



DECEMBER 2009 LOCAL CLIMATOLOGICAL DATA NOAA, National Climatic Data Center

OAK RIDGE, TN
OAK RIDGE (KOQT)
Lat:36° 1' N Long: 84° 14' W Elev (Ground) 913 Feet
Time Zone : EASTERN WBAN: 53868 ISSN#: 0198-487X



Date 1	Temperature °F						Deg Days BASE 65°		WEATHER 10	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES								Date 24
	MAXIMUM 2	MINIMUM 3	AVERAGE 4	DEP FROM NORMAL 5	AVERAGE DEW PT 6	AVERAGE WET BULB 7	HEATING 8	COOLING 9		LST 11	LST 12	LST 13	LST 14	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM					
																			3-SEC		2-MIN			
01	52	29	41	-2	35	37	24	0	FG+ FZFG BR			0.00	29.13	30.13	0.7	05	0.9	13	04	10	07	01		
02	57	40	49	6	46	48	16	0	RA BR			0.96	28.71	29.64	0.6	11	4.6	32	27	16	25	02		
03	53	40	47	5	36	40	18	0	RA			T	28.93	29.98	3.7	26	4.1	24	28	16	25	03		
04	42	36	39	-3	30	35	26	0				0.00	29.18	30.18	2.2	06	2.5	13	02	8	05	04		
05	40	26	33	-9	26	31	32	0	SN BR			0.09	29.14	30.17	1.9	01	2.5	14	36	10	36	05		
06	39	21	30	-11	25	28	35	0	BR			0.00	29.31	30.34	0.6	06	0.8	10	08	8	08	06		
07	46	26	36	-5	32	35	29	0	BR UP			T	29.28	30.30	0.6	19	1.7	10	21	8	21	07		
08	46	40	43	2	40	42	22	0	RA BR			1.90	29.08	30.01	2.8	05	3.0	13	05	10	05	08		
09	60*	37	49	8	34	43	16	0	RA FG+ FG BR			1.18	28.59	29.59	8.1	25	8.8	44*	24	25*	22	09		
10	37	23	30	-10	12	25	35	0				0.00	29.10	30.17	5.2	26	6.7	23	29	15	28	10		
11	35	18*	27*	-13	12	22	38	0				0.00	29.44	30.51	0.5	12	0.7	8	14	7	13	11		
12	37	20	29	-11	20	26	36	0	RA			0.01	29.46	30.49	0.6	07	0.7	7	04	5	08	12		
13	46	34	40	0	40	41	25	0	RA FG+ FG BR			0.94	29.13	30.15	0.9	22	1.5	13	22	9	22	13		
14	56	45	51*	11	49	49	14	0	RA SN FG+ FG BR			0.01	29.08		0.4	21	0.4	7	24	5	22	14		
15	57	36	47	8	43	46	18	0	FG BR			0.00	29.17	30.22	1.9	33	2.9	18	01	13	35	15		
16	43	29	36	-3	23	31	29	0				0.00	29.46	30.48	2.0	07	2.4	16	10	13	09	16		
17	50	27	39	0	25	33	26	0				0.00	29.35	30.35	1.6	06	1.8	15	07	9	07	17		
18	39	34	37	-2	35	36	28	0	RA SN BR			1.46	28.98	29.94	3.1	05	3.3	18	05	13	05	18		
19	43	35	39	0	34	36	26	0	RA BR			0.03	28.79	29.81	4.0	25	4.6	16	27	10	25	19		
20	37	34	36	-2	28	32	29	0				0.00	29.12	30.17	2.7	25	3.2	17	28	10	28	20		
21	43	29	36	-2	29	33	29	0	BR			0.00	29.21	30.24	1.3	22	1.9	13	20	8	19	21		
22	51	28	40	2	33	35	25	0	FG+ FZFG BR			0.00	29.23	30.25	0.2	24	0.2	12	28	8	25	22		
23	53	34	44	6	37	40	21	0	BR			0.00	29.23	30.22	0.7	04	1.0	9	04	6	05	23		
24	58	35	47	9	38	42	18	0	RA FG+ BR			0.20	29.08	30.04	1.2	06	1.4	15	07	10	06	24		
25	55	36	46	8	41	44	19	0	RA BR			0.96	28.77	29.77	2.0	21	7.5	29	21	16	25	25		
26	44	26	35	-2	24	30	30	0				0.00	29.06	30.09	1.6	22	2.0	15	19	10	19	26		
27	50	24	37	0	24	32	28	0				0.00	29.03	30.04	5.0	23	6.1	29	21	21	21	27		
28	40	25	33	-4	17	28	32	0				0.00	29.13	30.18	4.0	27	6.1	21	30	13	35	28		
29	40	27	34	-3	19	28	31	0				0.00	29.36	30.41	2.0	03	3.3	17	35	12	06	29		
30	47	28	38	1	25	33	27	0	RA BR			0.08	29.30	30.31	1.4	22	2.2	17	22	13	20	30		
31	43	38	41	4	39	40	24	0	RA BR			0.32	29.11	30.12	1.1	21	1.2	9	26	6	21	31		

46.4		31.0		38.7		30.7		35.5		26.0		0.0		< MONTHLY AVERAGES TOTALS >		8.14		29.13		30.14		0.7		26		2.9		< MONTHLY AVERAGES			
-2.6		1.2		-0.7		<-----		DEPARTURE FROM NORMAL		----->		2.72		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																	
DEGREE DAYS										GREATEST 24-HR PRECIPITATION : 3.08 DATE : 08-09				SEA LEVEL PRESSURE				DATE TIME													
MONTHLY					SEASON TO DATE					GREATEST 24-HR SNOWFALL :				MAXIMUM :				30.60 12 0953													
TOTAL DEPARTURE					TOTAL DEPARTURE					GREATEST SNOW DEPTH :				MINIMUM :				29.42 02 1853													
HEATING :		806		19		1470		-95		NUMBER OF -> DAYS WITH		MAXIMUM TEMP >= 90 :		0		MINIMUM TEMP <= 32 :		16		PRECIPITATION >= 0.01 INCH :		13									
COOLING :		0		0		1424		123		THUNDERSTORMS :		0		HEAVY FOG :		6		PRECIPITATION >= 0.10 INCH :		8		SNOWFALL >= 1.0 INCH :									

DECEMBER 2009
OAK RIDGE, TN

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

OAK RIDGE, TN (KOQT)
DECEMBER 2009

WBAN # 53868

Date	FOR HOUR (LST) ENDING AT												Date	FOR HOUR (LST) ENDING AT												Date	Sum of Hourly Data	2400 LST Water Equiv.
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			
01													01												01	0.00	0.00	
02			0.01	0.09	0.09	0.27	0.09	0.02	0.02	0.14	0.01		02		T				0.22	T		T		02	0.96	0.96		
03	T	T	T	T									03											03	T	T		
04													04											04	0.00	0.00		
05				T	0.02	0.02	0.02	0.01	0.02	T	T	T	05											05	0.09	0.09		
06													06											06	0.00	0.00		
07													07											07	T	T		
08													08	0.06	0.09	0.02	0.01	T		0.13	0.24	0.18	0.31	0.31	0.53	08	1.90	1.90
09	0.40	0.48	0.30	T									09											09	1.18	1.18		
10													10											10	0.00	0.00		
11													11											11	0.00	0.00		
12													12									T	0.01	12	0.01	0.01		
13	0.06	0.07	0.01	0.11	0.32	0.12	0.09	0.04	0.03	0.04	0.04	T	13		0.01								13	0.94	0.94			
14													14			0.01							T	14	0.01	0.01		
15													15											15	0.00	0.00		
16													16											16	0.00	0.00		
17													17											17	0.00	0.00		
18													18	0.23	0.22	0.22	0.14	0.12	0.13	0.07	0.05	0.01	0.01	0.02	0.03	18	1.46	1.46
19	0.01	0.01	0.01	T			T	0.01	0.02	0.02	0.06	0.10	19											19	0.03	0.03		
20													20							T	T			20	0.00	0.00		
21													21											21	0.00	0.00		
22													22											22	0.00	0.00		
23													23											23	0.00	0.00		
24													24					T	0.02	0.08	0.02	T	0.05	T	0.03	24	0.20	0.20
25	T	0.03	0.20	0.25	0.44	0.04	T	T					25											25	0.96	0.96		
26													26											26	0.00	0.00		
27													27											27	0.00	0.00		
28													28											28	0.00	0.00		
29													29											29	0.00	0.00		
30													30								0.01	0.01	T	0.02	0.04	30	0.08	0.08
31	0.02	T	0.01	0.05	0.05	0.01	0.05	0.04	0.06	0.01	0.01	0.01	31						T					31	0.32	0.32		

* Indicates sum of Hourly and Daily disagree.

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	0.07	0.11	0.16	0.20	0.28	0.37	0.44	0.51	0.60	0.70	0.83	0.92
Ending Date	25	25	25	25	25	25	25	25	25	25	25	25
Ending Time (Hr/Min)	0425	0431	0433	0438	0436	0451	0506	0511	0456	0458	0458	0511

Note : The hourly and daily precipitation totals are printed in the last 2 columns and hi-lighted in red when they disagree. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

Date and time are not entered for TRACE amounts.

REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

* = Extreme for the month (last occurrence if more than one).

T = Trace precipitation amount.

+ = also occurs on earlier date.

FG+ = Heavy fog, visibility .25 miles or less.

BLANK entries denote missing or unreported data.

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24-hour period ending at the time indicated in the column heading.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1971-2000

WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
DESCRIPTOR	PRECIPITATION	OBSCURATION	OTHER
BC Patches	DZ Drizzle	BR Mist	DS Duststorm
BL Blowing	GR Hail	DU Widespread Dust	FC Funnel Cloud
DR Low Drifting	GS Small Hail and/or Snow Pellets	FG Fog	+FC Tornado Waterspout
FZ Freezing	IC Ice Crystals	FU Smoke	PO Well-Developed Dust/Sand Whirls
MI Shallow	PL Ice Pellets	HZ Haze	
PR Partial	RA Rain	PY Spray	SQ Squalls
SH Shower(s)	SG Snow Grains	SA Sand	SS Sandstorm
TS Thunderstorm	SN Snow	VA Volcanic Ash	GL Glaze
VC In the Vicinity	UP Unkown Precipitation		

Intensity (as indicated on pages 4 to 6):
'+' = Heavy '' = Moderate '-' = Light

OAK RIDGE, TN DECEMBER 2009

Ceilometer (30-second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR-SS), or midnight to midnight (MN-MN).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. Clear = 0-2 oktas, Partly Cloudy = 3-6 oktas, Cloudy = 7-8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity. Wet Bulb is the temperature the air would have if cooled to saturation at constant pressure by evaporation of water into it.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

ADDITIONAL NOTES:

Station Augmentation-OAK RIDGE ATDD COOP
Lat/Lon:36.00278/-84.24861 Elevation:905FT
Distance:1.5 MI Dir:SW
Augmented Elements:Temp,Precip,Snow
Equipment:Pcpn-Model TRP525M, Temp Vaisala HMP35C,
Snow Board, Snow Stick

Date	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			Sky Cover	Satellite	Sky Cover	Satellite			
01							0.00	10.00	
02							2.00	10.00	
03							10.00	10.00	
04							10.00	10.00	
05							1.25	10.00	
06							5.00	10.00	
07							4.00	10.00	
08							1.50	10.00	
09							0.50	10.00	
10							10.00	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							0.25	10.00	
14							0.25	8.00	
15							0.50	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							3.00	10.00	
19							4.00	10.00	
20							10.00	10.00	
21							5.00	10.00	
22							0.00	10.00	
23							2.50	10.00	
24							0.00	10.00	
25							3.00	10.00	
26							8.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							10.00	10.00	
30							6.00	10.00	
31							1.25	9.00	
MONTHLY AVGS							5.10	9.90	
SUNSHINE (Minutes)									
Total : 0					Possible :				
Percent Possible :									
NUMBER OF DAYS WITH :									
SKY CONDITION									
Clear		Partly CLDY			Cloudy			Missing	
MINIMUM VISIBILITY (MILES)									
<= .25			<= 3.0				>= 7.0		
5			14				12		

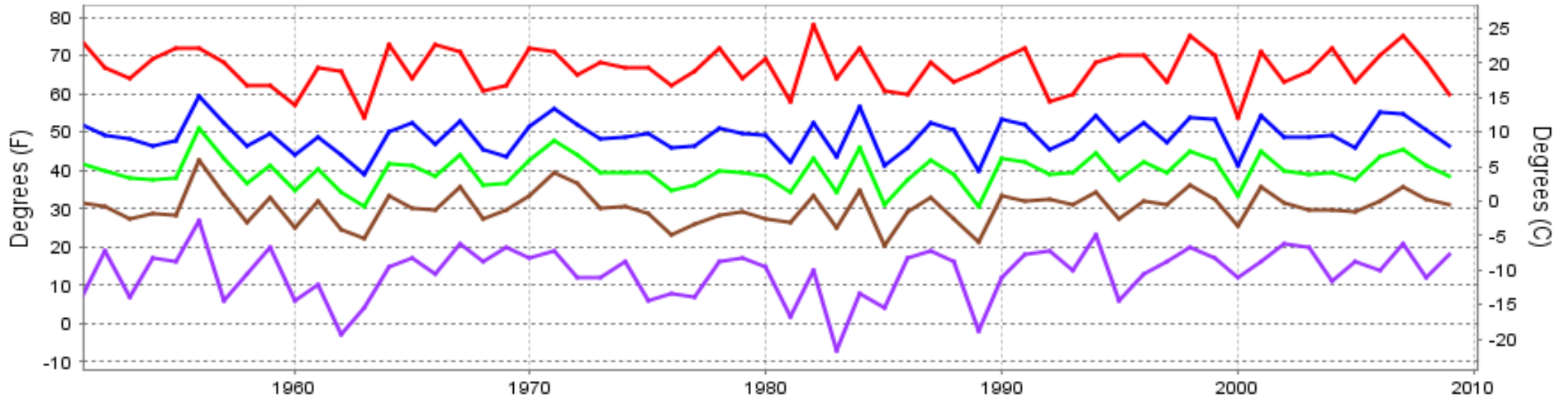
OBSERVATIONS AT 3-HOURLY INTERVALS

OAK RIDGE, TN
DECEMBER 2009 KOQT

WBAN # 53868

Table with columns for Hour (LST), Sky Cover, Ceiling, Satellite, Visibility, Weather, Temperature (Dry Bulb, Dew Point, Wet Bulb), Wind (Speed, Direction), Pressure (Station, Sea Level), and their counterparts for the second set of observations. Includes sunrise and sunset times for each day from Dec 01 to Dec 12.

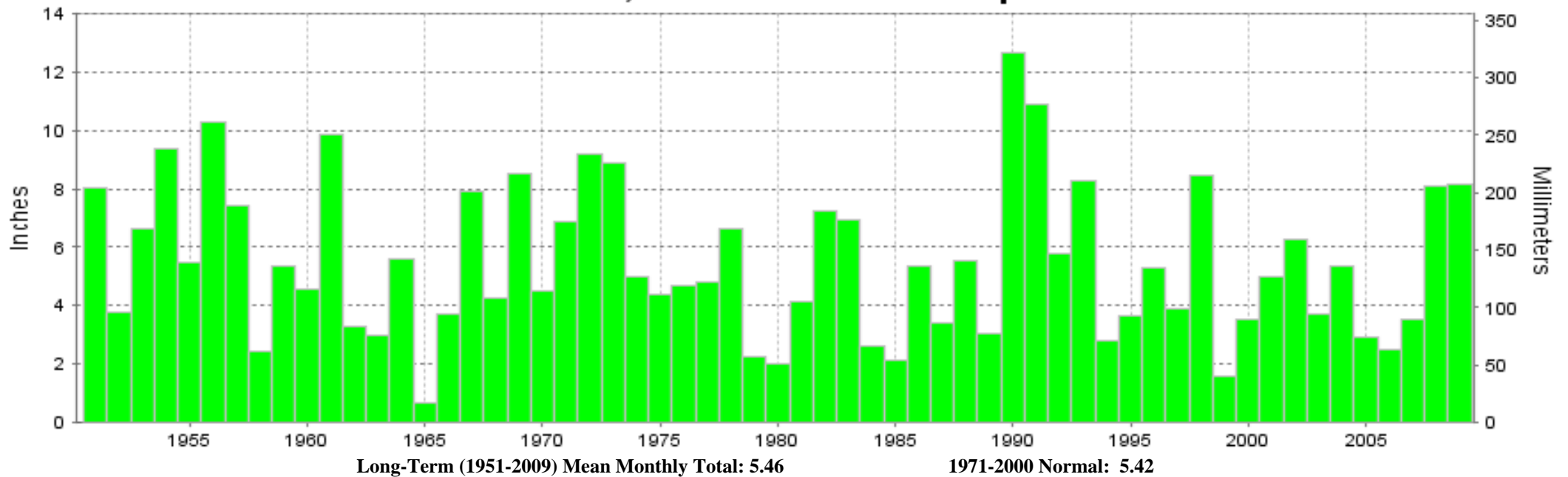
OAK RIDGE, TN DECEMBER Temperatures



— Extreme Max — Mean Max — Mean — Mean Min — Extreme Min

Long-Term (1951-2009) Mean: 39.7
1971-2000 Normal: 39.4

OAK RIDGE, TN DECEMBER Precipitation



Long-Term (1951-2009) Mean Monthly Total: 5.46

1971-2000 Normal: 5.42



DECEMBER 2009
OAK RIDGE, TN

LOCAL CLIMATOLOGICAL DATA NOAA, National Climatic Data Center

I certify that this is an official publication of the National Oceanic and Atmospheric Administration (NOAA). It is compiled using information from weather observing sites operated by NOAA-National Weather Service / Department Of Transportation-Federal Aviation Administration and received at the National Climatic Data Center (NCDC), Asheville, North Carolina 28801.

DIRECTOR

NCDC now offers an annual online subscription for the **Edited Local Climatological Data Publication**. When you purchase this subscription service, you will have **immediate online access** to all previous publications back to July 1996 and all publications thereafter until the expiration of the subscription. Your subscription is valid for one year after purchase. **The total cost for online delivery (including back issues) is significantly less than the cost for offline delivery.**

To order this and other subscriptions online with your credit card, go to: www.ncdc.noaa.gov and choose subscriptions.

We welcome your questions or comments, please contact us at:

Toll Free Number (866) 742-3322 (voice)

Fax Number : (304) 726-4409

TDD : (828) 271-4010

or Email : ncdc.info@noaa.gov

Local Climatological Data is available at www.ncdc.noaa.gov

NCDC Subscription Services Center
310 State Route 956 Building 300
Rocket Center, WV 26726
OFFICIAL BUSINESS, PENALTY FOR PRIVATE USE \$300

FIRST CLASS
POSTAGE AND FEES PAID
NOAA
PERMIT G-19

For address correction, please return a photocopy of this page to Subscription Services indicating changes