



**NOAA Atlas 14, Volume 2, Version 3**  
**Location name: Gatlinburg, Tennessee, USA\***  
**Latitude: 35.6831°, Longitude: -83.4928°**  
**Elevation: 2183.1 ft\*\***  
 \* source: ESRI Maps  
 \*\* source: USGS



**POINT PRECIPITATION FREQUENCY ESTIMATES**

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NOAA, National Weather Service, Silver Spring, Maryland

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**PF tabular**

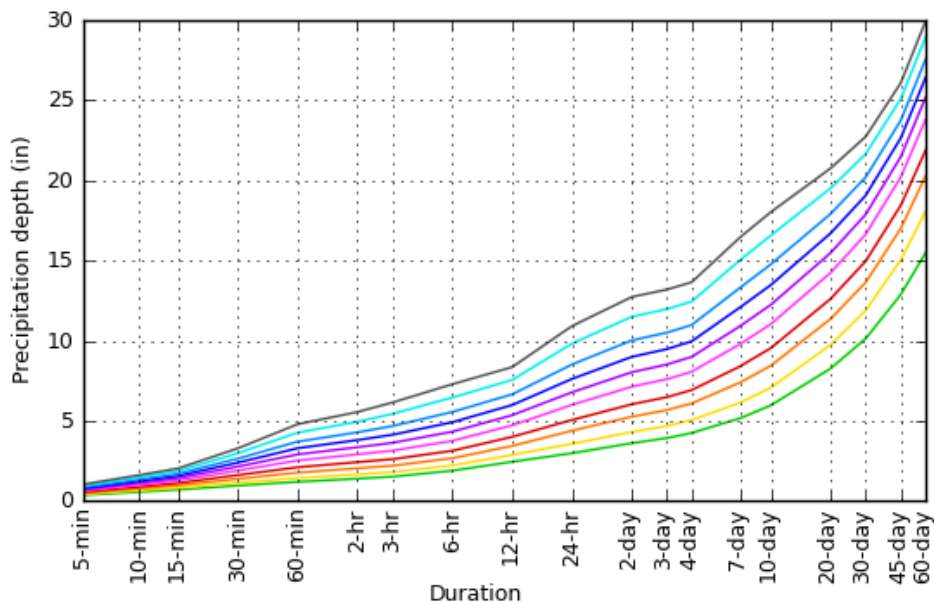
<b>PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)<sup>1</sup></b>										
<b>Duration</b>	<b>Average recurrence interval (years)</b>									
	<b>1</b>	<b>2</b>	<b>5</b>	<b>10</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>	<b>1000</b>
<b>5-min</b>	<b>0.349</b> (0.318-0.385)	<b>0.408</b> (0.371-0.451)	<b>0.478</b> (0.434-0.527)	<b>0.550</b> (0.498-0.607)	<b>0.633</b> (0.570-0.698)	<b>0.704</b> (0.631-0.777)	<b>0.775</b> (0.688-0.858)	<b>0.847</b> (0.744-0.941)	<b>0.937</b> (0.812-1.05)	<b>1.02</b> (0.874-1.15)
<b>10-min</b>	<b>0.557</b> (0.507-0.614)	<b>0.653</b> (0.594-0.721)	<b>0.765</b> (0.696-0.844)	<b>0.879</b> (0.797-0.970)	<b>1.01</b> (0.908-1.11)	<b>1.12</b> (1.00-1.24)	<b>1.23</b> (1.09-1.36)	<b>1.34</b> (1.18-1.49)	<b>1.48</b> (1.28-1.66)	<b>1.61</b> (1.38-1.82)
<b>15-min</b>	<b>0.696</b> (0.634-0.768)	<b>0.821</b> (0.747-0.906)	<b>0.968</b> (0.880-1.07)	<b>1.11</b> (1.01-1.23)	<b>1.28</b> (1.15-1.41)	<b>1.42</b> (1.27-1.57)	<b>1.56</b> (1.38-1.72)	<b>1.69</b> (1.49-1.88)	<b>1.87</b> (1.62-2.09)	<b>2.02</b> (1.73-2.28)
<b>30-min</b>	<b>0.954</b> (0.869-1.05)	<b>1.13</b> (1.03-1.25)	<b>1.38</b> (1.25-1.52)	<b>1.61</b> (1.46-1.78)	<b>1.89</b> (1.71-2.09)	<b>2.14</b> (1.92-2.36)	<b>2.38</b> (2.12-2.64)	<b>2.64</b> (2.32-2.93)	<b>2.97</b> (2.57-3.32)	<b>3.28</b> (2.80-3.69)
<b>60-min</b>	<b>1.19</b> (1.08-1.31)	<b>1.42</b> (1.29-1.57)	<b>1.76</b> (1.60-1.95)	<b>2.10</b> (1.90-2.31)	<b>2.52</b> (2.27-2.78)	<b>2.90</b> (2.60-3.20)	<b>3.29</b> (2.92-3.63)	<b>3.70</b> (3.25-4.11)	<b>4.26</b> (3.69-4.76)	<b>4.78</b> (4.09-5.39)
<b>2-hr</b>	<b>1.39</b> (1.27-1.52)	<b>1.65</b> (1.51-1.82)	<b>2.04</b> (1.85-2.24)	<b>2.42</b> (2.20-2.66)	<b>2.91</b> (2.63-3.19)	<b>3.35</b> (3.00-3.67)	<b>3.80</b> (3.38-4.18)	<b>4.28</b> (3.77-4.73)	<b>4.94</b> (4.28-5.50)	<b>5.55</b> (4.74-6.23)
<b>3-hr</b>	<b>1.51</b> (1.39-1.66)	<b>1.79</b> (1.65-1.97)	<b>2.19</b> (2.01-2.40)	<b>2.60</b> (2.38-2.85)	<b>3.13</b> (2.84-3.42)	<b>3.62</b> (3.25-3.96)	<b>4.13</b> (3.67-4.53)	<b>4.67</b> (4.11-5.14)	<b>5.43</b> (4.70-6.03)	<b>6.14</b> (5.22-6.88)
<b>6-hr</b>	<b>1.88</b> (1.74-2.04)	<b>2.21</b> (2.04-2.41)	<b>2.66</b> (2.45-2.89)	<b>3.13</b> (2.88-3.39)	<b>3.75</b> (3.42-4.06)	<b>4.32</b> (3.91-4.68)	<b>4.91</b> (4.40-5.34)	<b>5.55</b> (4.91-6.07)	<b>6.45</b> (5.61-7.09)	<b>7.28</b> (6.22-8.09)
<b>12-hr</b>	<b>2.44</b> (2.27-2.64)	<b>2.87</b> (2.66-3.11)	<b>3.43</b> (3.17-3.71)	<b>4.00</b> (3.69-4.31)	<b>4.71</b> (4.33-5.08)	<b>5.35</b> (4.88-5.78)	<b>5.98</b> (5.41-6.48)	<b>6.65</b> (5.96-7.24)	<b>7.55</b> (6.69-8.27)	<b>8.35</b> (7.31-9.24)
<b>24-hr</b>	<b>2.98</b> (2.79-3.19)	<b>3.56</b> (3.34-3.82)	<b>4.38</b> (4.10-4.70)	<b>5.05</b> (4.71-5.41)	<b>6.00</b> (5.56-6.44)	<b>6.78</b> (6.24-7.30)	<b>7.62</b> (6.94-8.23)	<b>8.52</b> (7.68-9.26)	<b>9.82</b> (8.70-10.8)	<b>10.9</b> (9.52-12.1)
<b>2-day</b>	<b>3.60</b> (3.37-3.87)	<b>4.30</b> (4.02-4.63)	<b>5.25</b> (4.91-5.66)	<b>6.03</b> (5.63-6.49)	<b>7.13</b> (6.60-7.70)	<b>8.03</b> (7.38-8.71)	<b>8.99</b> (8.19-9.80)	<b>10.0</b> (9.03-11.0)	<b>11.5</b> (10.2-12.8)	<b>12.7</b> (11.1-14.3)
<b>3-day</b>	<b>3.92</b> (3.68-4.19)	<b>4.67</b> (4.38-5.01)	<b>5.67</b> (5.31-6.08)	<b>6.47</b> (6.05-6.95)	<b>7.60</b> (7.05-8.17)	<b>8.51</b> (7.85-9.18)	<b>9.47</b> (8.66-10.3)	<b>10.5</b> (9.50-11.5)	<b>12.0</b> (10.7-13.2)	<b>13.2</b> (11.6-14.7)
<b>4-day</b>	<b>4.24</b> (3.99-4.52)	<b>5.05</b> (4.74-5.39)	<b>6.08</b> (5.71-6.50)	<b>6.92</b> (6.48-7.40)	<b>8.06</b> (7.51-8.64)	<b>8.99</b> (8.32-9.66)	<b>9.96</b> (9.14-10.8)	<b>11.0</b> (9.98-11.9)	<b>12.4</b> (11.1-13.7)	<b>13.6</b> (12.0-15.2)
<b>7-day</b>	<b>5.16</b> (4.83-5.50)	<b>6.13</b> (5.74-6.54)	<b>7.39</b> (6.91-7.89)	<b>8.40</b> (7.84-8.98)	<b>9.79</b> (9.07-10.5)	<b>10.9</b> (10.1-11.7)	<b>12.1</b> (11.1-13.0)	<b>13.3</b> (12.1-14.4)	<b>15.0</b> (13.4-16.4)	<b>16.4</b> (14.5-18.1)
<b>10-day</b>	<b>5.96</b> (5.61-6.35)	<b>7.07</b> (6.64-7.53)	<b>8.44</b> (7.91-9.00)	<b>9.54</b> (8.92-10.2)	<b>11.0</b> (10.3-11.8)	<b>12.2</b> (11.3-13.1)	<b>13.5</b> (12.4-14.5)	<b>14.8</b> (13.4-16.0)	<b>16.6</b> (14.9-18.1)	<b>18.0</b> (16.0-19.8)
<b>20-day</b>	<b>8.27</b> (7.81-8.75)	<b>9.74</b> (9.21-10.3)	<b>11.4</b> (10.7-12.0)	<b>12.6</b> (11.9-13.4)	<b>14.2</b> (13.4-15.1)	<b>15.5</b> (14.5-16.5)	<b>16.7</b> (15.6-17.8)	<b>17.9</b> (16.6-19.1)	<b>19.5</b> (17.9-21.0)	<b>20.8</b> (18.9-22.4)
<b>30-day</b>	<b>10.1</b> (9.62-10.6)	<b>11.9</b> (11.3-12.5)	<b>13.6</b> (13.0-14.3)	<b>15.0</b> (14.2-15.7)	<b>16.6</b> (15.8-17.5)	<b>17.9</b> (16.9-18.9)	<b>19.1</b> (17.9-20.1)	<b>20.2</b> (18.9-21.4)	<b>21.7</b> (20.1-23.1)	<b>22.7</b> (21.0-24.3)
<b>45-day</b>	<b>12.9</b> (12.3-13.5)	<b>15.0</b> (14.4-15.7)	<b>17.0</b> (16.3-17.8)	<b>18.4</b> (17.6-19.3)	<b>20.2</b> (19.3-21.2)	<b>21.5</b> (20.4-22.5)	<b>22.6</b> (21.5-23.8)	<b>23.7</b> (22.4-25.1)	<b>25.1</b> (23.6-26.6)	<b>26.1</b> (24.4-27.8)
<b>60-day</b>	<b>15.5</b> (14.8-16.2)	<b>18.1</b> (17.3-18.9)	<b>20.3</b> (19.4-21.2)	<b>21.9</b> (20.9-22.9)	<b>23.8</b> (22.7-24.9)	<b>25.2</b> (24.0-26.4)	<b>26.4</b> (25.0-27.8)	<b>27.6</b> (26.0-29.0)	<b>28.9</b> (27.2-30.6)	<b>29.9</b> (28.0-31.8)

<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.

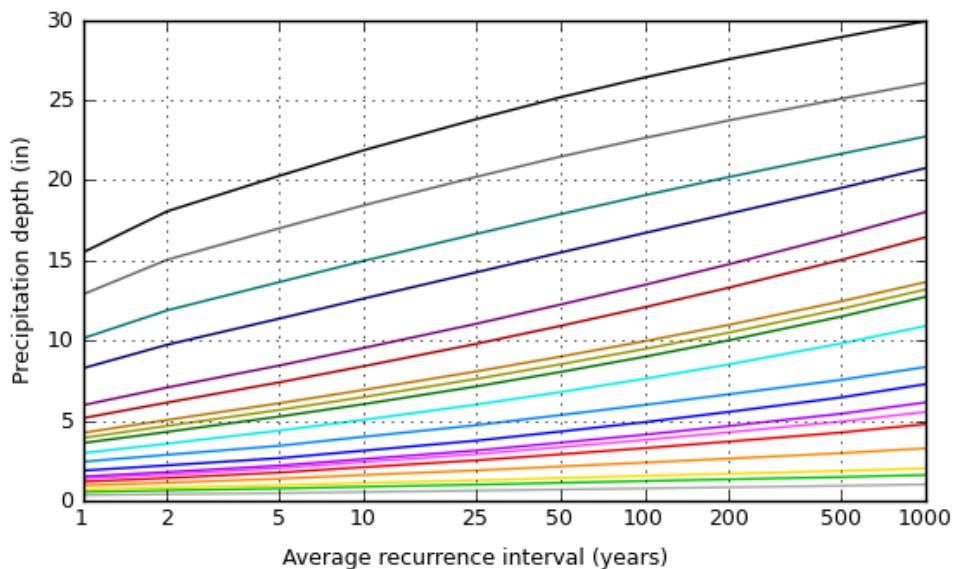
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### PF graphical

PDS-based depth-duration-frequency (DDF) curves  
 Latitude: 35.6831°, Longitude: -83.4928°



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

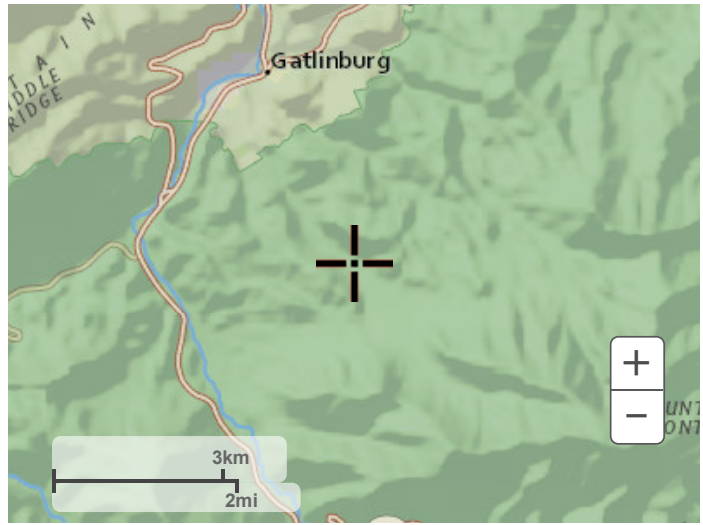


Duration	
5-min	2-day
10-min	3-day
15-min	4-day
30-min	7-day
60-min	10-day
2-hr	20-day
3-hr	30-day
6-hr	45-day
12-hr	60-day
24-hr	

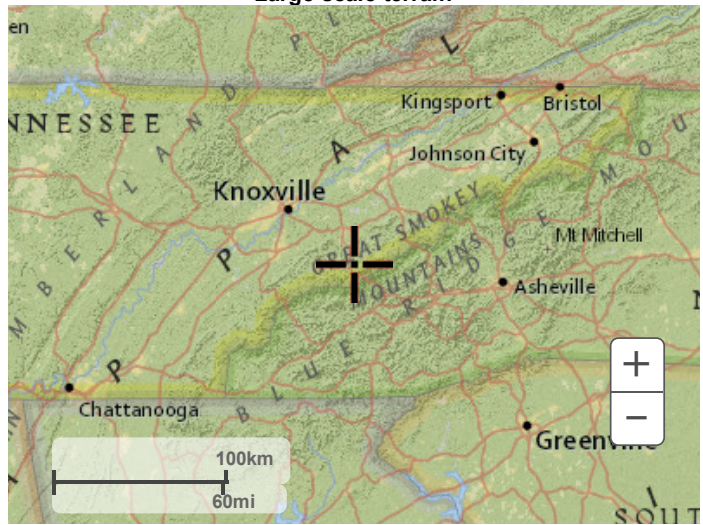
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### Maps & aerials

Small scale terrain



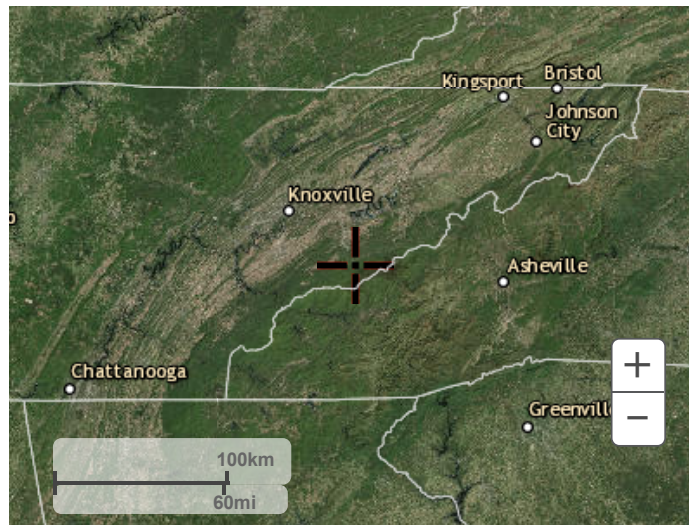
Large scale terrain



Large scale map



Large scale aerial



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