.4075	202	26	32	39	48	56	69	72	70	66	58	61.5	46	36	30.8
FT SMITH RGNL AP	KFSM	AR	35.3331	-94.3625	449	23	25	34	44	54	66	70.3	69.8	62	55.7	58	45	33	26
LITTLE ROCK AP ADAMS FLD	KLIT	AR	34.7272	-92.2389	258	24	28	36	45	56	67	71	70	63	57	59	46	36	28
DAVIS MONTHAN AFB	KDMA	AZ	32.1664	-110.883	2704	37	39	43.4											
PHOENIX SKY HARBOR INTL AP	KPHX	AZ	33.4278	-112.004	1107	43	46	51	59.3	67	79	83	82	78	73.4	76	63	50	42
PRESCOTT LOVE FLD	KPRC	AZ	34.6517	-112.421	5042	22	26	31	36	45	56	64	62	57	51	53	39	29	21
WINSLOW MUNI AP	KINW	AZ	35.0281	-110.721	4886	15	22	28	36	45	56	65	63	56	48	51	36	23	17
ARCATA EUREKA AP	KACV	CA	40.9781	-124.109	200	35	36	37.9	39	43	47	50	51	48	45	46	42.5	38.9	35
BAKERSFIELD AP	KBFL	CA	35.4344	-119.054	489	37	42	45	48	56	63	71	69	65	61	63	53	43	36
BARSTOW DAGGETT AP	KDAG	CA	34.8536	-116.787	1917	34	37	43	47	56	67	75	73	67.2	60	63	52	40	32
FRESNO YOSEMITE INTL AP	KFAT	CA	36.78	-119.719	333	35	41	44	47	54	61	68	67	62.3	59.4	61	52	42	35
OAKLAND METRO INTL AP	KOAK	CA	37.7214	-122.221	6	39.3	43	45	48	52	54	55	56	55	54	55	51	44	39
PASO ROBLES MUNI AP	KPRB	CA	35.6697	-120.628	810	30	33	37.1	41	47	51	54	54	52	49.6	51	43	34	29

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
RED BLUFF MUNI AP	KRBL	CA	40.1519	-122.254	353	34	38	41	45	53	60	67	64	60	56	57	49	39	33
SACRAMENTO EXECUTIVE AP	KSAC	CA	38.5069	-121.495	15	34	38.2	43	45	50	55	57	58	57	55	56	49	39	33
SAN FRANCISCO INTL AP	KSFO	CA	37.6197	-122.365	8	43	44	46	48	50	53	55	55	55	54	54	53	48	42
TRAVIS FLD AFB	KSUU	CA	38.2667	-121.933	59		39	44.7											
UKIAH MUNI AP	KUKI	CA	39.1258	-123.201	601	31	34	37	39.2	46	52	56	55	51	48	50	44	35.3	30
COLORADO SPRINGS MUNI AP	KCOS	CO	38.81	-104.688	6181	12	15	21	28.4	38	50	58	56	49	43	45	32	20	12.7
GRAND JUNCTION WALKER FLD	KGJT	CO	39.1342	-108.54	4858	8	19.7	29.4	35	44	56	65	63	54	47	50	36.7	24	11
LA JUNTA MUNI AP	KLHX	CO	38.0494	-103.512	4194	11	16	25	32	44	56	64	61	54	47	49	34	22	13
PUEBLO MEM AP	KPUB	CO	38.29	-104.498	4720	9	13	23	32	42	54	61	59	52	45	47	32	20	10
WILMINGTON NEW CASTLE CO AP	KILG	DE	39.6728	-75.6008	79	17	21	28	40	49	59	65	63	59	51.6	53	40	32	24
JACKSONVILLE NAS	KNIP	FL	30.2333	-81.6667	20	37	40.5	46	57.1	66	75	76	77	76	72	73	59	47	42
ORLANDO EXECUTIVE AP	KORL	FL	28.5453	-81.3331	108	42	46	52	59	66	72.6	74	75	73.8	71.3	72	62	51	44
PENSACOLA FOREST SHERMAN NAS	KNPA	FL	30.35	-87.3167	28	31.8	34.6	41	51	60.8	72	73.8	74	71	66	66.9	52	41	37
TALLAHASSEE RGNL AP	KTLH	FL	30.3931	-84.3533	55	30	33	40	48	59	71	73	73	70	64	66	48.7	39	32
WEST PALM BEACH INTL AP	KPBI	FL	26.6847	-80.0994	19	48	51	55.8	64	71	75	75	76	76	76	76	69	59	52
ATLANTA HARTSFIELD INTL AP	KATL	GA	33.63	-84.4417	1010	24.9	29.4	36	46	56	67	70	70	65	58	61	47	36	30
DES MOINES INTL AP	KDSM	IA	41.5339	-93.6531	957	2	3	20	34	46	59	64	62	54.7	47	49.8	36	22	6
MASON CITY MUNI AP	KMCW	IA	43.1544	-93.3269	1225	-6	-3	13	29	41	53	57	55	47	41	43	30	17	1
SIoux CITY GATEWAY AP	KSUX	IA	42.3914	-96.3792	1095	-1	1	16	31	43	55	60	58	49	41	45	32	18	2
BOISE AIR TERMINAL	KBOI	ID	43.5667	-116.241	2814	19	24	30	35	42	51	62	59	51	47.1	49	38	25	19
IDAHO FALLS FANNING FLD	KIDA	ID	43.5164	-112.067	4729	1	5	21	28	35	43.3	50	48	41	38	39	28	16	5
CHICAGO MIDWAY AP	KMDW	IL	41.7861	-87.7522	612	6.6	9	22	35	46	56	64	63	57	51	53	39	26.3	12
CHICAGO OHARE INTL AP	KORD	IL	41.995	-87.9336	662	5	5	20.3	33.4	44	54	62	62	55	49	50.5	38	25	10
MOLINE QUAD CITY INTL AP	KMLI	IL	41.4653	-90.5233	592	4.5	7	20	34	45	56	61	59	52	46	48	36	23	10
PEORIA GTR PEORIA AP	KPIA	IL	40.6675	-89.6839	650	5	5.8	22	35.2				61	54	47.2	50	37	25	10
SPRINGFIELD CAPITAL AP	KSPI	IL	39.8453	-89.6839	594	6	10	25	35	47	58	61	60	53	47	48.8	37	26.7	14
EVANSVILLE REGIONAL AP	KEVV	IN	38.0442	-87.5206	400	13.4	18	28	39	50	61.9	64	63	58	49.9	53	39.7	29	20
FT WAYNE INTL AP	KFWA	IN	40.9706	-85.2064	791	6	8.7	20	33	45	55	59	58	51.4	46	48	36	26	14
INDIANAPOLIS INTL AP	KIND	IN	39.7317	-86.2789	790	9	8.4	24	36.8	47	60	63	63	56	52	53	38	27	17
SOUTH BEND MICHIANA RGNL AP	KSBN	IN	41.7072	-86.3164	773	7	10	20	32	43	54	59	58	51	47	48	37	26	13
DODGE CITY RGNL AP	KDDC	KS	37.7686	-99.9678	2582	13	14	24	34	45	58	64	62	53.2	48	50	37	24	15
GOODLAND RENNER FLD	KGLD	KS	39.3675	-101.693	3656	7.1	10.5	21	30	40	53	61	59	49.2	46	47	33	19	10
RUSSELL MUNI AP	KRSL	KS	38.8761	-98.8092	1858	10	12	22	34	46	58	65	63	54	48	51	37	24	12
TOPEKA MUNI AP	KTOP	KS	39.0725	-95.6258	876	10	12	27	36	49	61	65	63	56	49	51	37	27	15
WICHITA MID-CONTINENT AP	KICT	KS	37.6472	-97.4294	1321	13	17	27	37	50	62	67.6	66	59	52	55	41	28	17
CINCINNATI NORTHERN KY AP (COVINGTON)	KCVG	KY	39.0431	-84.6717	869	12	15	25	37	48	58	63	62	57	49	52	39	28	19
LEXINGTON BLUEGRASS AP	KLEX	KY	38.0408	-84.6058	980	13	17.6	26	38	48	59	64	62	57	50	52.4	39	28	20

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
BATON ROUGE RYAN AP	KBTR	LA	30.5372	-91.1469	64	31	34.7	41	50	60	70	72.9	72	69	61	64	49	40	33
NEW ORLEANS INTL AP	KMSY	LA	29.9928	-90.2508	4	36	39	46	56	65	74	76	76	75	69	71	56	46	40
SHREVEPORT RGNL AP	KSHV	LA	32.4469	-93.8242	254	29	32	39	49	59	70	73	73	68	60	63	49	37.3	32
BEDFORD HANSCOM FLD	KBED	MA	42.47	-71.2894	133	7	10	19	32	43	52	59	55	48	43	45	34	25	16
BOSTON LOGAN INTL AP	KBOS	MA	42.3606	-71.0106	12	11	16	23	36	46	54	63	63	58	52	54	41	32	21
NANTUCKET MEM AP	KACK	MA	41.2531	-70.0608	45	18	21	26.3	37	45	53	62	61	56	54	54	45	35	26
BALTIMORE WASH INTL AP	KBWI	MD	39.1667	-76.6833	156	18	20	28	40	49	59	64	63	57	51	54	40	31	24
PATUXENT RIVER NAS	KNHK	MD	38.3	-76.4167	39	21	22.3	30	42	52	63	68	66	62	57	58	44	35.2	28
CARIBOU MUNI AP	KCAR	ME	46.8706	-68.0172	624	-10	-6	4	25	37	46	53	50	45	38	40	30	17	1
PORTLAND INTL JETPORT	KPWM	ME	43.6497	-70.3003	45	4	8	17	32	42	51	58	56	51	45	47	34	25	15
FLINT BISHOP INTL AP	KFNT	MI	42.9667	-83.7494	770	5	7	16	31	42	52	56	56	50	43	45.8	35	25	15
HANCOCK HOUGHTON CO AP	KCMX	MI	47.1686	-88.4889	1074	1	0	9	24.1	35	45	51	52	45	41	42	33	20	8
SAULT STE MARIE SANDERSON FLD	KANJ	MI	46.4794	-84.3572	722	-4	-2.6	6	25	36	47	52	52	46	42	43	33	20	6
TRAVERSE CITY CHERRY CPTL AP	KTVC	MI	44.7408	-85.5825	618	8	7	15	29	37	48	54	54	49	44	45	36	26	16
DULUTH INTL AP	KDLH	MN	46.8369	-92.1833	1433	-13	-8	4	25	36	46	54	52	45	39	41	30	13	-4
MINNEAPOLIS/ST PAUL AP	KMSP	MN	44.8831	-93.2289	872	-5.9	-2.1	13	31	43	55	62	60	53	45	47.3	34	18	1.8
ST CLOUD RGNL AP	KSTC	MN	45.5433	-94.0514	1032	-11	-9	7	26	39	51	56	53	46.1	39.8	43	30	15	-3
KANSAS CITY DOWNTOWN AP	KMKC	MO	39.1208	-94.5969	742	11	14.6	28	39	50	63	68	66	59	52.3	55	40	29	16
SPRINGFIELD RGNL AP	KSGF	MO	37.2397	-93.3897	1259	14	16	27	37	48	61	65	64	57	49	52	39	28	18
ST LOUIS LAMBERT INTL AP	KSTL	MO	38.7525	-90.3736	531	13.5	16	28	39.7	50	63	67	67	59	52	55	42	30	19
VICHY ROLLA NATIONAL AP	KVIH	MO	38.1311	-91.7683	1127	12	15	26	37	47	59	63	62	55	49	52	39	28	16.8
BILLINGS LOGAN INTL AP	KBIL	MT	45.8069	-108.542	3581	2.7	5.9	19	29	39	49	59	56	47	43	44	32	13	3
CUT BANK MUNI AP	KCTB	MT	48.6033	-112.375	3838	-6.4	-1	11.1	24	33	44	50	48	39	36	38	25	5	-3
DILLON AP	KDLN	MT	45.2575	-112.554	5200	4	11	17	25	32	41	52	48	39	37.8	38.7	28	12.8	3
GREAT FALLS INTL AP	KGTF	MT	47.4733	-111.382	3664	-1	4	16	27	35	45	53	50	43	39	41	30	12.8	2
HELENA RGNL AP	KHLN	MT	46.6056	-111.964	3828	1	9	18	29	37.8	47	56	52	43	42	43	30	11	2
LEWISTOWN MUNI AP	KLWT	MT	47.0492	-109.458	4145	-3	1	11	24	32	43	51	48	40.4	37	39	27	11.3	2.6
MILES CITY F WILEY FLD	KMLS	MT	46.4267	-105.883	2624	-3	-2	13.9	28	37	50	59	55	46	42	43	29.8	11	-1.6
MISSOULA INTL AP	KMSO	MT	46.9208	-114.093	3192	9	15	24	30	36	45	53	50	44	41	42	30	16	8
ASHEVILLE RGNL AP	KAVL	NC	35.4319	-82.5375	2117	17.2	23	29	38.3	47	57.6	62	61	56	49	52	37	28	23
CHARLOTTE DOUGLAS AP	KCLT	NC	35.2236	-80.9553	728		28.3	33	44	54	64								
CHERRY POINT MCAS	KNKT	NC	34.9	-76.8833	29	27	30	36	45	55	64.4	70	70	66	62	63	48	37	31
PIEDMONT TRIAD INTL AP (Formerly Greensboro)	KGSO	NC	36.0975	-79.9436	890	22	26	32	42	51	63	67	66	61	54	56	43	33	27
RALEIGH DURHAM INTL AP	KRDU	NC	35.8922	-78.7819	416	23	27	32	42	51.6	62	68	66	61	54	56	42	32	27
BISMARCK MUNI AP	KBIS	ND	46.7825	-100.757	1651	-11	-6.8	6	25	36	49	56	52	44	40	42	27.2	11	-4.7
FARGO HECTOR INTL AP	KFAR	ND	46.9253	-96.8111	900	-13	-10	5	27	38	52	56	53	47	41	43.1	30	12	-7
MINOT INTL AP	KMOT	ND	48.2553	-101.273	1665	-12	-8.4	3	24	34.7	50	56	52	45	40.3	43	29	8	-6

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
BELLEVUE OFFUTT AFB (OMAHA OFFUTT AFB)	KOFF	NE	41.1167	-95.9167	1047			18											
GRAND ISLAND AP	KGRI	NE	40.9611	-98.3136	1840	5	5.9	20	32	43	56	62	61	51	45	47.5	34	19	8
NORTH PLATTE RGNL AP	KLBF	NE	41.1214	-100.669	2778	4	4.5	18	28	38	51	59.1	57	46	40	42	29	15	5.4
OMAHA EPPLEY AIRFIELD	KOMA	NE	41.3103	-95.8992	982	3	5	21	34	45	58	63.1	62	53	47	49	35	22	7
SCOTTSBLUFF HEILIG AP	KBFF	NE	41.8706	-103.593	3945	5	9	19	27	37	50	59	55	46	40	42	30	16	4
CONCORD MUNI AP	KCON	NH	43.1953	-71.5011	346	0	5	15.6	29	39	49	55	53	46	39.5	43	31	22	11
PORTSMOUTH PEASE AFB	KPSM	NH	43.0833	-70.8167	100	5	9												
ATLANTIC CITY INTL AP	KACY	NJ	39.4494	-74.5672	60	16	19	27	38	46	57	63	61	55	50	52	39	30	23
NEWARK INTL AP	KEWR	NJ	40.6825	-74.1694	7	15	19	27	40	50	59	66	65	60	53	56	42	33	24
FARMINGTON RGNL AP	KFMN	NM	36.7436	-108.229	5495	11	18		34	41	53	63	59	53.6	46	48	35	23	14
LAS VEGAS MUNI AP	KLVS	NM	35.6542	-105.143	6866	16	17.8	23	30	40	51	56	54	49	44.3	46	34	21	16
ROSWELL IND AIR PK	KROW	NM	33.3075	-104.508	3649	23	27	33	42	54	65			61	56	58	43	31	23
ELKO RGNL AP	KEKO	NV	40.8289	-115.789	5030	2.3	13	22	28	36	45	56	52	43	35	40	28	16	4
FALLON NAAS	KNFL	NV	39.4167	-118.717	3934	13	22	28	34	42	52	62	58	51	44	47	33	22.8	13.4
LAS VEGAS MCCARRAN AP	KLAS	NV	36.0719	-115.163	2180	36	41	46	53	61	73	81	80	73	66	69	55	44	35
LOVELOCK DERBY FLD	KLOL	NV	40.0681	-118.569	2902	12.4	20	25	32	42	52	61	57	48.4	42	44	32	19	12
RENO TAHOE INTL AP	KRNO	NV	39.4839	-119.771	4410	20	25	30	35	42	51.6	63	59	53	46	49	38	26	18
TONOPAH	KTPH	NV	38.0511	-117.09	5395	18	22	27	31	40	50	59	57	50	45	48	35.2	24	16
ALBANY AP	KALB	NY	42.7431	-73.8092	312	3	8	18	33	45	54	60	57	52	45.3	47.8	36	27	15
BINGHAMTON GREATER AP	KBGM	NY	42.2067	-75.98	1595	2	7	15	29	41	51	57	55	50	43	45	34	25	13
MASSENA INTL AP	KMSS	NY	44.9358	-74.8456	214	-9	-1	9.1	28	40	50	55.3	53	48	41	43	32	22	4
NEW YORK JFK INTL AP	KJFK	NY	40.6386	-73.7622	11	17	20	28	40	49	58	66	65	61	55	57	44	35	25
NEW YORK LAGUARDIA AP	KLGA	NY	40.7789	-73.8808	11	17	21	28	41	51	59	68	67	63	57	59	46	36	26
NIAGARA FALLS INTL AP	KIAG	NY	43.1083	-78.9381	585				31	41.2	53	59	57	52	46	47.1	36.3	27	17
ROCHESTER GTR INTL AP	KROC	NY	43.1167	-77.6767	539	7	10	18.1	32	42.8	52	57	56	52	45	47	37	27	17
SYRACUSE HANCOCK INTL AP	KSYR	NY	43.1111	-76.1039	413	3	8	17	32	43	52	58	57	53	46	48	36.1	27	16
WATERTOWN INTL AP	KART	NY	43.9922	-76.0217	318	-7	-2	12	28	40	51	56	53	47	42	44	32.7	23.1	10
WESTHAMPTN GABRESKI AP	KFOK	NY	40.8436	-72.6322	67	13	15	23	34	46	55.3	63	57	53	45	48	36	27	19.9
CLEVELAND HOPKINS INTL AP	KCLE	OH	41.405	-81.8528	770	9	13	21.9	34	44.5	55	61	59	55	49	50.6	39	28	19
COLUMBUS PORT COLUMBUS INTL AP	KCMH	OH	39.9914	-82.8808	810	11	14.1	23.2	36	47	58	62	61	55	49	51	38	28	19
DAYTON INTL AP	KDAY	OH	39.9061	-84.2186	1000	9	13	22	36	46	56.2	61	60	54	48	50	37.7	26.9	17
YOUNGSTOWN RGNL AP	KYNG	OH	41.2544	-80.6739	1180	8	10	19	32	42	52	56	55	51	46	47	36	26.4	16
GAGE AP	KGAG	OK	36.2967	-99.7689	2191	16	18	25.7	36	47	60	66	63	55	50	52	38	26	18
OKLAHOMA CITY WILL ROGERS AP	KOKC	OK	35.3886	-97.6003	1285	20	23	32	42	53	65	70	69	61	55	57	43	32	23
TULSA INTL AP	KTUL	OK	36.1994	-95.8872	650	19	21	32	42	53	65	70	68	60	54	56	43.9	32.2	22
ASTORIA RGNL AP	KAST	OR	46.1569	-123.883	9		33.5		39	43.3	49	53	53	49	47	48	41.8	36	32
BAKER CITY MUNI AP	KBKE	OR	44.8428	-117.809	3361	11	17	24	27	34	42	49	46	38	35.9	37	26	17	11.5
MEDFORD ROGUE VLY AP	KMFR	OR	42.3811	-122.872	1297	27	30	34	38	44	51	59	58	52	48	50	39	32	27

Table II-6 Revised. Modern Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1996-2015)

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
PENDLETON E OR RGNL AP	KPDT	OR	45.6983	-118.855	1486	22	25	32	36	42	50	57	56	50	46	48	37	24	19
PORTLAND INTL AP	KPDX	OR	45.5958	-122.609	19	31	33	37	41	46	52	57	58	55	50.5	52	45	35	32
REDMOND ROBERTS FLD	KRDM	OR	44.2558	-121.139	3043	17	19	22.9	28	34	40	48	47	39	36	38	29	21	14
SALEM MCNARY FLD	KSLE	OR	44.905	-123.001	205	29	31	34.6	38.3	44	50	55	55	51	48	49	41	32	28
ALLENTOWN INTL AP	KABE	PA	40.6508	-75.4492	390	12.6	16	24	37	45	56	61	58.9	54	47	49	37	28	20
ERIE INTL AP	KERI	PA	42.08	-80.1825	730	11	11	21	32	43	54	60	59	56	50	52	40.6	30	20
HARRISBURG CPTL CY AP	KCXY	PA	40.2172	-76.8514	340	14	16.8	25	38.3	47	58	63	61	56.4	50	51.9	39	30	23
PHILADELPHIA INTL AP	KPHL	PA	39.8683	-75.2311	10	18	21	29	41	50	59.5	67	66	61	54	57	43	34	25
PITTSBURGH INTL AP	KPIT	PA	40.4847	-80.2144	1203	10	13	22	34	44	55	60	59	53	47	50	37	27	18
WILKES-BARRE INTL AP	KAVP	PA	41.3336	-75.7269	930	8.2	12	20	33	43	53	57	56.2	52	45	47.8	35	27.3	17.4
WILLIAMSPORT	KIPT	PA	41.2433	-76.9217	520							58					36		
PROVIDENCE T F GREEN AP	KPVD	RI	41.7219	-71.4325	60	11	15	23	36	46	54	62	61	55	49	51.5	39	30	21
CHARLESTON INTL AP	KCHS	SC	32.8986	-80.0408	40	30	33	39	48.5	59	69	73	73	68	63	65	50	39	34
GREENVILLE DWTN AP	KGMU	SC	34.8461	-82.3461	1048	25	29	36	46	54.8	66	70	70	64	57	60	46	36	30
HURON RGNL AP	KHON	SD	44.3981	-98.2231	1280	-8	-4	9	27	39	52	58	56	48	43	45	30	12.3	-2
PIERRE RGNL AP	KPIR	SD	44.3814	-100.286	1742	-1	0	12	28	39	52	59	57	49	44	46	31	16	2
RAPID CITY REGIONAL AP	KRAP	SD	44.0433	-103.054	3160	-1	2	14.4	25	38	50	58	56	46	41	43	30	14	2
SIOUX FALLS FOSS FLD	KFSD	SD	43.5769	-96.7536	1428	-6	-2	10.9	28	40	53	58	56	47	42	44	31	15	-0.7
CHATTANOOGA LOVELL AP	KCHA	TN	35.0311	-85.2014	671	22	27	33	43	52	64	68.8	68	62	55	57.6	43	32.3	27
KNOXVILLE MCGHEE TYSON AP	KTYS	TN	35.8181	-83.9858	962	20	25	31	41	51	63	67	66	61	54	56	42	32	26
ABILENE RGNL AP	KABI	TX	32.4111	-99.6817	1790	27	29	36	46	56	67	71	70	63	57.1	60	47	36	27
AMARILLO INTL AP	KAMA	TX	35.2294	-101.704	3604	18.4	19	28	37	47.9	61	65	64	56	51	53	40	27	20
AUSTIN-CAMP MABRY	KATT	TX	30.3208	-97.7603	670	33	35	43	53	63	72	74	75	70	65	67	53	41	34
BROWNSVILLE INTL AP	KBRO	TX	25.9142	-97.4231	24	44	46	52	61	69	75.1	76	77	75	68	71	60.5	51	45
CORPUS CHRISTI NAS	KNGP	TX	27.6833	-97.2833	18	42	45	52	63	71	78	79	79	77	72	73.9	64	51	45
EL PASO INTL AP	KELP	TX	31.8111	-106.376	3918	30	34	41	50	60	70	71	70	66	62	63.8	51	37	29
LUBBOCK INTL AP	KLBB	TX	33.6656	-101.823	3254	23	23	31	42	51	64	68	66	59	54.8	56	43	29	22
LUFKIN ANGELINA CO AP	KLFK	TX	31.2361	-94.7544	288	30	33	39	49	58	69	73	72	67.5	59.2	62	49.8	37	32
MIDLAND INTL AP	KMAF	TX	31.9475	-102.209	2862	26	27	35	45.7	56	68	70	69	63	58	60	47	33	26
SAN ANGELO MATHIS FLD	KSJT	TX	31.3517	-100.495	1916	28	29	36	47	57	69	71	70.1	64	58	60	46	34	28
WICHITA FALLS MUNI AP	KSPS	TX	33.9786	-98.4928	1017	24	26	34.9	46	55	67	72	71	64	57.8	60	46	34	25
CEDAR CITY MUNI AP	KCDC	UT	37.7086	-113.094	5586	8.4	15.9	24	29	38	49	60	58	49	42	45	31	20	10
SALT LAKE CITY INTL AP	KSLC	UT	40.7781	-111.969	4225	18	21	29.4	35	43	52	67	63	52.7	48	50	38	26	18
QUANTICO MCAS	KNYG	VA	38.5	-77.3	10	19	23	30	41	50	61	66	65	59	54	55	43	32	
RICHMOND INTL AP	KRIC	VA	37.505	-77.3203	164	21.2	25	31	41	50.8	61	67	65	61	54	57	42	33	27
ROANOKE RGNL AP	KROA	VA	37.3169	-79.9742	1175	20	24	30	41	50	60	65	63.2	57	52	54	41	31	26
WASHINGTON REAGAN AP	KDCA	VA	38.8483	-77.0342	10	21	24	31	43	53	63	69	68	63	56	58.2	45	36	27
BURLINGTON INTL AP	KBTB	VT	44.4681	-73.1503	330	-4	2	11	30	41	52	57	55	51	43.2	46	34	24	9
MOSES LAKE GRANT CO AP	KMWH	WA	47.2078	-119.319	1196	16	24	30	34	42	52	57	56	48.8	45	46	33	20	13

**Table II-6 Revised. Modern Era 10<sup>th</sup> Percentile 6-Hr. Minimum Temperatures, °F (1996-2015)**

Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
OLYMPIA AP	KOLM	WA	46.9733	-122.903	188	28	27.3	32	35	40	47	51	50	47	42	44	37.1	30	28
SEATTLE TACOMA INTL AP	KSEA	WA	47.4444	-122.314	370	31	33	36	39	45	51	55	56	53	50	51	44	34	31
SPOKANE INTL AP	KGEG	WA	47.6214	-117.528	2353	17	21	27	32	39	47	54	54	47	44	45	34	22	14.8
TACOMA MCCHORD AFB	KTCM	WA	47.15	-122.483	322		28	32											
THE DALLES MUNI AP (Formerly DALESPORT)	KDLS	WA	45.6194	-121.166	235	28	28	34	39	46	54	60	60	52	50	50	39	29	25
WHIDBEY ISLAND NAS	KNUW	WA	48.35	-122.667	47	30	33	36	39	45	50	52	52	50	46	47	42	32	30
YAKIMA AIR TERMINAL	KYKM	WA	46.5683	-120.543	1064	17.2	22	29	33	41	50	57	54	45	42	44	32	21	14
EAU CLAIRE RGNL AP	KEAU	WI	44.8664	-91.4878	885	-8	-5	9	29	39	52	56.1	55	47	42	44	31	16	1
GREEN BAY A S INTL AP	KGRB	WI	44.4794	-88.1367	687	-3	-1	12	30.4	40	52	55	54	47	40.6	43	33	20	2.5
LA CROSSE MUNI AP	KLSE	WI	43.8789	-91.2528	678	-3	-2	15	32	44	54.5	60	58	51	45	48	35	21	5
MADISON DANE RGNL AP	KMSN	WI	43.1406	-89.3453	866	0	0	14.1	31	42	54	58	56	49	43	45	34	22	4.5
MILWAUKEE MITCHELL AP	KMKE	WI	42.955	-87.9044	670	4	5	18	33	42	52	60	61	54	48	49	38	24	9
CHARLESTON YEAGER AP	KCRW	WV	38.3794	-81.59	910	15	19	26	38	46	57	61	60	55	48	50	37	29	21.3
ELKINS RANDOLPH CO AP	KEKN	WV	38.8853	-79.8528	1979	8	13	20	30	39	50	54	54	48	43	45	32	22	16
MARTINSBURG E WV RGNL AP	KMRB	WV	39.4019	-77.9844	534	15.6	19	26	37	46	57	62	60	54.5	48	50	39	29	22
CASPER NATRONA CO AP	KCPR	WY	42.8975	-106.473	5313	6.9	8	16	26	33	45	53.3	50	41	38	39	27	14.2	5
CHEYENNE MUNI AP	KCYS	WY	41.15	-104.817	6130	10	10.3	19	27	34.5	47	56	53	45	40	42	29	18	9
ROCK SPRINGS AP	KRKS	WY	41.5944	-109.053	6741	4	7.1	18	24	33	42	56	51	43	37.5	40	28	14	4
SHERIDAN CO AP	KSHR	WY	44.7694	-106.969	3945	0	1	15.1	26	35	46	55	51.1	42	39	40	29	10	3

**Table II-9 Revised. Differences in 10<sup>th</sup> Percentile 6-hr Minimum Temperatures (°F) Between Doner and Modern Eras (Modern-Doner)**

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
ANCHORAGE ELMENDORF AFB	PAED	AK	61.2531	-149.794	192		5	7											
ANCHORAGE INTL AP	PANC	AK	61.1689	-150.028	120	3	7	7.8	0	1.5	1	1	3	3.4	1	2	6	7	11.6
ANNETTE ISLAND AP	PANT	AK	55.0389	-131.579	109	5.8	1	1	1	1	2	1	1	0	1	0.3	0	2	2
BARROW POST ROGERS AP	PABR	AK	71.2833	-156.781	31	6	9	5.2	7	2.8	3	1	3	6	5.3	6	11	10	10.3
BETHEL AP	PABE	AK	60.785	-161.829	102	-0.4	9	7	7	0.5	2.6	0	0	2	0	0	2	1	8.8
BETTLES AP	PABT	AK	66.54	-151.31	643	-5.1	8	9	4	2	2	2	-2	1	1	2	3.8	6	12.8
BIG DELTA AP	PABI	AK	63.9944	-145.721	1277	4	13	7	2	1	2	1	1	1.6	0	0	3	5.5	11
COLD BAY AP	PACD	AK	55.2208	-162.733	78	-2.4	1	-1	2	-1	1	1	2	0	0	1	1	0.9	0
CORDOVA M K SMITH AP	PACV	AK	60.4889	-145.451	31	4	2.6	5	0	1.2	0	0	1	1.8	-1	0	1	-1	5
FAIRBANKS INTL AP	PAFA	AK	64.8039	-147.876	432	4	11	11	4	1	3.7	2	1	1.2	1	0	3	8.4	11
GULKANA AP	PAGK	AK	62.1592	-145.459	1562	5	4.8	4	2.9	2	2	2	0	0	-2	-2.8	5	0	5.6
HOMER AP	PAHO	AK	59.6419	-151.491	64	-1	3	5	2	2.7	3	3	3	5	1.6	2.1	3.2	1	8
ILIAMNA AP	PAIL	AK	59.7494	-154.909	143	1	11	5	4	1	2	2	1	3	1	1	2.7	0.1	7
JUNEAU INTL AP	PAJN	AK	58.3567	-134.564	16	8	5	1	1	2	2	2	2	4	3	3	3	7	8.3
KING SALMON AP	PAKN	AK	58.6828	-156.656	67	-3	11	5	2	1	1	1	0	3	2	0	4	0.1	6
KODIAK AP	PADQ	AK	57.7511	-152.486	80	-2	1	1	0	0	1	1.1	0.2	-1	-2.8	-1.2	1	-2	1
KOTZEBUE RALPH WEIN AP	PAOT	AK	66.8667	-162.633	30	0.4	10	6	5.9	2	1	2	0	3	1	2.5	5	6	10
MCGRATH AP	PAMC	AK	62.9575	-155.61	333	-2.8	10.4	7	7	3	3	0	-1	1	3	1	3.9	5.3	9.4
NOME MUNI AP	PAOM	AK	64.5111	-165.44	13	-3	6.9	6	2	-1	1	1.5	-1	2	0.8	1	2	4.6	6
NORTHWAY AP	PAOR	AK	62.9617	-141.938	1713	8	7.8	2	0.2	0	0	0	2	2	-2	-1	6	5.7	8
SITKA AIRPORT	PASI	AK	57.0481	-135.365	14	7	2.8	1	1	1	3	2	2	2	2	2.6	2	4	5
TALKEETNA AP	PATK	AK	62.32	-150.095	350	4.5	9	9.7	3.1	3	3	2	2	4	1	1	6	7.4	11
TANANA CALHOUN MEM AP	PATA	AK	65.1744	-152.107	222	-2	10.3	9	1	0	3	1	-2	1	1.6	0	5	9	11
YAKUTAT STATE AP	PAYA	AK	59.5119	-139.671	33	1	-1	-2	-1	0	2	1	1	1	-1	-1	1	0	4.8
BIRMINGHAM AP	KBHM	AL	33.5656	-86.745	615	0	2	3	3	0	2	1	1	2	-1	0.8	2	3	3
MOBILE RGNL AP	KMOB	AL	30.6883	-88.2456	215	-5	-2	-2	-1	-5	0	0	-2	-2	-6	-4.5	-4	-3	-2.2
MONTGOMERY AP	KMGM	AL	32.2997	-86.4075	202	2	3	2.8	4	2	2	1.5	1	5	1	2	3	5	5
FT SMITH RGNL AP	KFSM	AR	35.3331	-94.3625	449	4	-1.9	3	2	1	2	1.3	2.8	2.7	0.7	1.3	2	4	3
LITTLE ROCK AP ADAMS FLD	KLIT	AR	34.7272	-92.2389	258	1	0	2	0	1	2	0.1	2	1	0.6	0	1	4	3
DAVIS MONTHAN AFB	KDMA	AZ	32.1664	-110.883	2704	2	3	3.4											
PHOENIX SKY HARBOR INTL AP	KPHX	AZ	33.4278	-112.004	1107	8	7	7	7.3	8	10.3	6	6	6	7.4	8	8	8.2	5
PRESCOTT LOVE FLD	KPRC	AZ	34.6517	-112.421	5042	3	4	4	1	4	3	2	2	2	1	2	-1	3	-2
WINSLOW MUNI AP	KINW	AZ	35.0281	-110.721	4886	5	3	3	1	2	2	0	2	-1.7	-3	-1	-3	-0.5	2
ARCATA EUREKA AP	KACV	CA	40.9781	-124.109	200	0	0	0.9	0	0	0	1	1	-0.4	0	-1	-1.6	-0.1	-1
BAKERSFIELD AP	KBFL	CA	35.4344	-119.054	489	4	4	4	1	3	2.2	3	3	2.6	1	2	1	1.2	1
BARSTOW DAGGETT AP	KDAG	CA	34.8536	-116.787	1917	4	1	4	0	3	5	3	4	1.9	-1	1	1	3	0
FRESNO YOSEMITE INTL AP	KFAT	CA	36.78	-119.719	333	4	6	6	2	4	5	4.7	6	4.3	3.4	4	4	5	3
OAKLAND METRO INTL AP	KOAK	CA	37.7214	-122.221	6	2.3	2	2	2	2	1	0	1	-1	0	0	0	0	0
PASO ROBLES MUNI AP	KPRB	CA	35.6697	-120.628	810	2	1	2.1	1	2	1	1	2	1	0.6	1	0	0	0

**Table II-9 Revised. Differences in 10<sup>th</sup> Percentile 6-hr Minimum Temperatures (°F) Between Doner and Modern Eras (Modern-Doner)**

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
RED BLUFF MUNI AP	KRBL	CA	40.1519	-122.254	353	2	1	1	0	2.2	2	1	1	0	-2	-2	-1	0	-2
SACRAMENTO EXECUTIVE AP	KSAC	CA	38.5069	-121.495	15	2	0.3	3	1	2	2	0	2	2	1	2	0	0	-1
SAN FRANCISCO INTL AP	KSFO	CA	37.6197	-122.365	8	5	2	2.1	2	2	2	3	2	1	2	1	3	4	2
TRAVIS FLD AFB	KSUU	CA	38.2667	-121.933	59		-5	-5											
UKIAH MUNI AP	KUKI	CA	39.1258	-123.201	601		6	9.7											
COLORADO SPRINGS MUNI AP	KCOS	CO	38.81	-104.688	6181	5	3.3	5	2.4	-1	1	1	1	4	0	1	-1	3	-1.3
GRAND JUNCTION WALKER FLD	KGJT	CO	39.1342	-108.54	4858	-2.3	2.7	4.4	0	-1	0	-1	1	-1	-2	-2	-2.3	0	-4
LA JUNTA MUNI AP	KLHX	CO	38.0494	-103.512	4194	5.8	3	4	0	-0.9	1	1	-1	2	-1	-0.5	-3	3	0
PUEBLO MEM AP	KPUB	CO	38.29	-104.498	4720	6	0	4	1.2	-1	0	1	0	1	-1	-1	-2	1	-2
WILMINGTON NEW CASTLE CO AP	KILG	DE	39.6728	-75.6008	79	1	3	1.8	3	2	2	2	2.1	5	3.6	2	0	2	6
JACKSONVILLE NAS	KNIP	FL	30.2333	-81.6667	20	-1	0.5	1	2.1	1	3	1	2	4	2	2	2	1	4
ORLANDO EXECUTIVE AP	KORL	FL	28.5453	-81.3331	108	2	1	4	3	1	1.6	1	1	0.8	0.3	0	2	2	3
PENSACOLA FOREST SHERMAN NAS	KNPA	FL	30.35	-87.3167	28	-1.2	-1.3	-1	-3	-1.2	1	-0.2	0	1	0.8	-1.1	0	0	3
TALLAHASSEE RGNL AP	KTLH	FL	30.3931	-84.3533	55	-2	-3	-1	-1	-1	2	1	1	0.6	-2.3	-1.8	-0.3	1	0
WEST PALM BEACH INTL AP	KPBI	FL	26.6847	-80.0994	19	0	0	2.4	3	3	2	0	1	1	1	1	2	3	4
ATLANTA HARTSFIELD INTL AP	KATL	GA	33.63	-84.4417	1010	-0.1	1.4	3	2	2	3	2	3	3.9	1.7	2	1.4	2	3
DES MOINES INTL AP	KDSM	IA	41.5339	-93.6531	957	5	0	5	3	2	3	2	3	3.7	1	1.8	1	4	4
MASON CITY MUNI AP	KMCW	IA	43.1544	-93.3269	1225	3	-0.5	4	1	0	2	-1	0	1	-1	-1	-2	6	6
SIOUX CITY GATEWAY AP	KSUX	IA	42.3914	-96.3792	1095	4	0	3.6	1	-2	-0.2	-1	0	-1	-3	-1	-1	2	1
BOISE AIR TERMINAL	KBOI	ID	43.5667	-116.241	2814	7	5	4	2	2	3	6	5	2	5.1	4	3	1	-1
IDAHO FALLS FANNING FLD	KIDA	ID	43.5164	-112.067	4729	4	2	8	0	0	-0.7	-1.5	-1	-0.2	3	1	0	2	-1
CHICAGO MIDWAY AP	KMDW	IL	41.7861	-87.7522	612	4.6	1	2	1	3	2	2	3	2	4	3	1	3.3	4
CHICAGO OHARE INTL AP	KORD	IL	41.995	-87.9336	662	6	-1	1.3	2.4	3	2.7	3	6	5	4	4.5	3	4	6
MOLINE QUAD CITY INTL AP	KMLI	IL	41.4653	-90.5233	592	5.1	2	3.6	2	1	0.5	0	1	2	3	1	1	3.2	6
PEORIA GTR PEORIA AP	KPIA	IL	40.6675	-89.6839	650	4	-0.2	3	3.2				2	2	3.2	2	0	5	7
SPRINGFIELD CAPITAL AP	KSPI	IL	39.8453	-89.6839	594	1	-1	4	1	1	1	-2	1	1	1	-0.2	0	4.7	5.8
EVANSVILLE REGIONAL AP	KEVV	IN	38.0442	-87.5206	400	-0.6	-0.7	1	1.7	2	2.9	0	2	5	2.9	4	2.7	4	5
FT WAYNE INTL AP	KFWA	IN	40.9706	-85.2064	791	-0.4	0.4	0	3	2	1	-1	2	2.4	4	2	1	2	6
INDIANAPOLIS INTL AP	KIND	IN	39.7317	-86.2789	790	1	-3.6	1.5	3.8	2	4	1	4	4	5.8	5	1.9	3	7
SOUTH BEND MICHIANA RGNL AP	KSBN	IN	41.7072	-86.3164	773	2	1.2	1	1	2	2	1	2.9	2	3	2	1	3	3
DODGE CITY RGNL AP	KDDC	KS	37.7686	-99.9678	2582	6.7	-1	4	1	-2	0	0	-1	-0.8	-1	-1	-2	2	2
GOODLAND RENNER FLD	KGLD	KS	39.3675	-101.693	3656	4.1	-0.5	5	3	-1	1	1	1	1.2	4	2	0	1	0
RUSSELL MUNI AP	KRSL	KS	38.8761	-98.8092	1858	6	0	3.8	1.6	0	1	0	0	1	-0.3	1	-1	4	2
TOPEKA MUNI AP	KTOP	KS	39.0725	-95.6258	876	4	-2	6	2	2	2	1	1	4	1	1	0	4	4
WICHITA MID-CONTINENT AP	KICT	KS	37.6472	-97.4294	1321	4	1	3	1	-1	1	-0.4	0	3	-0.2	1	0	2.7	2.3
CINCINNATI NORTHERN KY AP (COVINGTON)	KCVG	KY	39.0431	-84.6717	869	0.9	0	1	2.3	2	2	1	2.8	4	1.5	2	1	2	5
LEXINGTON BLUEGRASS AP	KLEX	KY	38.0408	-84.6058	980	-1	1.3	1	3	1	1	0	1	2.6	1	0.4	0	2.1	4



**Table II-9 Revised. Differences in 10<sup>th</sup> Percentile 6-hr Minimum Temperatures (°F) Between Doner and Modern Eras (Modern-Doner)**

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
BATON ROUGE RYAN AP	KBTR	LA	30.5372	-91.1469	64	0	-0.3	0	0.3	-1	1	0.9	0	3	-2	-0.6	0	2	1
NEW ORLEANS INTL AP	KMSY	LA	29.9928	-90.2508	4	0.8	0.1	2	3	2	4	2	2	5	2	3	2	4	3
SHREVEPORT RGNL AP	KSHV	LA	32.4469	-93.8242	254	1.8	-0.2	2	1.4	0	2	0	1	3	0	1	0	2.3	2
BEDFORD HANSCOM FLD	KBED	MA	42.47	-71.2894	133	0	3	-0.9	1	3	2	3	2	0.1	3	2	0	0	6
BOSTON LOGAN INTL AP	KBOS	MA	42.3606	-71.0106	12	-1	2	0	0	1	-1	1	3	3	3.1	3	0	1	4
NANTUCKET MEM AP	KACK	MA	41.2531	-70.0608	45	-1	2	0	1	2	0	2	1	1	4	2	2	0.2	4
BALTIMORE WASH INTL AP	KBWI	MD	39.1667	-76.6833	156	1	2.7	1	2	1.4	1.9	0	2	2	3	3	0	1	5
PATUXENT RIVER NAS	KNHK	MD	38.3	-76.4167	39	0	-0.7	0	1	1	2	0	0	2	1	0	-3	0.2	4
CARIBOU MUNI AP	KCAR	ME	46.8706	-68.0172	624	1	2	0	1	3	1	2	3	4.7	4	3	2	-1.9	5
PORTLAND INTL JETPORT	KPWM	ME	43.6497	-70.3003	45	1	5	2	3	4	2	3	5	6	7	7	2	1	8
FLINT BISHOP INTL AP	KFNT	MI	42.9667	-83.7494	770	1	1.7	1	3	4	3	1	4	5	3	3.1	2	3	6.6
HANCOCK HOUGHTON CO AP	KCMX	MI	47.1686	-88.4889	1074	3	1	2	0.1	2.8	1	0	3	1	3	2	2	4	3
SAULT STE MARIE SANDERSON FLD	KANJ	MI	46.4794	-84.3572	722	1	2.4	0	2	4	4	4	5	3	4.2	4	2	2	5
TRAVERSE CITY CHERRY CPTL AP	KTVC	MI	44.7408	-85.5825	618	2	2	2.6	2	2	2	1	3	4	2	2	2	4	4.6
DULUTH INTL AP	KDLH	MN	46.8369	-92.1833	1433	2	0	3	3	3	2	3	3	2	2	2	0	4	4.6
MINNEAPOLIS/ST PAUL AP	KMSP	MN	44.8831	-93.2289	872	5.1	0.9	6	3	1	3	3	4	4	2	3.3	0	5	4.8
ST CLOUD RGNL AP	KSTC	MN	45.5433	-94.0514	1032	4	-0.3	5	1	1	2	0	0	1.1	1.8	2.2	-0.1	5	4.7
KANSAS CITY DOWNTOWN AP	KMKC	MO	39.1208	-94.5969	742	3	-0.6	5	3	1	2.6	1	1	3	0.3	1	-2	3	4
SPRINGFIELD RGNL AP	KSGF	MO	37.2397	-93.3897	1259	3	-1	2	2	0	3	1	2	2	-1	1	0	5	2
ST LOUIS LAMBERT INTL AP	KSTL	MO	38.7525	-90.3736	531	3.5	1	4	3.3	2	3	1	4	3	2	2.6	1	5	5
VICHY ROLLA NATIONAL AP	KVIH	MO	38.1311	-91.7683	1127	2	-1	3	2	-1	1	-2	0	0	-2	0	-1	4.1	2.8
BILLINGS LOGAN INTL AP	KBIL	MT	45.8069	-108.542	3581	10.7	1.4	9	2	-1	1	3	1	3.1	4	3	1	0	-2
CUT BANK MUNI AP	KCTB	MT	48.6033	-112.375	3838	10.6	4	13	3	-1	1	1	1	1	2.7	3	1	-1	3
DILLON AP	KDLN	MT	45.2575	-112.554	5200	11	7	9	1	-1	-1	3	1	0.8	3.8	2.7	2	2.8	-2.2
GREAT FALLS INTL AP	KGTF	MT	47.4733	-111.382	3664	12	4	10.7	2.4	-2	0	0	-2	2.8	3	3	1	2.2	3.8
HELENA RGNL AP	KHLN	MT	46.6056	-111.964	3828	16	7	10	4	0.8	3	4	2	4	6.9	6	4	1.5	0
LEWISTOWN MUNI AP	KLWT	MT	47.0492	-109.458	4145	11.7	2	6	2.6	-2	1	2	0	2.4	4.1	4	1	2.3	1.6
MILES CITY F WILEY FLD	KMLS	MT	46.4267	-105.883	2624	11	2	9.9	2	-3	0	2	0	3	4	2	-1.2	2	0.3
MISSOULA INTL AP	KMSO	MT	46.9208	-114.093	3192	13.8	4	7	1	0	1	4	2	3.7	5	4	1	1	-1
ASHEVILLE RGNL AP	KAVL	NC	35.4319	-82.5375	2117	0.2	3	3	4.3	3	3.6	3.9	4	6	4	5	4	4	5
CHARLOTTE DOUGLAS AP	KCLT	NC	35.2236	-80.9553	728		0.3	1	2.3	0	1								
CHERRY POINT MCAS	KNKT	NC	34.9	-76.8833	29	-1	0	1	0	0	0.4	0	1	2	3	2	0	0	2.1
PIEDMONT TRIAD INTL AP (Formerly Greensboro)	KGSO	NC	36.0975	-79.9436	890	2	3	3	4	1	3	2	3	5	4	4	3	4	6
RALEIGH DURHAM INTL AP	KRDU	NC	35.8922	-78.7819	416	1	2	1	2	0.6	2	2	3	4	1	2	1	1	4
BISMARCK MUNI AP	KBIS	ND	46.7825	-100.757	1651	5	1.2	5	1	0	1	1	0	2	2	4	-1.8	6	3
FARGO HECTOR INTL AP	KFAR	ND	46.9253	-96.8111	900	4	-1	5	2	1	3	0	-1	2	2	2.1	0.7	6	3
MINOT INTL AP	KMOT	ND	48.2553	-101.273	1665	5.7	1.6	5	1	-0.3	3	2	0	3	5.3	5	0	5	4

**Table II-9 Revised. Differences in 10<sup>th</sup> Percentile 6-hr Minimum Temperatures (°F) Between Doner and Modern Eras (Modern-Doner)**

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
BELLEVUE OFFUTT AFB (OMAHA OFFUTT AFB)	KOFF	NE	41.1167	-95.9167	1047			2											
GRAND ISLAND AP	KGRI	NE	40.9611	-98.3136	1840	7	-0.1	6.2	2	-0.9	2	1	3	2	1	2.1	0	2	3
NORTH PLATTE RGNL AP	KLBF	NE	41.1214	-100.669	2778	6	-1.5	5.7	1	-2	-1	0.1	0	-1	-1	-1	0	0	0.4
OMAHA EPPLEY AIRFIELD	KOMA	NE	41.3103	-95.8992	982	5	0	5	1	-1	1	-0.9	1.2	1	0	0	-1	2	1
SCOTTSBLUFF HEILIG AP	KBFF	NE	41.8706	-103.593	3945	6	0	7	1	-2	0.2	2	0	1	-0.2	0	-1	1	-4.1
CONCORD MUNI AP	KCON	NH	43.1953	-71.5011	346	-1.1	3.7	0.6	0	2	1	1	3.9	3	3.5	4	1	0	6.7
PORTSMOUTH PEASE AFB	KPSM	NH	43.0833	-70.8167	100	-0.2	3												
ATLANTIC CITY INTL AP	KACY	NJ	39.4494	-74.5672	60	0	1	1	2	0	1	0	1	0	2	1	-1	-1	5
NEWARK INTL AP	KEWR	NJ	40.6825	-74.1694	7	-1	2.3	1	3	3	1	0	2	3	2.7	4	0	0	5
FARMINGTON RGNL AP	KFMN	NM	36.7436	-108.229	5495	4	1		1	-2	-1	1	0	-0.7	-1	-1	-2	0	1.2
LAS VEGAS MUNI AP	KLVS	NM	35.6542	-105.143	6866	3	4.8	4	2	1	1	1	-1	0	-0.7	0	-1	2	0.3
ROSWELL IND AIR PK	KROW	NM	33.3075	-104.508	3649	3	4	2	-1	1	1			-0.4	1	0	-2	1.1	0
ELKO RGNL AP	KEKO	NV	40.8289	-115.789	5030	3.3	5	4	2	2	3	3	5	3	2	3	1	3	-3
FALLON NAAS	KNFL	NV	39.4167	-118.717	3934	-1	1	2	1	1.4	3	2	3	1	0	1	-1	1.8	-2.6
LAS VEGAS MCCARRAN AP	KLAS	NV	36.0719	-115.163	2180	7	7.8	8	5.2	6	6	5	6	5.7	4	5	4	7	4
LOVELOCK DERBY FLD	KLOL	NV	40.0681	-118.569	2902	4.4	3	3	1	3	3	2	3	1.4	-1	0	-1	1	0
RENO TAHOE INTL AP	KRNO	NV	39.4839	-119.771	4410	12	8	8	8	7	7.6	10	10	8	6	8	7	7	4
TONOPAH	KTPH	NV	38.0511	-117.09	5395	6	4	4.9	0	1.8	1.1	1	3	2	0	2	-0.8	3	-2
ALBANY AP	KALB	NY	42.7431	-73.8092	312	0.1	4	1	1	4	2	3	4	5	4.3	3.8	3	3	7
BINGHAMTON GREATER AP	KBGM	NY	42.2067	-75.98	1595	-2.2	2	1	1	3	2.1	2	2	3	2.7	2	0	1	5.7
MASSENA INTL AP	KMSS	NY	44.9358	-74.8456	214	-3	4	-0.3	0	2	1	0.3	3	4	4	3	1	0	4.3
NEW YORK JFK INTL AP	KJFK	NY	40.6386	-73.7622	11	0	2	1	2	1	0	0	2	2	3	3	0	1	5
NEW YORK LAGUARDIA AP	KLGA	NY	40.7789	-73.8808	11	-1	3	1	3	3	0	2	2	4	3.6	4	1	1	6
NIAGARA FALLS INTL AP	KIAG	NY	43.1083	-78.9381	585				1	2.2	2	1	1	4	3.6	2.1	0.3	0	4
ROCHESTER GTR INTL AP	KROC	NY	43.1167	-77.6767	539	-1	4	2.1	2	2.8	2	1	3	4	3	3	1	1	5
SYRACUSE HANCOCK INTL AP	KSYR	NY	43.1111	-76.1039	413	0	2.5	1	1	3	1	1	2	4	3	2.3	0.1	1	5
WATERTOWN INTL AP	KART	NY	43.9922	-76.0217	318	-6	-1	-0.3	-1	2	2	0	0	1	2.6	2	-1.3	-0.9	9
WESTHAMPTN GABRESKI AP	KFOK	NY	40.8436	-72.6322	67	-1	0	-1.6	0	2	1.3	2	-1	-1	-4	-3	-3	-3	2.7
CLEVELAND HOPKINS INTL AP	KCLE	OH	41.405	-81.8528	770	-1	1	0.9	2	2.5	3	3	2	3	4	1.6	1	2	6
COLUMBUS PORT COLUMBUS INTL AP	KCMH	OH	39.9914	-82.8808	810	0	0.1	0.9	3	3	4	2	3	4	4	4	2	3	7.8
DAYTON INTL AP	KDAY	OH	39.9061	-84.2186	1000	-1	0	1	4	2	1.2	-1	1	2	1	2	-0.3	1.9	6
YOUNGSTOWN RGNL AP	KYNG	OH	41.2544	-80.6739	1180	-1	0	1	2.1	2	2	0	1	3	3	2	0	2.4	5
GAGE AP	KGAG	OK	36.2967	-99.7689	2191	6	0.7	1.7	1	-2.3	0	0	-3	1	-3	-1	-1.2	2	2
OKLAHOMA CITY WILL ROGERS AP	KOKC	OK	35.3886	-97.6003	1285	6	1	3	2	0	2.7	1	2	2	-1	0	-2	3	2
TULSA INTL AP	KTUL	OK	36.1994	-95.8872	650	4	-1	3	1	0	1.6	1	1	1	-1	-1	-0.1	3.2	2
ASTORIA RGNL AP	KAST	OR	46.1569	-123.883	9		1.5		1	1.3	0.1	2	1	0	1	1	0.8	2	-1
BAKER CITY MUNI AP	KBKE	OR	44.8428	-117.809	3361	6.6	6	2	-3	-2	-1	1	0	-2.3	0.9	0	-1	0	-0.5
MEDFORD ROGUE VLY AP	KMFR	OR	42.3811	-122.872	1297	3	3	3	3	2	4	5.7	5	4	5	5	3	4	0.5

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
PENDLETON E OR RGNL AP	KPDT	OR	45.6983	-118.855	1486	14.7	-1	2	-1	-1	0	1	0	-1	0	0	-1	-2	-4
PORTLAND INTL AP	KPDX	OR	45.5958	-122.609	19	5.6	1	3	1	1	1	2	3	3	3.5	3	3	2	0
REDMOND ROBERTS FLD	KRDM	OR	44.2558	-121.139	3043	7	-0.9	0.9	1.2	1	-1	2	2	-1	2	1	0	1	-5
SALEM MCNARY FLD	KSLE	OR	44.905	-123.001	205	4	1	2.6	2.3	2	2	4	4	3	5	4	2	2	-2
ALLENTOWN INTL AP	KABE	PA	40.6508	-75.4492	390	0.6	4	2	3	1	1	1	1.9	3	3	2	1	1	6
ERIE INTL AP	KERI	PA	42.08	-80.1825	730	0	1	2	2	3	4	3	3	5	4	4	0.6	2	5.6
HARRISBURG CPTL CY AP	KCXY	PA	40.2172	-76.8514	340	-2	1.8	-1	2.3	0	1.6	1	2	2.4	3	2.9	0	1	7
PHILADELPHIA INTL AP	KPHL	PA	39.8683	-75.2311	10	2	3	2	3	3	1.5	3	5	5.1	6	5	3	3	6
PITTSBURGH INTL AP	KPIT	PA	40.4847	-80.2144	1203	-1	1.7	2	3	2	3	2	3	3	3	3	-0.3	2	6
WILKES-BARRE INTL AP	KAVP	PA	41.3336	-75.7269	930	-1.8	3.7	2	2	1	1	0	1.2	3	3	2.8	-0.1	2.3	6.2
WILLIAMSPORT	KIPT	PA	41.2433	-76.9217	520							1					1		
PROVIDENCE T F GREEN AP	KPVD	RI	41.7219	-71.4325	60	-1	3	-0.2	1	3	1	2	4	3	5	5.5	2	1	6
CHARLESTON INTL AP	KCHS	SC	32.8986	-80.0408	40	1	2	2.2	2.5	2	4	3	5	5	3	3	3.1	3	4
GREENVILLE DWTN AP	KGMU	SC	34.8461	-82.3461	1048	-1	0	4	3	0.8	2	2	3	3	1.6	1.1	0	2	3
HURON RGNL AP	KHON	SD	44.3981	-98.2231	1280	3	1.8	5	1	0	1	1	1	2	3.2	3	0	1.3	3
PIERRE RGNL AP	KPIR	SD	44.3814	-100.286	1742	7	1	6.7	2	-1	0	0	0	1.7	1.7	2	-1	4	2.6
RAPID CITY REGIONAL AP	KRAP	SD	44.0433	-103.054	3160	3	-0.1	7.2	0	-2	0	1	0.9	1	2	2	-1	1	-1.2
SIOUX FALLS FOSS FLD	KFSD	SD	43.5769	-96.7536	1428	4	1	3.9	1	-0.2	1	0	0	0	2	1	0	3	2.3
CHATTANOOGA LOVELL AP	KCHA	TN	35.0311	-85.2014	671	1	3.4	2	4	2	3	1.8	3	3.8	2	2.6	3	2.3	5
KNOXVILLE MCGHEE TYSON AP	KTYS	TN	35.8181	-83.9858	962	-1	1	0	2	0	1	1	1	1.9	0	0	0	2	3
ABILENE RGNL AP	KABI	TX	32.4111	-99.6817	1790	5	1	3	1	0	1	0	-0.5	0.9	-0.9	0	-2	3	-1
AMARILLO INTL AP	KAMA	TX	35.2294	-101.704	3604	5.4	0	3	2	-0.1	2.6	0	0	1	-1	0	-1.3	1	1
AUSTIN-CAMP MABRY	KATT	TX	30.3208	-97.7603	670	3	0	3	3	1.4	3	-1	1	2	1	2	-0.5	2	0
BROWNSVILLE INTL AP	KBRO	TX	25.9142	-97.4231	24	2	2	1	1	1	1.1	0	1	2	-2	0	-0.5	3	1
CORPUS CHRISTI NAS	KNGP	TX	27.6833	-97.2833	18	1	0.6	1	0	0	0	0	1	1	0	-0.9	0	1	1
EL PASO INTL AP	KELP	TX	31.8111	-106.376	3918	4	4	5	1	3	2	1	0	1	2	1.8	2	2	1
LUBBOCK INTL AP	KLBB	TX	33.6656	-101.823	3254	6	2.8	3	3	0	3	1	0	1	0.8	1	0	2	0.7
LUFKIN ANGELINA CO AP	KLFK	TX	31.2361	-94.7544	288	3	0	2	2	-2	1.1	1	2	4.5	-0.8	1	3.4	2	2
MIDLAND INTL AP	KMAF	TX	31.9475	-102.209	2862	3.6	0	1.6	2	1	2	0	-1	0	-1	0	-2	1	-2
SAN ANGELO MATHIS FLD	KSJT	TX	31.3517	-100.495	1916	3	-1	1	0	-1	1	-0.1	-0.9	-1	-3	-2	-3	-1	-1
WICHITA FALLS MUNI AP	KSPS	TX	33.9786	-98.4928	1017	4	-1	2.9	2	-1	1.9	0	1	2	-0.2	0	-2	2	0
CEDAR CITY MUNI AP	KCDC	UT	37.7086	-113.094	5586	0.4	2.9	4	0	1	1	0	0	-1.3	-1	0	-2	3	-3
SALT LAKE CITY INTL AP	KSLC	UT	40.7781	-111.969	4225	6	4.6	6.4	2	3	2	6	6	2.8	6	4	2	3	1
QUANTICO MCAS	KNYG	VA	38.5	-77.3	10	2.7	4	3	3	2	3	1	3	3.1	4	3	3	2	
RICHMOND INTL AP	KRIC	VA	37.505	-77.3203	164	2.2	3	2.5	2.3	1.8	3	2	3	5	5	5	3	2	7
ROANOKE RGNL AP	KROA	VA	37.3169	-79.9742	1175	1	2	2	3	1	2	2	1.2	3	4.6	3	0.8	2	6
WASHINGTON REAGAN AP	KDCA	VA	38.8483	-77.0342	10	0.8	2	1	3	2	3	2	3	4	4	3.2	0	3	5
BURLINGTON INTL AP	KBTB	VT	44.4681	-73.1503	330	-0.5	6	0	1	5.6	3	2	4	6	5.2	5	2	1	6
MOSES LAKE GRANT CO AP	KMWH	WA	47.2078	-119.319	1196	9	3	3	-2	-2	0	-1	0	-1.2	0	-1	-3	-4	-5

**Table II-9 Revised. Differences in 10<sup>th</sup> Percentile 6-hr Minimum Temperatures (°F) Between Doner and Modern Eras (Modern-Doner)**

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Station	ID	State	Latitude	Longitude	Elevation (ft)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep 1-15	Sep 16-30	Sep	Oct	Nov	Dec
OLYMPIA AP	KOLM	WA	46.9733	-122.903	188	5	-1.7	2	1	1	1	2	1	2.7	1	1	0.1	0	-2
SEATTLE TACOMA INTL AP	KSEA	WA	47.4444	-122.314	370	5	1	3	1	2	2	2	3	2	3	2	2	0	-1
SPOKANE INTL AP	KGEG	WA	47.6214	-117.528	2353	13.6	3.9	2.6	0	0	0.6	1	2	0	3	2	0	-0.8	-2.2
TACOMA MCCHORD AFB	KTCM	WA	47.15	-122.483	322		-1	2											
THE DALLES MUNI AP (Formerly DALESPORT)	KDLS	WA	45.6194	-121.166	235	13	0.7	3	0	1	1	1.7	3	0	2.6	0	1	1	0
WHIDBEY ISLAND NAS	KNUW	WA	48.35	-122.667	47	5	1	2	0	0	1	1	0	1	0	0	0	-2	-2
YAKIMA AIR TERMINAL	KYKM	WA	46.5683	-120.543	1064	10.2	1.1	3	0	1	1	4	3	1	2	2	0	0	-5
EAU CLAIRE RGNL AP	KEAU	WI	44.8664	-91.4878	885	5	1	3	3	0	2	0.1	2	0.8	2	2	0	3	6
GREEN BAY A S INTL AP	KGRB	WI	44.4794	-88.1367	687	3	0	2	2.4	2.7	4	1	2	3	1.6	2	0	4	2.2
LA CROSSE MUNI AP	KLSE	WI	43.8789	-91.2528	678	4	-1	5	3	1	2.5	1	2	2	2	3	1	6	6.6
MADISON DANE RGNL AP	KMSN	WI	43.1406	-89.3453	866	5	-1	1.1	2	2.9	3	1	2	2	3	2	0	6	3.5
MILWAUKEE MITCHELL AP	KMKE	WI	42.955	-87.9044	670	5	-1	1	2	2	3	2	3	4	3	2	1.6	5	5
CHARLESTON YEAGER AP	KCRW	WV	38.3794	-81.59	910	1	2	0	3	1	3	1	2	2	2	1	0.8	3	5.3
ELKINS RANDOLPH CO AP	KEKN	WV	38.8853	-79.8528	1979	-1	2	0	1	0	2	2	3	3	4	3	2	1	5
MARTINSBURG E WV RGNL AP	KMRB	WV	39.4019	-77.9844	534	0.7	4	2	2	0	2.6	2	3	3.5	5	3	3	4	7
CASPER NATRONA CO AP	KCPR	WY	42.8975	-106.473	5313	7.8	1	4	2.8	-3	-1	-0.7	-2	0	2.6	0	-3	2.2	-4
CHEYENNE MUNI AP	KCYS	WY	41.15	-104.817	6130	4	0.3	8	4	-0.5	2	2	1.4	2.5	4	3	-1	2	-2
ROCK SPRINGS AP	KRKS	WY	41.5944	-109.053	6741	4	2.1	7	1	0.2	0	2.9	1	2	2.5	2	-1	2	-2
SHERIDAN CO AP	KSHR	WY	44.7694	-106.969	3945	10	-1	7.1	1.1	-3	0	1	-0.9	0	3	2	-1	1	-1