

1999

LOCAL CLIMATOLOGICAL DATA  
ANNUAL SUMMARY WITH COMPARATIVE DATA



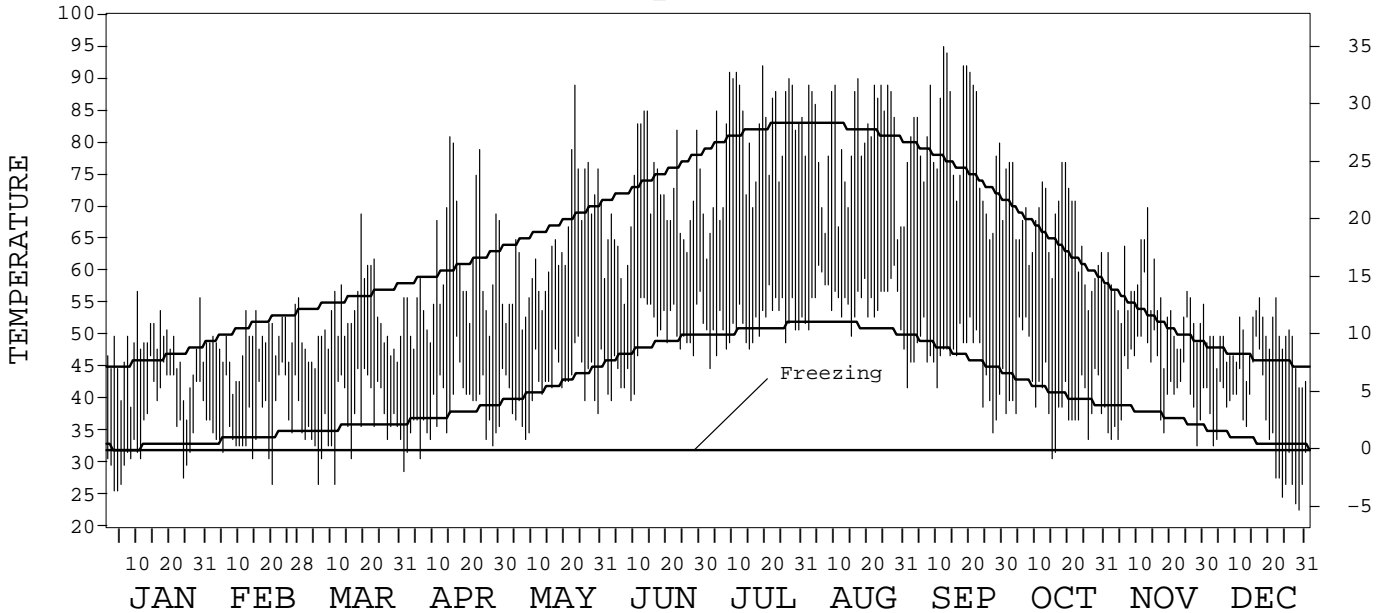
ISSN 0198-4217

SALEM,  
OREGON (SLE)

Daily Data

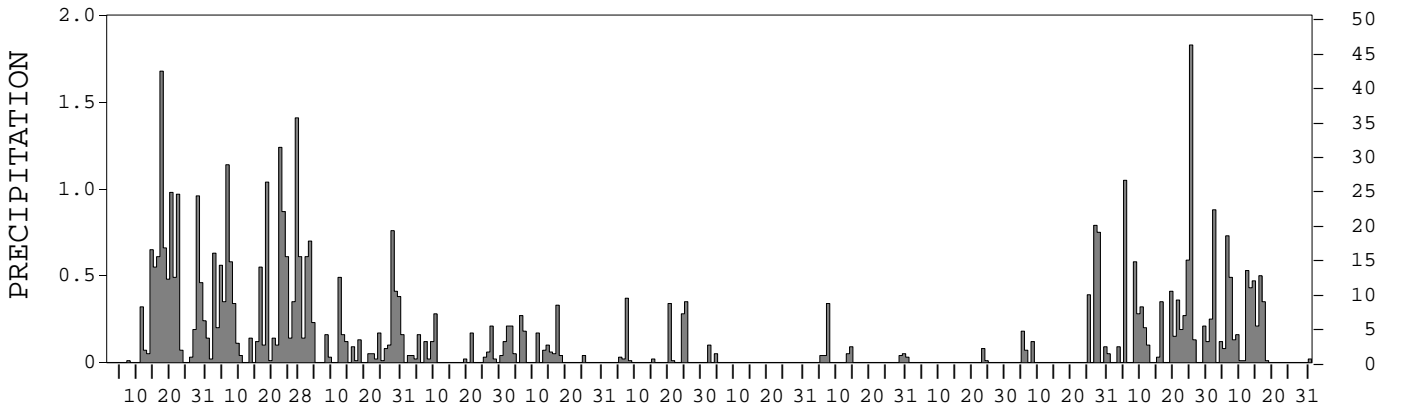
Fahrenheit

Celsius



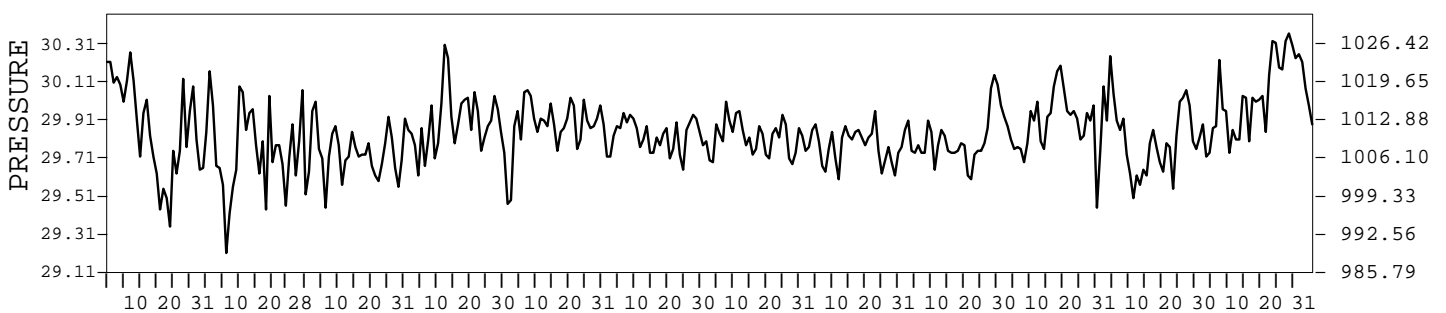
Inches

Millimeters



Inches of Mercury

Hectopascals



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*Thomas R. Karl*

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE  
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 ASHEVILLE, NORTH CAROLINA

# METEOROLOGICAL DATA FOR 1999

## SALEM, OR (SLE)

LATITUDE: 44° 54' 28" N      LONGITUDE: 122° 59' 42" W      ELEVATION (FT): GRND: 196      BARO: 196      TIME ZONE: PACIFIC (UTC + 8)      WBAN: 24232

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	47.5	49.3	52.4	60.5	64.1	70.8	80.4	80.2	80.3	66.8	55.7	49.0	63.1	
	HIGHEST DAILY MAXIMUM	57	56	69	81	89	85	92	90	95	77	70	56	95	
	DATE OF OCCURRENCE	10	28	19	15	23	14+	19	17	12	19+	13	22+	SEP 12	
	MEAN DAILY MINIMUM	36.0	36.9	36.9	38.1	42.5	49.0	51.7	55.5	46.2	41.0	43.0	36.1	42.7	
	LOWEST DAILY MINIMUM	26	27	27	29	34	40	45	48	35	31	33	23	23	
	DATE OF OCCURRENCE	04+	20	11+	01	08	09+	03	31	27	15	28	29	DEC 29	
	AVERAGE DRY BULB	41.8	43.1	44.7	49.3	53.3	59.9	66.1	67.9	63.3	53.9	49.4	42.6	52.9	
	MEAN WET BULB	40.6	41.3	41.7	44.6	48.4	53.9	57.6	60.1	53.7	48.8	47.7	40.6	48.2	
	MEAN DEW POINT	38.8	38.8	38.6	39.3	43.8	49.5	51.7	55.3	45.8	43.8	45.7	38.6	44.1	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	0	5	1	5	0	0	0	0	11
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MINIMUM ≤ 32°	13	4	4	3	0	0	0	0	0	2	0	10	36		
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	713	606	625	461	358	170	45	26	95	336	460	687	4582	
	COOLING DEGREE DAYS	0	0	0	0	4	23	87	120	51	0	0	0	285	
RH	MEAN (PERCENT)	90	85	81	72	73	72	65	69	60	74	89	88	76	
	HOUR 04 LST	93	89	90	89	89	89	89	89	85	90	94	93	90	
	HOUR 10 LST	90	85	79	66	69	65	59	65	52	69	88	87	73	
	HOUR 16 LST	81	74	68	50	55	55	42	48	33	50	81	79	60	
	HOUR 22 LST	93	88	85	78	79	78	71	76	65	80	93	90	81	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	8	1	0	1	0	0	1	0	2	5	5	3	26	
	THUNDERSTORMS	0	1	0	0	0	0	0	2	0	0	0	0	3	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)	29.87	29.75	29.74	29.91	29.88	29.83	29.82	29.78	29.81	29.91	29.79	30.06	29.85	
	MEAN SEA-LEVEL PRESS. (IN.)	30.09	29.97	29.96	30.12	30.10	30.04	30.03	29.99	30.03	30.13	30.00	30.27	30.06	
WINDS	RESULTANT SPEED (MPH)	6.5	10.8	5.5	1.2	2.4	1.9	1.5	1.3	2.4	1.1	5.1	6.8	2.9	
	RES. DIR. (TENS OF DEGS.)	17	17	18	23	22	25	31	27	36	16	17	17	18	
	MEAN SPEED (MPH)	8.1	11.8	8.0	6.3	7.4	5.5	6.1	5.2	4.8	5.3	6.8	9.0	7.0	
	PREVAIL. DIR. (TENS OF DEGS.)	17	17	17	01	36	29	36	36	36	01	17	17	17	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	37	38	36	23	24	21	20	23	21	34	33	33	38	
	DIR. (TENS OF DEGS.)	17	17	19	27	20	27	27	25	26	17	17	17	17	
	DATE OF OCCURRENCE	29	18+	03+	02	17+	24+	23+	30	25+	28	24	06+	FEB 18+	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	45	49	46	25	31	25	24	28	26	44	39	44	49	
DIR. (TENS OF DEGS.)	17	17	19	36	21	27	27	26	27	17	17	17	17		
DATE OF OCCURRENCE	29	05	03	14+	06	03	23	30	25	27	24	02	FEB 05		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	9.61	11.40	5.06	1.35	1.90	1.43	0.15	0.68	0.09	2.44	7.26	5.38	46.75	
	GREATEST 24-HOUR (IN.)	1.89	1.62	1.18	0.28	0.42	0.38	0.10	0.36	0.09	1.43	1.87	1.02	1.89	
	DATE OF OCCURRENCE	17-18	26-27	02-03	10	06-07	24-25	02	06-07	23-24	27-28	25-26	01-02	JAN 17-18	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	20	25	23	15	14	9	2	8	2	8	19	18	163	
PRECIPITATION ≥ 0.10	15	22	15	6	8	4	1	1	0	5	17	13	107		
PRECIPITATION ≥ 1.00	1	4	0	0	0	0	0	0	0	0	2	0	7		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

# NORMALS, MEANS, AND EXTREMES

## SALEM, OR (SLE)

LATITUDE: 44° 54' 28" N      LONGITUDE: 122° 59' 42" W      ELEVATION (FT): GRND: 196      BARO: 196      TIME ZONE: PACIFIC (UTC + 8)      WBAN: 24232

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	46.4	51.5	55.7	60.4	67.0	74.5	81.6	82.0	76.0	64.2	52.4	46.4	63.2
	MEAN DAILY MAXIMUM	52	46.2	51.1	55.4	60.9	67.6	74.1	81.9	81.5	76.6	64.2	52.8	46.6	63.2
	HIGHEST DAILY MAXIMUM	62	65	72	80	88	100	105	108	108	104	93	72	68	108
	YEAR OF OCCURRENCE		1984	1968	1947	1957	1983	1992	1941	1981	1988	1970	1970	1993	AUG 1981
	MEAN OF EXTREME MAXS.	52	58.2	62.7	67.8	76.1	85.4	90.9	97.2	96.2	92.8	79.8	63.9	58.6	77.5
	NORMAL DAILY MINIMUM	30	32.7	34.1	35.6	37.7	42.2	48.3	50.9	51.4	47.1	41.1	37.5	33.6	41.0
	MEAN DAILY MINIMUM	52	32.9	34.4	36.0	38.3	43.2	48.2	51.1	51.5	47.3	41.5	37.6	34.2	41.4
	LOWEST DAILY MINIMUM	62	-10	-4	12	23	25	32	37	36	26	23	9	-12	-12
	YEAR OF OCCURRENCE		1950	1950	1971	1968	1954	1976	1962	1980	1972	1971	1955	1972	DEC 1972
	MEAN OF EXTREME MINS.	52	18.4	20.8	25.6	28.7	32.9	39.2	42.5	43.0	37.2	30.1	24.5	19.9	30.2
	NORMAL DRY BULB	30	39.6	42.8	45.7	49.1	54.6	61.4	66.3	66.7	61.6	52.7	45.0	40.0	52.1
	MEAN DRY BULB	52	39.6	42.8	45.6	49.5	55.5	61.3	66.5	66.5	62.0	52.9	45.3	40.4	52.3
	MEAN WET BULB	15	36.4	37.6	41.0	43.9	47.8	51.4	58.7	54.7	54.8	45.9	43.8	35.2	45.9
	MEAN DEW POINT	15	36.4	36.7	39.6	42.5	46.2	49.6	52.5	48.8	49.0	42.2	41.4	32.9	43.1
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	0.3	2.0	5.9	6.1	2.3	0.1	0.0	0.0	16.7	
MAXIMUM ≤ 32°	30	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	2.8	
MINIMUM ≤ 32°	30	14.3	11.2	9.8	5.9	0.9	*	0.0	0.0	0.2	3.1	7.8	12.7	65.9	
MINIMUM ≤ 0°	30	0.0	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	
H/C	NORMAL HEATING DEG. DAYS	30	787	622	598	477	322	141	41	52	131	381	600	775	4927
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	0	33	81	104	29	0	0	0	247
RH	NORMAL (PERCENT)	30	83	82	77	74	71	68	63	64	69	80	85	85	75
	HOUR 04 LST	30	86	88	88	87	87	86	86	86	87	91	90	88	88
	HOUR 10 LST	30	84	82	76	70	66	62	57	59	64	77	84	85	72
	HOUR 16 LST	30	75	69	61	57	54	49	40	40	45	60	76	80	59
	HOUR 22 LST	30	85	85	82	79	77	74	69	71	77	86	88	87	80
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	62	6.3	4.0	2.0	0.7	0.5	0.1	0.0	0.3	1.8	6.9	6.3	7.0	35.9
	THUNDERSTORMS	62	0.1	0.1	0.2	0.4	0.8	0.5	0.8	0.7	0.8	0.4	0.2	0.1	5.1
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
CLEAR	1	1.0	5.0	2.0		4.0	1.0								
PARTLY CLOUDY	1		1.0	1.0			1.0								
CLOUDY	1	2.0	2.0	9.0		6.0									
PR	MEAN STATION PRESSURE (IN)	27	29.87	29.83	29.80	29.85	29.83	29.83	29.83	29.80	29.81	29.86	29.84	29.90	29.84
	MEAN SEA-LEVEL PRES. (IN)	15	30.10	30.09	30.04	30.07	30.04	30.04	30.05	30.02	30.01	30.08	30.09	30.15	30.07
WINDS	MEAN SPEED (MPH)	37	8.1	8.0	7.8	7.3	6.8	6.7	6.8	6.4	6.1	6.1	7.8	7.9	7.2
	PREVAIL. DIR (TENS OF DEGS)	21	18	18	18	18	18	36	36	36	36	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	4	37	38	40	40	29	25	24	25	34	34	49	37	49
	DIR. (TENS OF DEGS)		17	17	18	22	19	29	19	18	19	17	17	20	17
	YEAR OF OCCURRENCE		1999	1999	1997	1997	1996	1997	1996	1997	1997	1999	1998	1996	NOV 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	4	45	49	49	52	36	30	26	30	43	44	68	48	68
DIR. (TENS OF DEGS)		17	17	17	21	17	31	24	28	19	17	18	17	18	
YEAR OF OCCURRENCE		1999	1999	1997	1997	1996	1997	1996	1997	1997	1999	1998	1998	NOV 1998	
PRECIPITATION	NORMAL (IN)	30	5.92	4.50	4.17	2.42	1.88	1.34	0.56	0.76	1.55	2.98	6.28	6.80	39.16
	MAXIMUM MONTHLY (IN)	62	15.40	13.01	8.56	5.72	5.56	4.19	2.63	4.17	3.98	11.17	15.23	15.01	15.40
	YEAR OF OCCURRENCE		1953	1996	1983	1996	1998	1984	1983	1968	1971	1947	1973	1996	JAN 1953
	MINIMUM MONTHLY (IN)	62	0.24	0.75	0.87	0.39	0.05	0.01	0.00	0.00	0.00	0.12	0.84	1.26	0.00
	YEAR OF OCCURRENCE		1985	1988	1965	1939	1992	1951	1967	1988	1975	1988	1939	1976	AUG 1988
	MAXIMUM IN 24 HOURS (IN)	62	3.07	3.16	3.03	2.22	2.23	1.81	1.92	1.25	1.86	4.08	4.44	3.12	4.44
	YEAR OF OCCURRENCE		1972	1949	1943	1971	1991	1993	1987	1943	1951	1994	1996	1987	NOV 1996
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	17.3	15.3	16.5	13.4	10.7	7.2	3.2	4.3	7.2	11.4	18.2	18.5	143.2	
PRECIPITATION ≥ 1.00	30	1.3	0.5	0.4	0.1	0.1	0.1	*	0.1	0.2	0.3	1.1	1.4	5.6	
SNOWFALL	NORMAL (IN)	30	2.2	1.5	0.2	0.*	T	0.0	0.0	0.0	0.0	T	0.3	2.2	6.4
	MAXIMUM MONTHLY (IN)	58	32.8	14.1	10.9	0.1	T	0.0	0.0	0.0	T	T	6.1	14.6	32.8
	YEAR OF OCCURRENCE		1950	1993	1951	1972	1988				1981	1990	1977	1972	JAN 1950
	MAXIMUM IN 24 HOURS (IN)	58	10.8	12.0	8.5	0.1	T	0.0	0.0	0.0	T	T	6.1	9.4	12.0
	YEAR OF OCCURRENCE		1943	1993	1960	1972	1988				1981	1990	1977	1972	FEB 1993
	MAXIMUM SNOW DEPTH (IN)	48	12	10	7	0	0	0	0	0	0	0	4	8	12
	YEAR OF OCCURRENCE		1969	1993	1960								1977	1972	JAN 1969
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	2.1	

PRECIPITATION (inches) 1999 SALEM, OR (SLE)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	13.47	4.46	1.92	2.63	1.36	0.85	0.01	T	1.81	3.25	7.18	9.74	46.68
1971	6.49	4.34	6.93	4.05	1.89	2.47	0.01	1.49	3.98	3.09	6.27	8.18	49.19
1972	7.98	4.68	4.96	3.79	2.40	0.69	0.12	0.14	2.07	0.70	3.77	8.70	40.00
1973	5.64	1.62	3.50	1.69	1.11	1.48	T	0.80	2.80	2.79	15.23	11.08	47.74
1974	10.89	5.56	7.95	1.48	0.90	0.41	1.80	0.11	0.28	2.15	7.42	6.94	45.89
1975	4.96	4.68	4.22	2.20	1.66	0.81	0.51	1.96	0.00	5.51	6.06	6.07	38.64
1976	5.47	6.92	3.66	2.00	1.33	1.04	0.67	1.89	1.13	1.51	1.13	1.26	28.01
1977	0.88	2.83	3.33	0.62	3.76	0.73	0.26	1.70	2.36	2.37	6.19	8.73	33.76
1978	5.67	3.54	1.23	3.50	2.97	0.48	1.07	2.56	2.64	0.37	4.50	2.64	31.17
1979	2.84	7.19	2.17	2.82	2.20	0.65	0.30	0.70	2.19	6.06	3.83	6.95	37.90
1980	6.58	4.04	3.48	3.58	1.53	1.99	0.22	0.04	1.05	1.45	5.24	10.44	39.64
1981	2.09	3.29	3.45	2.06	2.19	3.33	0.15	T	2.78	4.63	7.54	9.73	41.24
1982	6.11	6.02	2.81	3.80	0.73	1.36	0.33	0.41	1.83	3.04	4.92	9.26	40.62
1983	6.00	10.57	8.56	2.72	2.12	2.48	2.63	2.09	0.32	1.31	10.06	6.49	55.35
1984	2.34	5.50	4.40	3.74	3.32	4.19	0.03	T	1.19	4.31	12.70	3.71	45.43
1985	0.24	3.44	3.80	0.93	0.65	2.42	0.32	0.20	1.25	3.17	4.81	2.51	23.74
1986	6.25	8.26	2.89	1.30	2.22	0.42	1.23	T	3.12	2.71	7.24	3.86	39.50
1987	7.67	3.52	3.98	2.36	1.52	0.26	2.51	0.15	0.14	0.47	3.00	10.92	36.50
1988	6.78	0.75	3.34	3.56	2.39	1.97	0.03	0.00	0.98	0.12	9.50	3.23	32.65
1989	3.57	2.79	6.47	1.06	1.08	1.03	0.77	0.48	1.03	2.50	3.09	3.95	27.82
1990	8.51	5.31	2.39	1.67	1.94	1.09	0.47	0.85	0.42	5.63	4.91	2.82	36.01
1991	2.42	3.72	5.18	3.84	4.51	1.55	0.11	0.67	0.04	1.70	5.94	3.73	33.41
1992	4.76	4.46	0.89	4.35	0.05	1.12	0.50	0.38	0.70	3.52	4.84	7.83	33.40
1993	4.77	1.61	5.12	5.64	3.59	3.17	1.05	0.40	0.01	1.11	1.26	6.84	34.57
1994	4.28	4.21	2.56	2.16	1.61	1.14	T	0.05	1.64	7.96	7.09	4.91	37.61
1995	8.63	4.35	4.44	4.41	1.29	1.48	0.36	1.29	1.81	4.07	9.07	7.28	48.48
1996	8.26	13.01	3.08	5.72	3.21	0.74	0.90	0.20	1.94	4.78	10.11	15.01	66.96
1997	9.07	2.08	7.32	3.41	2.71	1.86	0.36	1.13	3.81	6.45	4.40	3.16	45.76
1998	9.06	6.18	4.96	1.63	5.56	0.98	0.10	0.04	0.68	2.52	11.70	8.66	52.07
1999	9.61	11.40	5.06	1.35	1.90	1.43	0.15	0.68	0.09	2.44	7.26	5.38	46.75
POR= 62 YRS	6.29	5.06	4.34	2.50	2.08	1.38	0.40	0.59	1.42	3.43	6.05	6.69	40.23

WBAN : 24232

AVERAGE TEMPERATURE (°F) 1999 SALEM, OR (SLE)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	41.6	44.9	45.5	45.8	54.2	64.4	67.2	65.4	58.3	50.7	43.6	39.0	51.7
1971	39.1	39.4	41.9	47.1	53.3	58.2	67.3	69.1	59.1	50.6	44.5	39.5	50.8
1972	38.3	43.2	47.9	46.0	56.5	60.0	67.6	68.2	57.6	50.1	46.4	35.2	51.4
1973	38.8	43.9	44.6	49.1	55.8	61.1	67.5	63.6	62.1	51.9	44.0	43.4	52.2
1974	37.6	41.2	46.1	49.3	52.9	61.8	65.8	67.4	65.8	53.0	46.4	43.0	52.5
1975	42.6	41.9	43.6	45.3	54.3	59.9	67.1	63.1	63.5	51.6	43.9	41.9	51.6
1976	40.7	40.2	42.5	47.2	53.2	56.9	65.3	64.2	62.0	52.1	45.9	38.8	50.8
1977	37.7	44.5	44.5	50.6	51.8	61.8	64.5	70.1	59.0	52.1	44.6	43.2	52.0
1978	41.4	45.3	48.2	48.9	54.8	65.2	68.8	68.3	61.0	54.1	39.4	34.8	52.5
1979	31.2	42.7	49.0	50.5	56.8	61.8	67.9	65.7	62.9	54.7	41.8	44.8	52.5
1980	35.6	43.2	44.6	50.7	53.7	57.5	65.5	62.8	62.5	53.6	47.3	42.9	51.7
1981	40.6	43.1	46.6	50.6	54.5	59.0	65.1	68.7	61.9	50.4	44.6	42.9	52.3
1982	38.6	41.6	44.5	45.9	54.7	65.1	65.7	66.4	61.4	53.4	42.4	41.1	51.7
1983	43.3	46.1	48.9	50.1	57.3	60.3	64.3	67.8	60.3	52.7	49.3	38.4	53.2
1984	43.2	44.2	48.7	47.8	52.9	57.4	65.4	66.8	61.3	51.4	44.4	37.5	51.8
1985	34.3	39.6	42.8	51.4	55.2	61.2	70.2	65.4	58.4	51.2	37.3	33.3	50.0
1986	43.2	44.4	50.2	48.4	55.3	64.2	63.5	69.9	59.0	53.7	46.7	39.6	53.2
1987	39.5	43.8	47.3	51.9	58.1	64.0	64.9	67.8	62.7	56.1	46.9	38.9	53.5
1988	39.4	43.3	45.6	51.1	53.7	60.5	66.8	65.8	62.3	56.6	46.8	40.5	52.7
1989	41.6	34.8	46.4	54.6	56.2	63.3	64.6	64.9	63.1	53.0	47.4	39.6	52.5
1990	42.8	41.3	47.8	52.8	55.2	62.3	69.6	69.1	64.9	51.2	46.9	34.4	53.2
1991	39.5	48.7	44.6	49.2	53.1	57.9	68.0	67.8	65.4	54.3	47.3	41.6	53.1
1992	44.1	47.6	50.5	53.8	60.8	65.8	68.9	68.2	62.0	55.1	46.1	39.2	55.2
1993	36.4	39.4	49.1	52.3	60.5	61.3	63.2	67.2	63.3	56.5	40.5	41.1	52.6
1994	44.3	43.0	50.2	53.2	59.2	61.7	69.1	67.1	65.2	52.7	41.7	42.3	54.1
1995	44.5	46.5	47.5	50.0	59.0	62.6	68.5	65.1	64.7	52.4	51.1	42.3	54.5
1996	41.9	42.2	47.3	51.9	53.1	60.9	70.3	67.8	60.0	52.4	45.2	42.5	53.0
1997	40.9	42.3	46.4	49.5	60.4	60.5	67.0	69.8	64.1	52.0	48.0	39.5	53.4
1998	44.0	45.5	47.3	50.5	54.6	61.3	69.6	69.0	64.5	52.4	47.7	39.9	53.9
1999	41.8	43.1	44.7	49.3	53.3	59.9	66.1	67.9	63.3	53.9	49.4	42.6	52.9
POR= 62 YRS	39.4	42.8	45.8	50.0	55.8	61.3	66.8	66.6	62.0	53.2	45.2	40.6	52.5

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HEATING DEGREE DAYS (base 65°F) 1999 SALEM, OR (SLE)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	33	45	195	438	635	797	796	710	706	528	355	201	5439
1971-72	61	18	169	440	607	784	821	625	523	560	267	148	5023
1972-73	34	42	239	454	552	919	803	586	626	468	288	141	5152
1973-74	30	85	106	398	624	665	845	658	580	463	371	123	4948
1974-75	48	28	47	364	550	674	688	641	656	584	327	164	4771
1975-76	37	84	79	409	624	708	743	709	693	529	356	243	5214
1976-77	43	63	98	395	565	807	842	569	629	424	400	108	4943
1977-78	57	23	181	392	606	670	727	547	513	476	316	51	4559
1978-79	17	20	129	328	763	928	1038	619	486	430	249	121	5128
1979-80	24	21	76	315	691	620	905	627	627	423	344	217	4890
1980-81	51	82	87	357	525	682	746	610	566	426	318	176	4626
1981-82	59	33	124	447	607	676	814	649	629	568	317	85	5008
1982-83	42	27	128	356	671	732	668	524	491	439	253	135	4466
1983-84	59	3	135	376	463	821	667	597	501	511	367	231	4731
1984-85	44	12	124	418	610	846	947	706	684	403	299	132	5225
1985-86	5	51	196	423	824	975	668	574	452	494	324	82	5068
1986-87	64	3	210	345	542	779	781	586	544	389	237	89	4569
1987-88	54	16	92	272	536	803	788	622	595	411	346	145	4680
1988-89	47	41	125	264	538	752	716	841	570	308	267	90	4559
1989-90	44	39	81	367	523	779	682	658	527	363	297	103	4463
1990-91	14	16	43	419	535	939	784	449	624	464	360	210	4857
1991-92	10	32	61	329	524	717	641	498	443	332	152	56	3795
1992-93	12	22	108	303	558	792	881	711	486	373	150	117	4513
1993-94	60	32	93	257	729	734	632	610	452	349	179	114	4241
1994-95	21	7	50	379	691	699	630	514	537	443	188	118	4277
1995-96	21	42	46	385	409	698	707	654	545	387	363	122	4379
1996-97	24	28	152	387	588	690	739	630	568	458	160	130	4554
1997-98	17	0	65	395	503	783	644	538	542	434	318	113	4352
1998-99	11	9	77	384	512	770	713	606	625	461	358	170	4696
1999-	45	26	95	336	460	687							

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COOLING DEGREE DAYS (base 65°F) 1999 SALEM, OR (SLE)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	0	2	82	106	66	0	1	0	0	257
1971	0	0	0	0	0	5	140	152	2	0	0	0	299
1972	0	0	0	0	10	6	122	148	21	0	0	0	307
1973	0	0	0	0	6	34	115	47	29	0	0	0	231
1974	0	0	0	0	0	34	78	108	78	0	0	0	298
1975	0	0	0	0	1	16	109	30	41	0	0	0	197
1976	0	0	0	0	0	6	59	48	16	3	0	0	132
1977	0	0	0	0	0	19	50	187	5	0	0	0	261
1978	0	0	0	0	6	63	143	130	16	0	0	0	358
1979	0	0	0	0	0	29	121	48	20	1	0	0	219
1980	0	0	0	0	0	0	73	21	17	9	0	0	120
1981	0	0	0	1	0	2	69	156	38	0	0	0	266
1982	0	0	0	0	5	91	68	82	27	0	0	0	273
1983	0	0	0	0	21	4	46	94	3	0	0	0	168
1984	0	0	0	0	1	10	64	73	19	5	0	0	172
1985	0	0	0	0	1	26	171	71	1	0	0	0	270
1986	0	0	0	0	28	64	25	159	34	0	0	0	310
1987	0	0	0	0	27	64	59	110	31	4	0	0	295
1988	0	0	0	0	3	16	108	75	48	10	0	0	260
1989	0	0	0	0	4	46	39	46	32	0	0	0	167
1990	0	0	0	0	1	31	165	153	46	0	0	0	396
1991	0	0	0	0	0	1	111	127	78	0	0	0	317
1992	0	0	0	1	30	83	138	128	25	0	0	0	405
1993	0	0	0	0	17	11	10	108	51	1	0	0	198
1994	0	0	0	0	8	21	155	79	61	2	0	0	326
1995	0	0	0	0	9	52	139	53	41	0	0	0	294
1996	0	0	0	0	0	6	194	119	9	4	0	0	332
1997	0	0	0	0	28	5	86	158	44	0	0	0	321
1998	0	0	0	4	3	7	163	140	68	0	0	0	385
1999	0	0	0	0	4	23	87	120	51	0	0	0	285

SNOWFALL (inches) 1999 SALEM, OR (SLE)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	T	T	0.9	11.1	8.1	1.4	T	T	0.0	21.5
1971-72	0.0	0.0	0.0	0.0	0.0	2.2	0.4	T	0.3	0.1	0.0	0.0	3.0
1972-73	0.0	0.0	0.0	0.0	0.0	14.6	0.7	0.0	T	T	0.0	0.0	15.3
1973-74	0.0	0.0	0.0	0.0	0.5	0.0	T	T	T	0.0	T	0.0	0.5
1974-75	0.0	0.0	0.0	T	0.0	0.0	1.6	T	T	T	T	0.0	1.6
1975-76	0.0	0.0	0.0	0.0	T	1.5	0.0	T	0.3	T	0.0	0.0	1.8
1976-77	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	T	0.0	T
1977-78	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	T	T	0.0	6.1
1978-79	0.0	0.0	0.0	0.0	1.5	2.9	2.2	0.6	0.0	T	0.0	0.0	7.2
1979-80	0.0	0.0	0.0	0.0	0.0	T	1.8	T	T	T	T	0.0	1.8
1980-81	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1981-82	0.0	0.0	T	0.0	T	T	4.4	0.6	T	T	0.0	0.0	5.0
1982-83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	T	0.0	T
1983-84	0.0	0.0	0.0	0.0	T	4.3	T	0.0	0.0	T	T	0.0	4.3
1984-85	0.0	0.0	0.0	0.0	0.0	0.3	T	4.6	T	T	0.0	0.0	4.9
1985-86	0.0	0.0	0.0	0.0	2.0	6.5	0.0	3.6	0.0	0.0	0.0	0.0	12.1
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	T
1987-88	0.0	0.0	0.0	0.0	0.0	5.8	1.0	0.0	0.0	T	T	0.0	6.8
1988-89	0.0	0.0	0.0	0.0	0.0	T	T	8.9	0.7	T	0.0	0.0	9.6
1989-90	0.0	0.0	0.0	0.0	0.0	0.0	T	9.6	0.0	0.0	0.0	0.0	9.6
1990-91	0.0	0.0	0.0	T	0.0	1.2	T	0.0	0.0	T	0.0	0.0	1.2
1991-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	T
1992-93	0.0	0.0	0.0	0.0	0.0	7.9	10.0	14.1	0.0	0.0	0.0	0.0	32.0
1993-94	0.0	0.0	0.0	0.0	0.4	T	0.0	T	0.0	0.0	0.0	0.0	0.4
1994-95	0.0	0.0	0.0	0.0	T	1.9	0.1	3.1	0.0	T	0.0	0.0	5.1
1995-96	0.0	0.0	0.0	0.0	0.0								
1996-97													
1997-98													
1998-99													
1999-													
POR= 58 YRS	0.0	0.0	T	T	0.3	1.6	2.9	1.3	0.5	0.0	T	0.0	6.6

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REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1999  
SALEM,  
OREGON (SLE)

Salem is located in the middle Willamette Valley some 60 airline miles east of the Pacific Ocean. The valley here is approximately 50 miles wide with the city about equidistant from the valley walls formed by the Coast Range on the west and the Cascade Range on the east.

The usual movement of very moist maritime air masses from the Pacific Ocean inland over the Coast Range produces, near its crest, some of the heaviest yearly rainfall in the United States. Annual totals of nearly 170 inches have been recorded in the mountains. From the ridge crest of the Coast Range, approximately 3,000 feet above sea level, there is a gradual decrease of rainfall downslope to the valley floor where annual totals are between 35 and 45 inches. As these marine conditioned air masses continue to move farther inland they are forced to ascend the west slopes of the Cascades to approximately 5,000 feet above sea level and again rainfall amounts substantially increase with elevation.

Most of this precipitation in both the valley and its bordering mountain ranges occurs during the winter. At Salem, 70 percent of the annual total occurs during the five months of November through March while only 6 percent occurs during the three summer months, with practically all of it falling in the form of rain. In the immediate area, there are only three or four days a year with measurable amounts of snow. Its depth on the ground rarely exceeds 2 or 3 inches, and it usually melts in a day or two. The few thunderstorms that occur each year are not generally severe and seldom do they, or the hail that occasionally accompanies them, cause any serious damage. A tornado in the immediate metropolitan area has never been recorded.

The seasonal difference in temperatures is much less marked than that of precipitation. There is a range of about 28 degrees between the temperature for January, the coldest month, and July, the warmest. Highs of 100 degrees or more seldom occur, and only in a few years since records began in 1892, have 0 degree or lower temperatures been observed. There is an average growing season of six and a half months.

The mild temperatures, long growing season, and plentiful supply of moisture are ideal for a wide variety of crops. In dollar value of agricultural returns, this is the most productive area in Oregon. Large orchards of sweet cherries are grown and processed here for maraschino cherries. Hops, filberts, walnuts, cane, and strawberries each contribute many millions of dollars to the annual farm income. A wide variety of vegetables is raised for both the fresh market and to support a large number of processing plants located in Salem. This climate is also suitable for the production of a number of specialty crops including mint, several seed crops, and nursery stock, particularly roses and ornamental shrubs.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 22 and the average last occurrence in the spring is May 5.

# STATION LOCATION

SALEM, OREGON

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE											* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS	
						SEA LEVEL	GROUND												AUTOMATED
							WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND			
<u>COOPERATIVE</u>																			
Various locations in City of Salem	2/1892	8/06/28														No data available as to exact locations, elevations and exposure of instruments for Cooperative Stations.			
<u>AIRPORT</u>																			
Lee Eyerley's Office Salem Airport	8/06/28	11/03/37	3 mi. SSE	44° 55'	123°00'	182	a80	5	5							Airway observations a - 46 ft. to 9/22/31.			
Lee Eyerley's Office Salem Airport	11/03/37	3/03/38	No Change	44° 55'	123°00'	195	80	5	5					3		First Order station. Weighing gage installed February 1938.			
Salem Airport Hangar	3/03/38	7/18/50	200 ft. SW	44° 55'	123°00'	195	24	5	5					4	3				
Salem Airport Administration Building McNary Field	7/18/50	4/26/78	1/2 mi. W	44° 55'	123°01'	196	b20	5	5	NA	NA			4	3	c5 NA b - 24 ft. to 10/15/54 and 30 ft. to 2/17/59. c - Commissioned 620 ft. E of thermometer site 9/1/59 and moved 1800 ft. to SE 6/25/62. d - Minor relocation 7/3/76.			
3030 25th Street SE McNary Field	4/26/78	07/01/95	370' SSW	44° 55'	123°00'	196	e20	5	5	NA	NA			5	5	e5 f5 g5 NA e - Not Moved. f - Type change 11/27/84. g - Type change 11/27/84.			
McNary Field	07/01/95	Present	NA	44°54'	123°00'	196										S ASOS Commissioned 07/01/95			

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801. INQUIRIES/COMMENTS CALL: (828) 271-4800

National Climatic Data Center  
151 Patton Avenue, Rm 120  
Asheville NC 28801-5001

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