



**NOAA Atlas 14, Volume 11, Version 2**  
**Location name: Tomball, Texas, USA\***  
**Latitude: 30.0972°, Longitude: -95.616°**  
**Elevation: 184 ft\*\***  
 \* source: ESRI Maps  
 \*\* source: USGS



### POINT PRECIPITATION FREQUENCY ESTIMATES

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[PF\\_tabular](#) | [PF\\_graphical](#) | [Maps\\_&\\_aerials](#)

### PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) <sup>1</sup>										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.490 (0.371-0.647)	0.572 (0.438-0.749)	0.708 (0.540-0.931)	0.821 (0.616-1.09)	0.975 (0.708-1.34)	1.09 (0.773-1.54)	1.21 (0.836-1.76)	1.34 (0.900-1.99)	1.51 (0.982-2.33)	1.65 (1.04-2.60)
10-min	0.776 (0.588-1.02)	0.909 (0.695-1.19)	1.13 (0.859-1.48)	1.31 (0.982-1.74)	1.56 (1.13-2.14)	1.75 (1.24-2.47)	1.94 (1.34-2.82)	2.13 (1.43-3.17)	2.38 (1.54-3.66)	2.56 (1.62-4.04)
15-min	0.987 (0.747-1.30)	1.15 (0.879-1.51)	1.42 (1.08-1.86)	1.64 (1.23-2.18)	1.94 (1.41-2.66)	2.17 (1.54-3.06)	2.40 (1.66-3.48)	2.65 (1.78-3.94)	2.98 (1.94-4.60)	3.24 (2.05-5.13)
30-min	1.41 (1.07-1.86)	1.64 (1.25-2.14)	2.01 (1.53-2.64)	2.31 (1.73-3.08)	2.72 (1.97-3.72)	3.02 (2.13-4.26)	3.34 (2.30-4.84)	3.70 (2.49-5.51)	4.21 (2.74-6.50)	4.63 (2.93-7.31)
60-min	1.85 (1.40-2.44)	2.16 (1.65-2.83)	2.67 (2.04-3.51)	3.10 (2.32-4.13)	3.68 (2.66-5.03)	4.11 (2.90-5.78)	4.58 (3.16-6.64)	5.12 (3.44-7.63)	5.93 (3.85-9.15)	6.61 (4.18-10.4)
2-hr	2.22 (1.69-2.92)	2.70 (2.04-3.45)	3.42 (2.60-4.45)	4.06 (3.06-5.39)	5.01 (3.65-6.84)	5.77 (4.10-8.11)	6.63 (4.59-9.58)	7.64 (5.16-11.3)	9.18 (5.98-14.1)	10.5 (6.66-16.5)
3-hr	2.42 (1.84-3.17)	3.02 (2.26-3.80)	3.89 (2.96-5.04)	4.70 (3.55-6.22)	5.94 (4.35-8.11)	6.98 (4.98-9.82)	8.19 (5.68-11.8)	9.60 (6.48-14.2)	11.8 (7.67-18.0)	13.6 (8.66-21.4)
6-hr	2.77 (2.12-3.62)	3.59 (2.67-4.42)	4.72 (3.61-6.07)	5.84 (4.43-7.69)	7.58 (5.60-10.4)	9.14 (6.57-12.8)	11.0 (7.63-15.7)	13.1 (8.84-19.2)	16.2 (10.6-24.8)	19.0 (12.1-29.7)
12-hr	3.16 (2.43-4.10)	4.20 (3.10-5.08)	5.59 (4.28-7.14)	7.01 (5.34-9.19)	9.25 (6.88-12.6)	11.3 (8.16-15.8)	13.7 (9.57-19.6)	16.4 (11.2-24.1)	20.6 (13.5-31.3)	24.1 (15.5-37.6)
24-hr	3.59 (2.77-4.64)	4.86 (3.58-5.81)	6.54 (5.03-8.31)	8.28 (6.33-10.8)	11.0 (8.26-15.0)	13.6 (9.88-19.0)	16.5 (11.6-23.6)	19.8 (13.5-28.9)	24.7 (16.3-37.4)	28.8 (18.5-44.7)
2-day	4.06 (3.14-5.22)	5.59 (4.13-6.62)	7.61 (5.88-9.63)	9.72 (7.46-12.6)	13.1 (9.90-17.9)	16.2 (11.9-22.8)	19.8 (14.0-28.1)	23.4 (16.0-33.9)	28.3 (18.7-42.6)	32.2 (20.8-49.8)
3-day	4.43 (3.44-5.68)	6.09 (4.52-7.23)	8.32 (6.44-10.5)	10.6 (8.15-13.7)	14.2 (10.8-19.3)	17.6 (12.9-24.6)	21.3 (15.1-30.1)	25.0 (17.1-36.1)	29.9 (19.8-44.8)	33.6 (21.7-51.9)
4-day	4.76 (3.70-6.10)	6.48 (4.85-7.73)	8.81 (6.84-11.1)	11.2 (8.60-14.4)	14.8 (11.3-20.1)	18.2 (13.4-25.4)	21.9 (15.5-31.0)	25.6 (17.6-37.0)	30.5 (20.2-45.7)	34.3 (22.2-52.9)
7-day	5.56 (4.34-7.10)	7.33 (5.57-8.85)	9.82 (7.65-12.3)	12.2 (9.45-15.7)	15.9 (12.1-21.4)	19.2 (14.1-26.6)	22.8 (16.2-32.1)	26.5 (18.2-38.2)	31.4 (20.9-47.0)	35.3 (22.9-54.2)
10-day	6.24 (4.88-7.94)	8.04 (6.17-9.77)	10.6 (8.32-13.4)	13.1 (10.1-16.8)	16.8 (12.7-22.5)	20.0 (14.7-27.6)	23.6 (16.8-33.1)	27.2 (18.8-39.1)	32.2 (21.5-48.0)	36.1 (23.5-55.3)
20-day	8.26 (6.48-10.5)	10.2 (7.96-12.5)	13.1 (10.3-16.4)	15.7 (12.2-20.1)	19.5 (14.7-25.8)	22.6 (16.6-30.8)	26.0 (18.5-36.3)	29.5 (20.5-42.3)	34.4 (23.1-51.3)	38.4 (25.1-58.7)
30-day	9.95 (7.83-12.6)	12.0 (9.46-14.9)	15.2 (12.0-19.0)	17.9 (14.0-22.9)	21.8 (16.4-28.7)	24.8 (18.3-33.7)	28.1 (20.1-39.1)	31.5 (22.0-45.2)	36.3 (24.5-54.0)	40.2 (26.3-61.3)
45-day	12.4 (9.80-15.7)	14.6 (11.7-18.3)	18.2 (14.5-22.9)	21.2 (16.6-27.0)	25.3 (19.1-33.2)	28.4 (20.9-38.3)	31.5 (22.6-43.8)	34.8 (24.3-49.8)	39.3 (26.5-58.2)	42.8 (28.1-65.1)
60-day	14.7 (11.6-18.4)	17.0 (13.7-21.3)	21.0 (16.8-26.4)	24.2 (19.0-30.8)	28.5 (21.6-37.3)	31.7 (23.3-42.7)	34.7 (24.9-48.2)	37.9 (26.5-54.1)	42.0 (28.4-62.1)	45.0 (29.6-68.4)

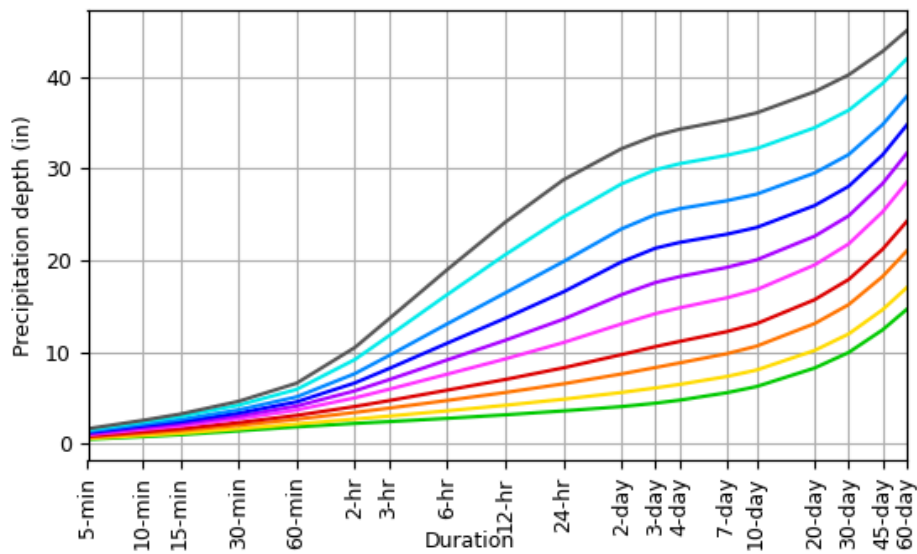
<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

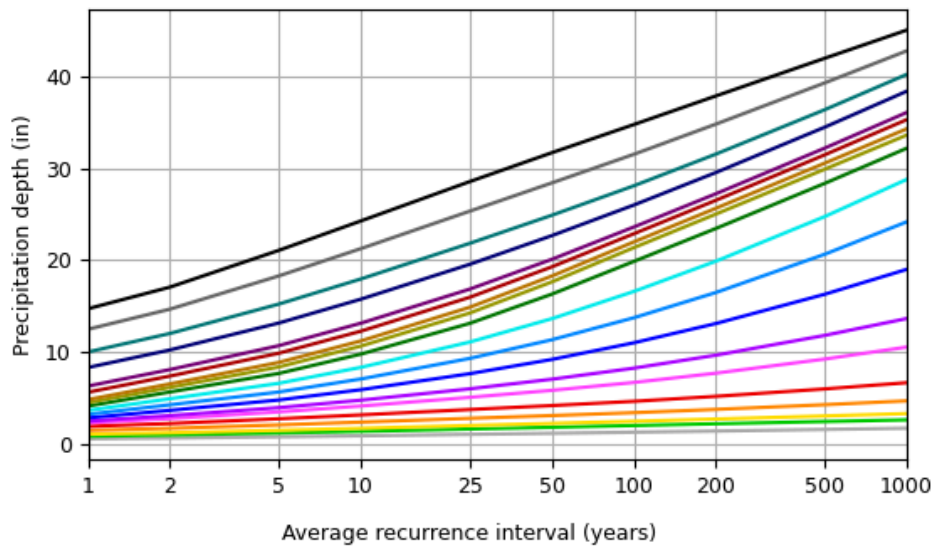
### PF graphical

## PDS-based depth-duration-frequency (DDF) curves

Latitude: 30.0972°, Longitude: -95.6160°



Average recurrence interval (years)
1
2
5
10
25
50
100
200
500
1000



Duration
5-min
10-min
15-min
30-min
60-min
2-hr
3-hr
6-hr
12-hr
24-hr
2-day
3-day
4-day
7-day
10-day
20-day
30-day
45-day
60-day

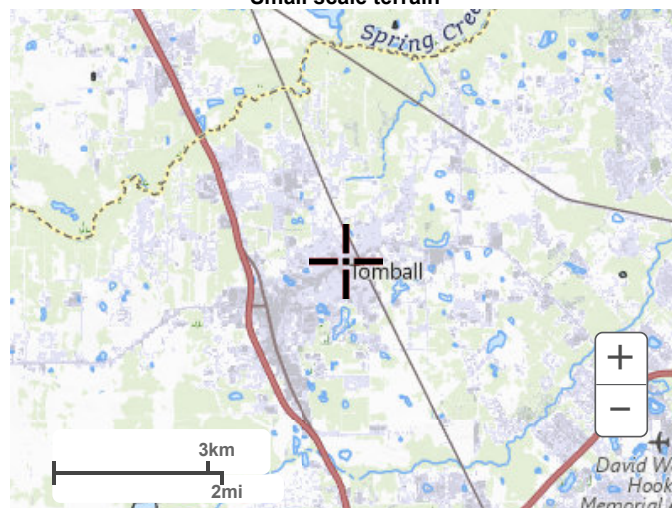
NOAA Atlas 14, Volume 11, Version 2

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[Back to Top](#)

## Maps &amp; aerals

## Small scale terrain



## Large scale terrain



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