



U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

RELATIVE HUMIDITY and DEW POINT TABLE

DRY BULB TEMPERATURES

	-18	-17	-16	-15	-14	-13	-12	-11	-10
-17	-35	-22							
-16	-31	-18							
-15	-27	-14							
-14	-23	-10							
-13	-19	-6							
-12	-15	-2							
-11	-11	2							
-10	-7	6							

Pressure 19 Inches of Mercury

For use at elevations between 11,001 and 13,500 feet above sea level.

(In Alaska, use at elevations between 10,001 and 12,500 feet above sea level.)

HOW TO USE THE TABLE

Locate the wet bulb temperature in the headings which read horizontally from left to right at the top of the columns. Locate the dry bulb temperature in the columns which read vertically from top to bottom at the left side of the table. Follow down the column under the wet bulb temperature and across the line from the dry bulb temperature, at the intersection of the column and line will be found the relative humidity (%) in black, and the dew point (°F) in red.

NOTE

This table was computed by use of the presently accepted psychrometric formulae. But at temperatures below 32°F the tables may and probably do depart significantly from physically-correct values. Vapor pressure over water, to which modern meteorological hygrometric tables are referred, is not known exactly at temperatures below the freezing point of water. The error is thought to be small near freezing and to grow to large proportions at very low temperatures. Furthermore the psychrometric equation itself is suspect at low temperatures. Because of (1) the difficulties of obtaining accurate wet and dry bulb readings at temperatures below 32°F, (2) the extreme sensitivity of tabular values to small differences in wet bulb depression at very low temperatures, and (3) other possible errors discussed above; the total error in psychrometrically derived dew points at 10°F and below may reach serious proportions.

Values in the body of the table are relative humidities (in percent) and dew points (in deg. Fahr.), with respect to water, for indicated values of wet and dry bulb temperatures in degrees Fahrenheit.

WET BULB TEMPERATURES

	6	7	8	9	10	11	12	13	14	15
13	-49	-25	-14	-7	-1	-3	7	11		
14	-39	-21	-12	-5	0	5	8	12		
15	-30	-17	-10	-3	2	6	10	13		
16	-22	-12	-5	0	3	7	11	14		
17	-15	-7	0	3	6	9	12	15		
18	-8	0	3	6	9	12	15	18		
19	-1	3	6	9	12	15	18	21		
20	4	7	10	13	16	19	22	25		
21	10	13	16	19	22	25	28	31		
22	16	19	22	25	28	31	34	37		
23	22	25	28	31	34	37	40	43		
24	28	31	34	37	40	43	46	49		
25	34	37	40	43	46	49	52	55		
26	40	43	46	49	52	55	58	61		
27	46	49	52	55	58	61	64	67		
28	52	55	58	61	64	67	70	73		
29	58	61	64	67	70	73	76	79		
30	64	67	70	73	76	79	82	85		
31	70	73	76	79	82	85	88	91		
32	76	79	82	85	88	91	94	97		
33	82	85	88	91	94	97	100			
34	88	91	94	97	100					
35	94	97	100							
36	100									
37										
38										
39										
40										
41										
42										
43										
44										
45										

DRY BULB TEMPERATURES

	26	27	28	29	30	31	32	33	34	35
26	-43	-22	-11	-4	2	7	11	14	17	20
27	-32	-17	-8	-1	4	8	12	15	18	21
28	-22	-12	-5	0	3	7	10	13	16	19
29	-12	-5	0	3	6	9	12	15	18	21
30	-2	3	6	9	12	15	18	21	24	27
31	6	9	12	15	18	21	24	27	30	33
32	12	15	18	21	24	27	30	33	36	39
33	18	21	24	27	30	33	36	39	42	45
34	24	27	30	33	36	39	42	45	48	51
35	30	33	36	39	42	45	48	51	54	57
36	36	39	42	45	48	51	54	57	60	63
37	42	45	48	51	54	57	60	63	66	69
38	48	51	54	57	60	63	66	69	72	75
39	54	57	60	63	66	69	72	75	78	81
40	60	63	66	69	72	75	78	81	84	87
41	66	69	72	75	78	81	84	87	90	93
42	72	75	78	81	84	87	90	93	96	99
43	78	81	84	87	90	93	96	99		
44	84	87	90	93	96	99				
45	90	93	96	99						

11001-13500 ASL

WET BULB TEMPERATURES

	6	7	8	9	10	11	12	13	14	15
13	-49	-25	-14	-7	-1	-3	7	11		
14	-39	-21	-12	-5	0	5	8	12		
15	-30	-17	-10	-3	2	6	10	13		
16	-22	-12	-5	0	3	7	11	14		
17	-15	-7	0	3	6	9	12	15		
18	-8	0	3	6	9	12	15	18		
19	-1	3	6	9	12	15	18	21		
20	4	7	10	13	16	19	22	25		
21	10	13	16	19	22	25	28	31		
22	16	19	22	25	28	31	34	37		
23	22	25	28	31	34	37	40	43		
24	28	31	34	37	40	43	46	49		
25	34	37	40	43	46	49	52	55		
26	40	43	46	49	52	55	58	61		
27	46	49	52	55	58	61	64	67		
28	52	55	58	61	64	67	70	73		
29	58	61	64	67	70	73	76	79		
30	64	67	70	73	76	79	82	85		
31	70	73	76	79	82	85	88	91		
32	76	79	82	85	88	91	94	97		
33	82	85	88	91	94	97	100			
34	88	91	94	97	100					
35	94	97	100							
36	100									
37										
38										
39										
40										
41										
42										
43										
44										
45										

DRY BULB TEMPERATURES

	26	27	28	29	30	31	32	33	34	35
26	-43	-22	-11	-4	2	7	11	14	17	20
27	-32	-17	-8	-1	4	8	12	15	18	21
28	-22	-12	-5	0	3	7	10	13	16	19
29	-12	-5	0	3	6	9	12	15	18	21
30	-2	3	6	9	12	15	18	21	24	27
31	6	9	12	15	18	21	24	27	30	33
32	12	15	18	21	24	27	30	33	36	39
33	18	21	24	27	30	33	36	39	42	45
34	24	27	30	33	36	39	42	45	48	51
35	30	33	36	39	42	45	48	51	54	57
36	36	39	42	45	48	51	54	57	60	63
37	42	45	48	51	54	57	60	63	66	69
38	48	51	54	57	60	63	66	69	72	75
39	54	57	60	63	66	69	72	75	78	81
40	60	63	66	69	72	75	78	81	84	87
41	66	69	72	75	78	81	84	87	90	93
42	72	75	78	81	84	87	90	93	96	99
43	78	81	84	87	90	93	96	99		
44	84	87	90	93	96	99				
45	90	93	96	99						

WET BULB TEMPERATURES

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
46	-28	-13	-3	4	9	13	17	20	23	26	29	31	33	35	37	39	41	43	44	46	47			
47	-45	8	12	17	22	27	31	36	41	45	50	56	61	66	71	77	82	88	94	100				
48	-19	-6	10	14	19	23	28	32	37	42	46	51	56	61	67	72	77	83	88	94	100			
49	-28	-12	-3	4	9	13	17	20	23	26	29	31	33	35	37	39	41	42	44	46	47	48	49	
50	-46	1	5	9	13	18	22	26	30	35	39	44	48	53	58	63	68	73	78	83	89	94	100	

11001-13500 ASL

51	52	53	54	55
51	-46	-18	-7	1
52	-11	-2	4	10
53	-17	-6	12	17
54	-26	-10	-2	5
55	-42	-16	-4	2

56	57	58	59	60
56	-25	-10	-2	5
57	-39	-14	-3	2
58	-24	-10	-1	5
59	-38	-14	-5	3
60	-23	-9	0	6

DRY BULB TEMPERATURES

56	57	58	59	60
56	-25	-10	-2	5
57	-39	-14	-3	2
58	-24	-10	-1	5
59	-38	-14	-5	3
60	-23	-9	0	6

61	62	63	64	65
61	-36	-15	-4	3
62	-22	-8	0	7
63	-14	-3	4	10
64	-21	-7	1	9
65	-32	-13	-2	5

66	67	68	69	70
66	-19	-6	2	8
67	-29	-11	-1	4
68	-17	-5	3	9
69	-26	-10	0	7
70	-42	-15	-4	10

71	72	73	74	75
71	-23	-2	4	6
72	-34	-13	-2	5
73	-20	-4	2	9
74	-31	-11	-1	6
75	-17	-5	4	10

61	62	63	64	65	66	67	68	69	70
61	100	95	91	86	81	77	72	68	64
62	95	90	85	80	75	70	66	62	58
63	90	85	80	75	70	66	62	58	54
64	85	80	75	70	66	62	58	54	50
65	80	75	70	66	62	58	54	50	46

WET BULB TEMPERATURES

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
76	-26	-9	1	8	13	18	22	26	29	32	34	36	39	42	44	46	48	50	51	53	55	57	58	60	61	63	64	66	67	68	70	71	72	73	75	76	77	78	79	80
77	-42	-15	-2	5	11	16	21	24	28	31	34	36	39	41	43	45	47	49	51	53	54	56	58	59	61	63	64	66	67	68	69	71	72	73	74	76	77	78	79	80
78	-22	-7	2	9	14	19	23	27	30	33	35	38	40	42	44	46	48	50	52	53	55	57	59	61	62	64	65	67	68	69	71	72	73	74	76	77	78	79	80	
79	-34	-12	-1	6	13	17	22	25	29	32	35	37	39	42	44	46	48	50	52	53	55	57	59	61	62	64	65	67	68	69	71	72	73	74	75	77	78	79	80	
80	-18	-2	3	5	7	11	16	20	24	28	31	34	36	39	41	43	45	47	49	51	53	55	57	59	61	62	64	65	67	68	69	71	72	73	74	75	76	78	79	80

81	82	83	84	85
81	-27	-9	1	8
82	-15	-2	4	5
83	-22	-1	3	6
84	-34	-11	2	4
85	-17	-2	3	5

DRY BULB TEMPERATURES

86	87	88	89	90
86	-26	-1	2	5
87	-13	-1	2	5
88	-20	-5	4	6
89	-31	-10	1	9
90	-15	-1	3	4

86	87	88	89	90
86	100	95	91	86
87	95	90	85	80
88	90	85	80	75
89	85	80	75	70
90	80	75	70	65