NOAA Atlas 14, Volume 2, Version 3
Location name: Lexington, North Carolina, USA*
Latitude: 35.8061°, Longitude: -80.2667°
Elevation: 744.62 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**4.62** (4.25-5.04)	**5.48** (5.05-5.99)	**6.38** (5.86-6.95)	**6.97** (6.38-7.57)	**7.60** (6.92-8.24)	**7.98** (7.25-8.66)	**8.30** (7.50-9.02)	**8.56** (7.70-9.30)	**8.77** (7.84-9.54)	**8.88** (7.87-9.68)
10-min	**3.69** (3.39-4.02)	**4.39** (4.04-4.79)	**5.11** (4.69-5.57)	**5.57** (5.11-6.05)	**6.05** (5.52-6.56)	**6.35** (5.77-6.90)	**6.60** (5.96-7.16)	**6.78** (6.10-7.37)	**6.94** (6.19-7.55)	**7.00** (6.20-7.63)
15-min	**3.08** (2.82-3.35)	**3.68** (3.38-4.01)	**4.31** (3.96-4.70)	**4.70** (4.30-5.10)	**5.11** (4.66-5.55)	**5.36** (4.88-5.82)	**5.56** (5.02-6.04)	**5.70** (5.14-6.20)	**5.82** (5.20-6.33)	**5.86** (5.18-6.38)
30-min	**2.11** (1.94-2.30)	**2.54** (2.34-2.77)	**3.06** (2.81-3.34)	**3.40** (3.12-3.70)	**3.79** (3.45-4.11)	**4.04** (3.67-4.39)	**4.26** (3.85-4.62)	**4.44** (4.00-4.82)	**4.63** (4.13-5.04)	**4.74** (4.20-5.17)
60-min	**1.32** (1.21-1.43)	**1.59** (1.47-1.74)	**1.96** (1.80-2.14)	**2.22** (2.03-2.41)	**2.52** (2.30-2.74)	**2.74** (2.49-2.97)	**2.93** (2.65-3.19)	**3.11** (2.80-3.38)	**3.32** (2.97-3.62)	**3.46** (3.07-3.77)
2-hr	**0.761** (0.704-0.825)	**0.922** (0.852-1.00)	**1.14** (1.06-1.24)	**1.31** (1.20-1.41)	**1.51** (1.38-1.62)	**1.65** (1.50-1.78)	**1.79** (1.62-1.94)	**1.93** (1.73-2.08)	**2.09** (1.85-2.26)	**2.20** (1.94-2.39)
3-hr	**0.541** (0.500-0.587)	**0.655** (0.607-0.712)	**0.816** (0.752-0.884)	**0.931** (0.857-1.01)	**1.08** (0.986-1.17)	**1.19** (1.08-1.28)	**1.29** (1.17-1.40)	**1.40** (1.25-1.51)	**1.52** (1.35-1.65)	**1.61** (1.41-1.74)
6-hr	**0.329** (0.304-0.358)	**0.396** (0.367-0.432)	**0.493** (0.455-0.536)	**0.566** (0.520-0.613)	**0.661** (0.603-0.714)	**0.734** (0.665-0.792)	**0.806** (0.725-0.869)	**0.877** (0.780-0.945)	**0.971** (0.851-1.05)	**1.04** (0.902-1.12)
12-hr	**0.192** (0.177-0.210)	**0.232** (0.214-0.254)	**0.290** (0.266-0.316)	**0.335** (0.307-0.365)	**0.395** (0.359-0.429)	**0.443** (0.398-0.479)	**0.491** (0.438-0.530)	**0.541** (0.477-0.583)	**0.608** (0.527-0.655)	**0.659** (0.562-0.709)
24-hr	**0.116** (0.108-0.126)	**0.141** (0.131-0.151)	**0.176** (0.163-0.189)	**0.203** (0.188-0.218)	**0.239** (0.221-0.258)	**0.268** (0.247-0.289)	**0.298** (0.274-0.321)	**0.328** (0.300-0.354)	**0.369** (0.335-0.399)	**0.400** (0.363-0.435)
2-day	**0.068** (0.063-0.073)	**0.081** (0.076-0.087)	**0.101** (0.094-0.108)	**0.115** (0.108-0.124)	**0.135** (0.126-0.145)	**0.151** (0.139-0.162)	**0.166** (0.153-0.179)	**0.182** (0.167-0.196)	**0.203** (0.186-0.220)	**0.220** (0.200-0.238)
3-day	**0.048** (0.045-0.051)	**0.057** (0.054-0.062)	**0.071** (0.066-0.076)	**0.081** (0.076-0.087)	**0.095** (0.088-0.102)	**0.106** (0.098-0.114)	**0.117** (0.108-0.126)	**0.128** (0.118-0.138)	**0.143** (0.131-0.155)	**0.155** (0.141-0.168)
4-day	**0.038** (0.036-0.041)	**0.045** (0.043-0.049)	**0.056** (0.052-0.060)	**0.064** (0.060-0.068)	**0.075** (0.070-0.080)	**0.083** (0.078-0.090)	**0.092** (0.085-0.099)	**0.101** (0.093-0.109)	**0.113** (0.104-0.122)	**0.123** (0.112-0.133)
7-day	**0.025** (0.023-0.027)	**0.030** (0.028-0.032)	**0.036** (0.034-0.038)	**0.041** (0.038-0.044)	**0.048** (0.045-0.051)	**0.053** (0.049-0.057)	**0.058** (0.054-0.062)	**0.064** (0.059-0.069)	**0.071** (0.066-0.077)	**0.077** (0.071-0.083)
10-day	**0.020** (0.019-0.021)	**0.024** (0.022-0.025)	**0.028** (0.027-0.030)	**0.032** (0.030-0.034)	**0.037** (0.035-0.039)	**0.041** (0.038-0.043)	**0.045** (0.042-0.048)	**0.049** (0.045-0.052)	**0.054** (0.050-0.058)	**0.058** (0.054-0.062)
20-day	**0.013** (0.013-0.014)	**0.016** (0.015-0.017)	**0.019** (0.018-0.020)	**0.021** (0.020-0.022)	**0.024** (0.023-0.025)	**0.026** (0.025-0.028)	**0.029** (0.027-0.030)	**0.031** (0.029-0.033)	**0.035** (0.032-0.037)	**0.037** (0.034-0.040)
30-day	**0.011** (0.011-0.012)	**0.013** (0.012-0.014)	**0.015** (0.014-0.016)	**0.017** (0.016-0.017)	**0.019** (0.018-0.020)	**0.020** (0.019-0.021)	**0.022** (0.021-0.023)	**0.024** (0.022-0.025)	**0.026** (0.024-0.027)	**0.027** (0.026-0.029)
45-day	**0.009** (0.009-0.010)	**0.011** (0.010-0.011)	**0.012** (0.012-0.013)	**0.014** (0.013-0.014)	**0.015** (0.014-0.016)	**0.016** (0.016-0.017)	**0.018** (0.017-0.018)	**0.019** (0.018-0.020)	**0.020** (0.019-0.021)	**0.021** (0.020-0.023)
60-day	**0.008** (0.008-0.009)	**0.010** (0.009-0.010)	**0.011** (0.010-0.011)	**0.012** (0.011-0.012)	**0.013** (0.013-0.014)	**0.014** (0.013-0.015)	**0.015** (0.014-0.015)	**0.016** (0.015-0.016)	**0.017** (0.016-0.018)	**0.018** (0.017-0.018)

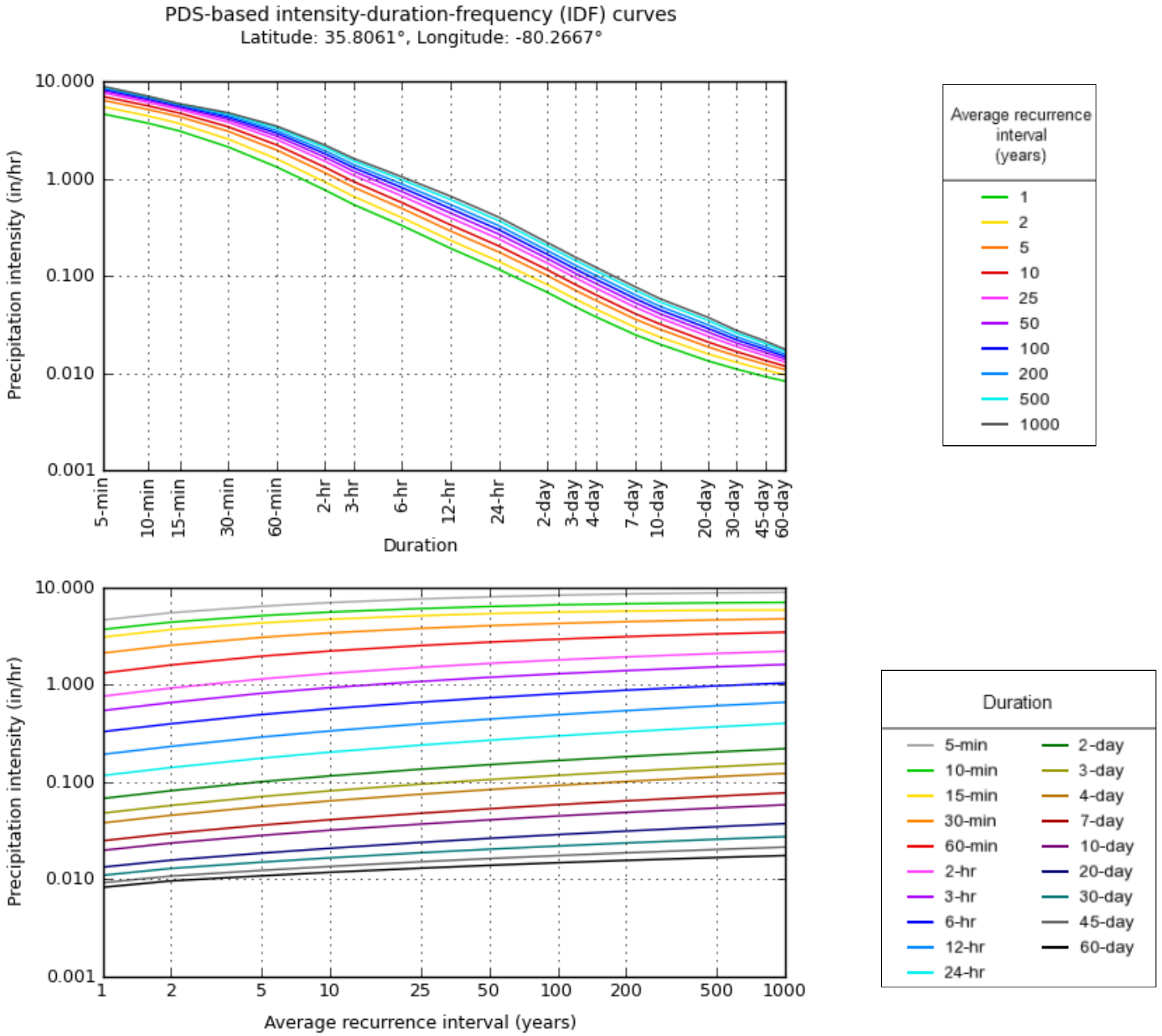
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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



NOAA Atlas 14, Volume 2, Version 3

Created (GMT): Mon Dec 19 20:09:15 2022

Back to Top

Maps & aerials

Small scale terrain

NOAA Atlas 14, Volume 2, Version 3
Location name: Lexington, North Carolina, USA*
Latitude: 35.8061°, Longitude: -80.2667°
Elevation: 744.62 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.385** (0.354-0.420)	**0.457** (0.421-0.499)	**0.532** (0.488-0.579)	**0.581** (0.532-0.631)	**0.633** (0.577-0.687)	**0.665** (0.604-0.722)	**0.692** (0.625-0.752)	**0.713** (0.642-0.775)	**0.731** (0.653-0.795)	**0.740** (0.656-0.807)
10-min	**0.615** (0.565-0.670)	**0.731** (0.673-0.798)	**0.852** (0.782-0.928)	**0.929** (0.851-1.01)	**1.01** (0.920-1.09)	**1.06** (0.962-1.15)	**1.10** (0.994-1.19)	**1.13** (1.02-1.23)	**1.16** (1.03-1.26)	**1.17** (1.03-1.27)
15-min	**0.769** (0.706-0.838)	**0.919** (0.846-1.00)	**1.08** (0.989-1.17)	**1.17** (1.08-1.28)	**1.28** (1.17-1.39)	**1.34** (1.22-1.46)	**1.39** (1.26-1.51)	**1.43** (1.28-1.55)	**1.46** (1.30-1.58)	**1.46** (1.30-1.60)
30-min	**1.06** (0.968-1.15)	**1.27** (1.17-1.39)	**1.53** (1.41-1.67)	**1.70** (1.56-1.85)	**1.89** (1.73-2.06)	**2.02** (1.84-2.19)	**2.13** (1.92-2.31)	**2.22** (2.00-2.41)	**2.32** (2.07-2.52)	**2.37** (2.10-2.58)
60-min	**1.32** (1.21-1.43)	**1.59** (1.47-1.74)	**1.96** (1.80-2.14)	**2.22** (2.03-2.41)	**2.52** (2.30-2.74)	**2.74** (2.49-2.97)	**2.93** (2.65-3.19)	**3.11** (2.80-3.38)	**3.32** (2.97-3.62)	**3.46** (3.07-3.77)
2-hr	**1.52** (1.41-1.65)	**1.84** (1.70-2.00)	**2.29** (2.11-2.48)	**2.61** (2.40-2.82)	**3.01** (2.75-3.25)	**3.31** (3.01-3.57)	**3.59** (3.24-3.88)	**3.85** (3.46-4.17)	**4.18** (3.71-4.52)	**4.41** (3.88-4.78)
3-hr	**1.63** (1.50-1.76)	**1.97** (1.82-2.14)	**2.45** (2.26-2.66)	**2.80** (2.57-3.02)	**3.24** (2.96-3.50)	**3.57** (3.25-3.85)	**3.89** (3.52-4.19)	**4.19** (3.76-4.52)	**4.57** (4.05-4.94)	**4.84** (4.24-5.24)
6-hr	**1.97** (1.82-2.14)	**2.37** (2.20-2.58)	**2.95** (2.72-3.21)	**3.39** (3.11-3.67)	**3.96** (3.61-4.28)	**4.39** (3.98-4.75)	**4.83** (4.34-5.20)	**5.25** (4.67-5.66)	**5.82** (5.10-6.27)	**6.23** (5.40-6.72)
12-hr	**2.32** (2.13-2.53)	**2.80** (2.58-3.06)	**3.49** (3.21-3.81)	**4.03** (3.69-4.39)	**4.76** (4.32-5.17)	**5.34** (4.80-5.77)	**5.92** (5.28-6.39)	**6.52** (5.75-7.03)	**7.32** (6.35-7.89)	**7.94** (6.77-8.55)
24-hr	**2.80** (2.60-3.01)	**3.38** (3.14-3.63)	**4.21** (3.91-4.54)	**4.86** (4.51-5.24)	**5.74** (5.30-6.19)	**6.44** (5.93-6.94)	**7.14** (6.57-7.71)	**7.86** (7.20-8.50)	**8.84** (8.05-9.59)	**9.61** (8.71-10.4)
2-day	**3.25** (3.03-3.49)	**3.91** (3.65-4.19)	**4.84** (4.51-5.19)	**5.54** (5.16-5.94)	**6.49** (6.03-6.96)	**7.23** (6.70-7.76)	**7.98** (7.36-8.58)	**8.74** (8.04-9.41)	**9.76** (8.93-10.5)	**10.6** (9.62-11.4)
3-day	**3.45** (3.23-3.69)	**4.14** (3.87-4.43)	**5.10** (4.77-5.46)	**5.84** (5.46-6.26)	**6.84** (6.36-7.33)	**7.62** (7.07-8.18)	**8.42** (7.78-9.05)	**9.23** (8.49-9.94)	**10.3** (9.45-11.1)	**11.2** (10.2-12.1)
4-day	**3.64** (3.42-3.90)	**4.37** (4.10-4.68)	**5.36** (5.03-5.74)	**6.14** (5.75-6.57)	**7.19** (6.70-7.70)	**8.01** (7.44-8.60)	**8.86** (8.20-9.53)	**9.71** (8.95-10.5)	**10.9** (9.97-11.8)	**11.8** (10.7-12.8)
7-day	**4.18** (3.94-4.46)	**4.99** (4.70-5.32)	**6.05** (5.69-6.44)	**6.89** (6.46-7.34)	**8.02** (7.50-8.55)	**8.91** (8.31-9.51)	**9.82** (9.12-10.5)	**10.8** (9.95-11.5)	**12.0** (11.1-12.9)	**13.0** (11.9-14.0)
10-day	**4.76** (4.51-5.05)	**5.66** (5.35-6.00)	**6.78** (6.41-7.18)	**7.67** (7.24-8.12)	**8.86** (8.34-9.38)	**9.80** (9.19-10.4)	**10.7** (10.0-11.4)	**11.7** (10.9-12.4)	**13.0** (12.0-13.9)	**14.0** (12.9-15.0)
20-day	**6.40** (6.09-6.74)	**7.55** (7.18-7.95)	**8.92** (8.46-9.39)	**10.0** (9.48-10.5)	**11.5** (10.8-12.1)	**12.7** (11.9-13.4)	**13.8** (13.0-14.6)	**15.0** (14.0-15.9)	**16.7** (15.5-17.7)	**17.9** (16.5-19.1)
30-day	**7.93** (7.58-8.30)	**9.32** (8.90-9.74)	**10.8** (10.3-11.3)	**12.0** (11.4-12.5)	**13.5** (12.8-14.1)	**14.7** (13.9-15.4)	**15.9** (15.0-16.6)	**17.0** (16.1-17.9)	**18.6** (17.4-19.6)	**19.8** (18.5-20.9)
45-day	**9.97** (9.57-10.4)	**11.7** (11.2-12.2)	**13.3** (12.8-13.9)	**14.7** (14.0-15.2)	**16.4** (15.6-17.0)	**17.7** (16.8-18.4)	**18.9** (18.0-19.8)	**20.2** (19.1-21.2)	**21.9** (20.6-23.0)	**23.2** (21.7-24.4)
60-day	**11.9** (11.5-12.4)	**13.9** (13.4-14.4)	**15.7** (15.1-16.3)	**17.0** (16.4-17.7)	**18.7** (18.0-19.5)	**20.1** (19.2-20.9)	**21.3** (20.4-22.2)	**22.5** (21.5-23.6)	**24.1** (22.9-25.3)	**25.3** (24.0-26.6)

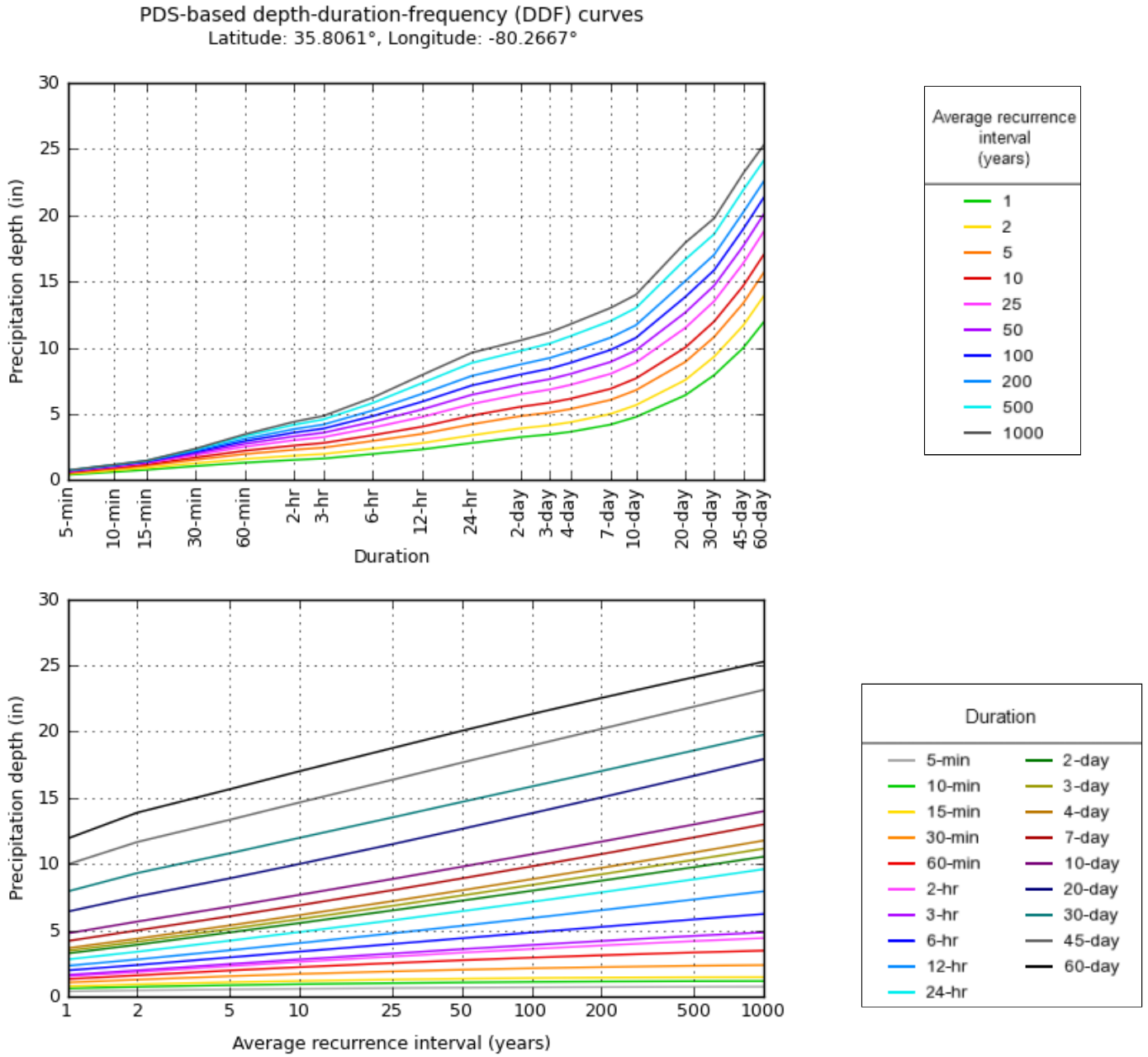
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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



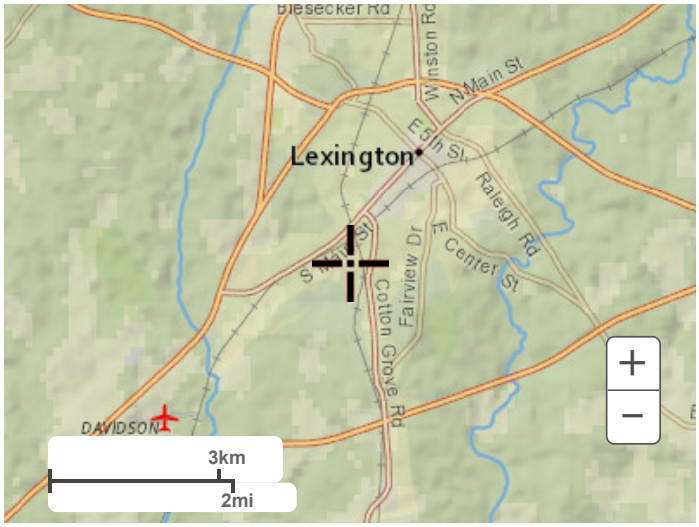
NOAA Atlas 14, Volume 2, Version 3

Created (GMT): Mon Dec 19 20:11:10 2022

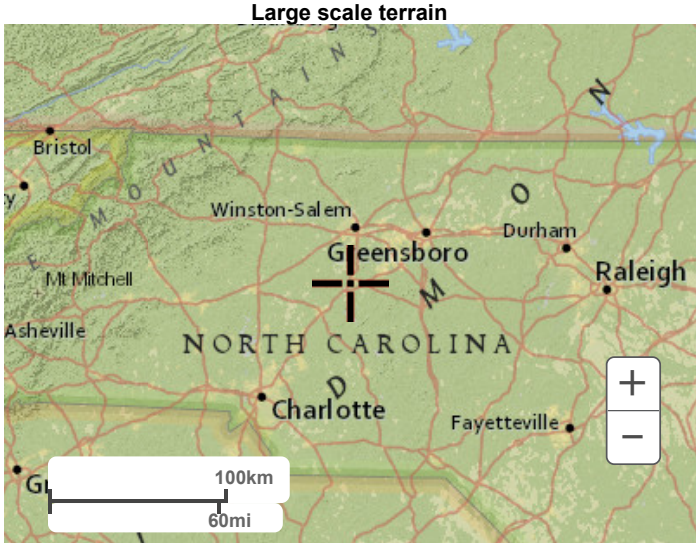
Back to Top

Maps & aerials

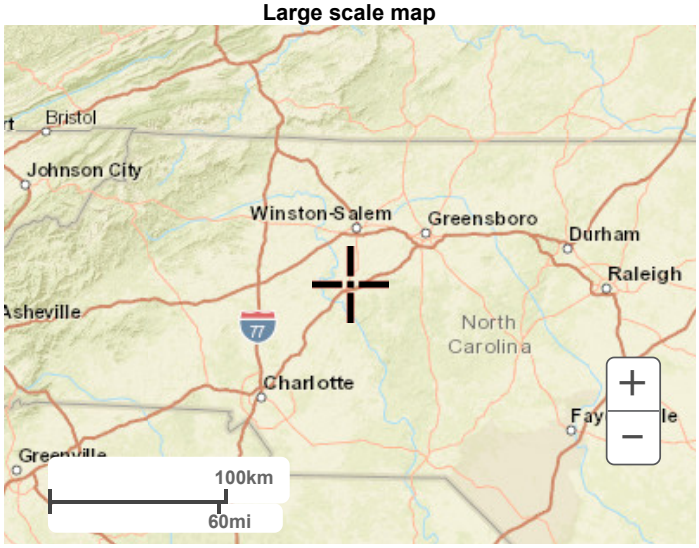
Small scale terrain



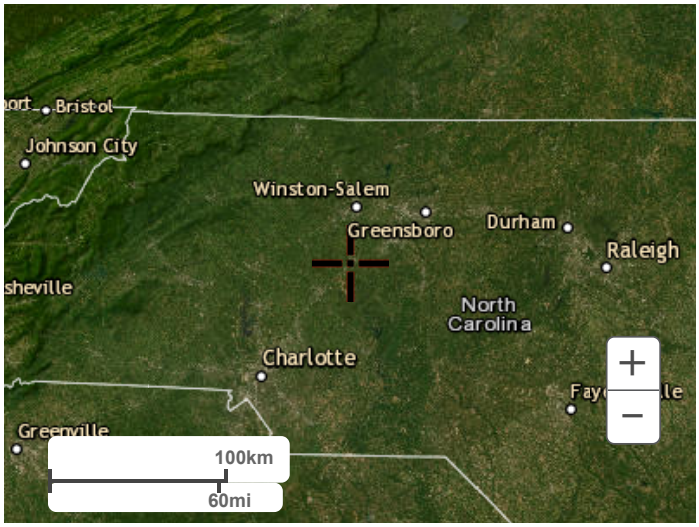
Large scale terrain



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer