



INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

Greater South Haven Drainage Study-
Coventry, New South Haven and Salt Creek Valley Commons
Porter County, Indiana

APPENDIX II A – Rainfall Depths



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

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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	0.375 (0.337-0.418)	0.443 (0.398-0.491)	0.525 (0.472-0.582)	0.597 (0.537-0.661)	0.684 (0.612-0.755)	0.756 (0.674-0.836)	0.824 (0.731-0.912)	0.895 (0.789-0.992)	0.991 (0.865-1.10)	1.07 (0.925-1.19)
10-min	0.583 (0.524-0.649)	0.692 (0.622-0.767)	0.816 (0.734-0.904)	0.922 (0.829-1.02)	1.05 (0.936-1.16)	1.15 (1.02-1.27)	1.24 (1.10-1.37)	1.34 (1.18-1.48)	1.46 (1.27-1.62)	1.55 (1.35-1.73)
15-min	0.714 (0.643-0.796)	0.846 (0.761-0.938)	1.00 (0.901-1.11)	1.14 (1.02-1.25)	1.29 (1.16-1.43)	1.42 (1.26-1.57)	1.54 (1.37-1.71)	1.66 (1.47-1.84)	1.82 (1.59-2.02)	1.94 (1.68-2.16)
30-min	0.945 (0.850-1.05)	1.13 (1.02-1.25)	1.37 (1.23-1.52)	1.58 (1.42-1.74)	1.83 (1.63-2.02)	2.03 (1.81-2.24)	2.23 (1.98-2.46)	2.43 (2.14-2.69)	2.69 (2.35-2.99)	2.91 (2.52-3.24)
60-min	1.15 (1.04-1.29)	1.39 (1.25-1.54)	1.72 (1.55-1.91)	2.01 (1.80-2.22)	2.37 (2.12-2.61)	2.67 (2.38-2.95)	2.98 (2.64-3.29)	3.29 (2.90-3.65)	3.72 (3.25-4.14)	4.09 (3.54-4.55)
2-hr	1.33 (1.19-1.47)	1.61 (1.45-1.78)	2.05 (1.84-2.26)	2.43 (2.18-2.68)	2.94 (2.62-3.23)	3.38 (3.00-3.71)	3.83 (3.38-4.20)	4.30 (3.77-4.72)	4.96 (4.31-5.46)	5.52 (4.76-6.10)
3-hr	1.43 (1.29-1.60)	1.74 (1.57-1.93)	2.22 (2.00-2.46)	2.64 (2.38-2.93)	3.21 (2.87-3.55)	3.70 (3.29-4.09)	4.21 (3.72-4.65)	4.75 (4.18-5.25)	5.51 (4.80-6.11)	6.17 (5.32-6.84)
6-hr	1.72 (1.53-1.94)	2.09 (1.86-2.35)	2.67 (2.38-3.01)	3.21 (2.84-3.61)	3.94 (3.47-4.42)	4.59 (4.02-5.15)	5.27 (4.59-5.91)	6.02 (5.20-6.75)	7.10 (6.05-7.97)	8.04 (6.78-9.04)
12-hr	2.02 (1.79-2.27)	2.43 (2.17-2.74)	3.09 (2.76-3.48)	3.69 (3.29-4.15)	4.51 (3.99-5.06)	5.24 (4.60-5.85)	6.00 (5.23-6.70)	6.82 (5.90-7.63)	8.00 (6.84-8.96)	9.03 (7.65-10.1)
24-hr	2.35 (2.16-2.59)	2.87 (2.63-3.16)	3.70 (3.38-4.08)	4.39 (3.99-4.82)	5.38 (4.85-5.91)	6.23 (5.57-6.84)	7.14 (6.32-7.84)	8.13 (7.12-8.94)	9.57 (8.24-10.6)	10.8 (9.14-11.9)
2-day	2.75 (2.54-3.00)	3.33 (3.07-3.63)	4.20 (3.87-4.58)	4.92 (4.51-5.35)	5.95 (5.42-6.49)	6.82 (6.16-7.45)	7.74 (6.92-8.49)	8.74 (7.72-9.63)	10.2 (8.82-11.3)	11.4 (9.69-12.8)
3-day	2.95 (2.73-3.19)	3.55 (3.28-3.84)	4.43 (4.10-4.80)	5.15 (4.75-5.58)	6.18 (5.66-6.70)	7.04 (6.39-7.65)	7.94 (7.14-8.66)	8.91 (7.93-9.77)	10.3 (9.00-11.4)	11.5 (9.86-12.8)
4-day	3.14 (2.92-3.38)	3.76 (3.50-4.06)	4.66 (4.32-5.02)	5.38 (4.98-5.80)	6.41 (5.90-6.91)	7.26 (6.62-7.85)	8.14 (7.37-8.84)	9.09 (8.13-9.91)	10.4 (9.19-11.5)	11.6 (10.0-12.8)
7-day	3.70 (3.47-3.96)	4.40 (4.13-4.72)	5.32 (4.98-5.71)	6.07 (5.67-6.50)	7.10 (6.59-7.60)	7.92 (7.32-8.49)	8.77 (8.04-9.44)	9.65 (8.78-10.4)	10.9 (9.75-11.8)	11.9 (10.5-13.0)
10-day	4.21 (3.94-4.51)	4.99 (4.67-5.36)	5.99 (5.60-6.43)	6.82 (6.35-7.31)	7.97 (7.38-8.56)	8.92 (8.20-9.60)	9.90 (9.02-10.7)	10.9 (9.85-11.9)	12.4 (11.0-13.5)	13.5 (11.8-14.9)
20-day	5.68 (5.36-6.06)	6.72 (6.33-7.15)	7.92 (7.44-8.42)	8.85 (8.31-9.41)	10.1 (9.44-10.7)	11.1 (10.3-11.8)	12.0 (11.1-12.8)	13.0 (11.9-13.9)	14.2 (13.0-15.4)	15.2 (13.7-16.5)
30-day	7.09 (6.74-7.48)	8.35 (7.93-8.81)	9.67 (9.17-10.2)	10.7 (10.1-11.2)	11.9 (11.2-12.5)	12.8 (12.0-13.5)	13.6 (12.8-14.4)	14.4 (13.5-15.3)	15.4 (14.3-16.5)	16.2 (14.9-17.4)
45-day	8.91 (8.51-9.34)	10.4 (9.97-10.9)	11.9 (11.3-12.4)	12.9 (12.3-13.5)	14.2 (13.5-14.9)	15.1 (14.3-15.9)	15.9 (15.1-16.8)	16.6 (15.7-17.6)	17.5 (16.5-18.6)	18.1 (17.0-19.3)
60-day	10.6 (10.1-11.1)	12.4 (11.9-13.0)	14.2 (13.5-14.8)	15.4 (14.7-16.2)	17.0 (16.1-17.8)	18.1 (17.2-19.0)	19.1 (18.1-20.1)	20.0 (18.9-21.2)	21.1 (19.8-22.5)	21.9 (20.5-23.4)

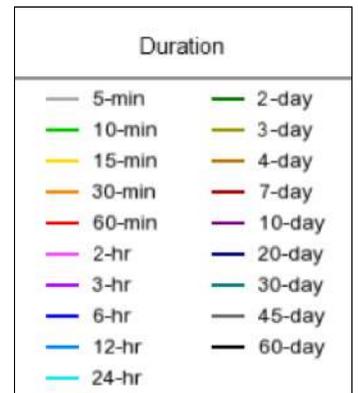
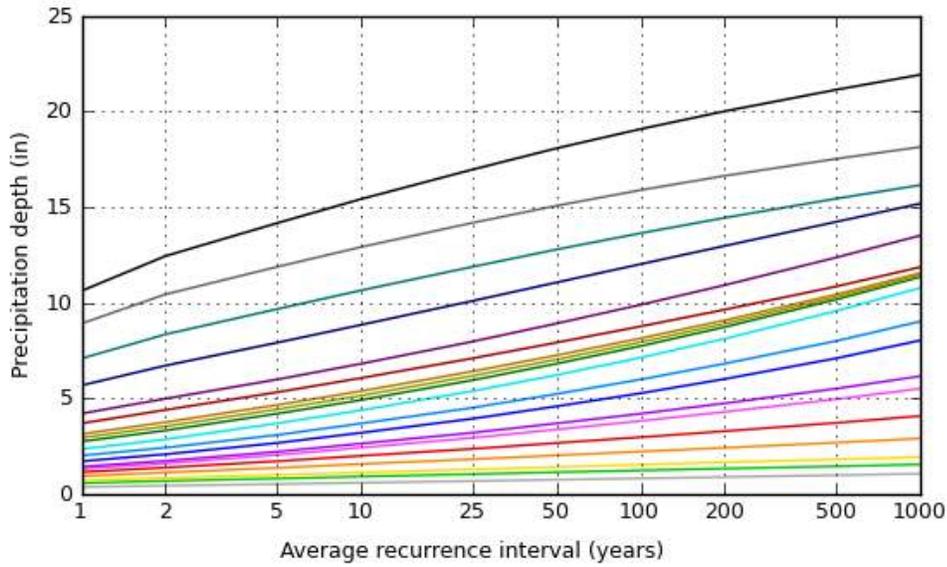
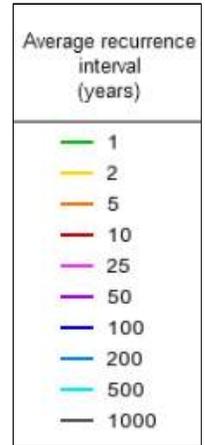
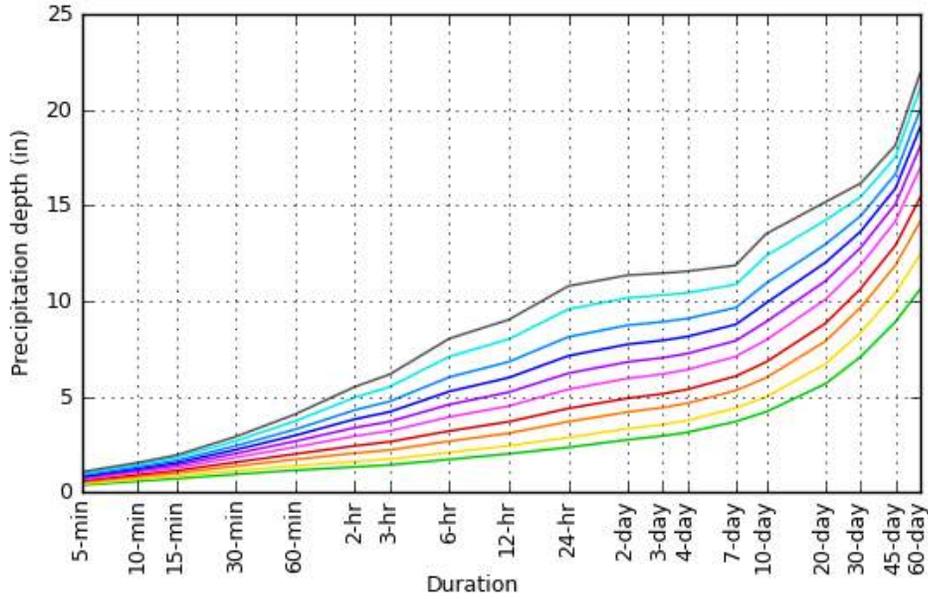
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average 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.

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PF graphical

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

Latitude: 41.5243°, Longitude: -87.1426°



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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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