

# RAINFALL FREQUENCY VALUES FOR KENTUCKY

Engineering Memorandum No. 2  
April 30, 1971; Revised - June 1, 1979



COMMONWEALTH OF KENTUCKY  
DEPARTMENT FOR NATURAL RESOURCES  
AND ENVIRONMENTAL PROTECTION  
BUREAU OF NATURAL RESOURCES  
DIVISION OF WATER RESOURCES



**KENTUCKY**



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DIVISION OF WATER RESOURCES  
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
ENGINEERING MEMORANDUM NO. 2 (4-30-71), REVISED (6-1-79)

RAINFALL FREQUENCY VALUES FOR KENTUCKY

THIS INFORMATION HAS BEEN PREPARED BY THE DIVISION OF WATER RESOURCES, DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION, COMMONWEALTH OF KENTUCKY. (AUTHORITY-KRS 151.220)

POINT RAINFALL VALUES HAVE BEEN DETERMINED FOR EACH OF THE 120 COUNTIES OF THE COMMONWEALTH AND TABULATED IN A CONVENIENT FORM. THE SOURCES OF THE INFORMATION WERE TECHNICAL PAPER 40 (RAINFALL FREQUENCY ATLAS OF THE UNITED STATES FOR DURATIONS FROM 30 MINUTES TO 24 HOURS AND RETURN PERIODS FROM 1 TO 100 YEARS) AND TECHNICAL PAPER 49 (TWO-TO TEN-DAY PRECIPITATION FOR RETURN PERIODS OF 2 TO 100 YEARS IN THE CONTIGUOUS UNITED STATES), WEATHER BUREAU, U.S. DEPARTMENT OF COMMERCE. PRECIPITATION VALUES PUBLISHED IN HYDROMETEOROLOGICAL OF THE ARMY, JUNE, 1978).

THE ESTIMATED POINT RAINFALL VALUES ARE BELIEVED TO BE ADEQUATE FOR MOST ENGINEERING DESIGN PURPOSES AND ARE MADE AVAILABLE TO FILL THE NEEDS OF PERSONS WHO DO NOT HAVE THE BASIC INFORMATION READILY AVAILABLE. THE POINT RAINFALL VALUES USED IN THIS PUBLICATION ARE VALUES FOR TEN (10) SQUARE MILE AREAS.

ADJUSTMENT FOR APEAL AND SEASONAL VARIATIONS ARE NOT COVERED IN THIS PUBLICATION, HOWEVER ASSISTANCE FOR THE MORE SOPHISTICATED DETERMINATIONS MAY BE OBTAINED BY CONTACTING THE DIVISION OF WATER RESOURCES.

THE LAST SERIES OF TABLES SHOWS VALUES FOR RUNOFF VOLUMES AND QUICK RETURN FLOWS. THE RUNOFF VOLUMES REPRESENT VALUES WHERE MEASURED RUNOFF MAY VARY FROM THAT OBTAINED BY THE CURVE NUMBER METHOD. THEY REPRESENT REGIONALIZED VALUES DERIVED FROM GAGED STREAMFLOW DATA AND SUPPLEMENTED WITH CLIMATOLOGICAL DATA AND LOCAL OBSERVATIONS. THE QUICK RETURN FLOWS ARE THOSE RATES OF DISCHARGE EXPECTED TO PERSIST BEYOND THE FLOOD PERIOD AS DESCRIBED BY THE 10-DAY PRINCIPAL SPILLWAY HYDROGRAPH. ALL VALUES IN THESE TABLES CAME FROM EXHIBITS 21.1, 21-2, AND 21-3 OF THE SOIL CONSERVATION SERVICE NATIONAL ENGINEERING HANDBOOK, SECTION 4, HYDROLOGY.

DIVISION OF WATER RESURECES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIROMENTAL PROTECTION  
 ENGINEERING MEMORADUM NO.2 (4-30-71), REVISED (6-1-79)

30 MINUTE RAINFALL (INCHES)

PAGE 1 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100
ADAIR	1.0	1.2	1.4	1.7	1.9	2.1	2.4
ALLEN	1.0	1.2	1.5	1.7	1.9	2.1	2.4
ANDERSON	0.9	1.1	1.4	1.6	1.9	2.0	2.3
BALLARD	1.1	1.3	1.6	1.8	2.0	2.2	2.5
BARREN	1.0	1.2	1.5	1.7	1.9	2.1	2.4
BATH	0.9	1.1	1.4	1.6	1.8	2.0	2.2
BELL	1.0	1.1	1.5	1.7	1.9	2.1	2.4
BOONE	0.9	1.1	1.4	1.6	1.8	2.0	2.2
BOURBON	0.9	1.1	1.4	1.6	1.8	2.0	2.2
BOYD	0.9	1.1	1.4	1.6	1.8	2.0	2.2
BOYLE	0.9	1.1	1.4	1.6	1.9	2.1	2.3
BRACKEN	0.9	1.1	1.4	1.6	1.8	2.0	2.2
BREATHITT	0.9	1.1	1.4	1.6	1.9	2.1	2.3
BRECKENRIDGE	1.0	1.2	1.4	1.7	1.9	2.1	2.3
BULLITT	1.0	1.1	1.4	1.6	1.9	2.1	2.3
BUTLER	1.0	1.2	1.5	1.7	1.9	2.1	2.4
CALDWELL	1.1	1.2	1.5	1.8	2.0	2.2	2.4
CALLOWAY	1.1	1.2	1.6	1.8	2.0	2.2	2.5
CAMPBELL	0.9	1.1	1.4	1.6	1.8	2.0	2.2
CARLISLE	1.1	1.3	1.6	1.8	2.0	2.3	2.5
CARROLL	0.9	1.1	1.4	1.6	1.8	2.0	2.2
CARTER	0.9	1.1	1.4	1.6	1.8	2.0	2.2
CASEY	1.0	1.1	1.4	1.7	1.9	2.1	2.3
CHRISTIAN	1.0	1.2	1.5	1.7	2.0	2.2	2.4
CLARK	0.9	1.1	1.4	1.6	1.8	2.1	2.3
CLAY	0.9	1.1	1.4	1.7	1.9	2.1	2.3
CLINTON	1.0	1.2	1.5	1.7	1.9	2.1	2.4
CRITTENDEN	1.1	1.2	1.5	1.8	2.0	2.2	2.4
CUMBERLAND	1.0	1.2	1.5	1.7	1.9	2.1	2.4
DAVIESS	1.0	1.2	1.5	1.7	1.9	2.1	2.3
EDMONSON	1.0	1.2	1.5	1.7	1.9	2.1	2.3
ELLIOTT	0.9	1.1	1.4	1.6	1.8	2.1	2.2
ESTILL	0.9	1.1	1.4	1.6	1.9	2.1	2.3
FAYETTE	0.9	1.1	1.4	1.6	1.8	2.1	2.3
FLEMING	0.9	1.1	1.4	1.6	1.8	2.0	2.2
FLOYD	0.9	1.1	1.4	1.6	1.9	2.1	2.3
FRANKLIN	0.9	1.1	1.4	1.6	1.8	2.0	2.3
FULTON	1.1	1.3	1.6	1.8	2.0	2.3	2.5
GALLATIN	0.9	1.1	1.4	1.6	1.9	2.1	2.2
GARRARD	0.9	1.1	1.4	1.6	1.9	2.1	2.3

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

30 MINUTE RAINFALL (INCHES)

PAGE 2 OF 3

COUNTY	FREQUENCY (YEARS)						
	1	2	5	10	25	50	
GRANT	0.9	1.1	1.4	1.6	1.8	2.0	2.2
GRAVES	1.1	1.3	1.6	1.8	2.0	2.2	2.5
GRAYSON	1.0	1.2	1.4	1.7	1.9	2.1	2.3
GREEN	1.0	1.1	1.4	1.7	1.9	2.1	2.3
GREENUP	0.9	1.1	1.4	1.6	1.8	2.0	2.2
HANCOCK	1.0	1.2	1.4	1.7	1.9	2.1	2.3
HARDIN	1.0	1.2	1.4	1.6	1.9	2.1	2.3
HARLIN	1.0	1.1	1.5	1.7	1.9	2.1	2.3
HARRISON	0.9	1.1	1.4	1.6	1.8	2.0	2.2
HART	1.0	1.2	1.4	1.7	1.9	2.1	2.3
HENDERSON	1.0	1.2	1.5	1.7	1.9	2.1	2.3
HENRY	0.9	1.1	1.4	1.6	1.8	2.0	2.2
HICKMAN	1.1	1.3	1.6	1.8	2.0	2.3	2.5
HOPKINS	1.0	1.2	1.5	1.7	1.9	2.1	2.4
JACKSON	0.9	1.1	1.4	1.6	1.9	2.1	2.3
JEFFERSON	1.0	1.1	1.4	1.6	1.9	2.0	2.3
JESSAMINE	0.9	1.1	1.4	1.6	1.9	2.1	2.3
JOHNSON	0.9	1.1	1.4	1.6	1.9	2.1	2.3
KENTON	0.9	1.1	1.4	1.6	1.8	2.0	2.2
KNOTT	0.9	1.1	1.4	1.6	1.9	2.1	2.3
KNOX	1.0	1.1	1.5	1.7	1.9	2.1	2.3
LARUE	1.0	1.1	1.4	1.7	1.9	2.1	2.3
LAURAL	1.0	1.1	1.4	1.7	1.9	2.1	2.3
LAWRENCE	0.9	1.1	1.4	1.6	1.8	2.1	2.2
LEE	0.9	1.1	1.4	1.6	1.9	2.1	2.3
LESLIE	0.9	1.1	1.4	1.7	1.9	2.1	2.3
LETCHER	0.9	1.1	1.4	1.7	1.9	2.1	2.3
LEWIS	0.9	1.1	1.4	1.6	1.8	2.0	2.2
LINCOLN	0.9	1.1	1.4	1.6	1.9	2.1	2.3
LIVINGSTON	1.1	1.2	1.5	1.8	2.0	2.2	2.4
LOGAN	1.0	1.2	1.5	1.7	1.9	2.1	2.4
LYON	1.0	1.2	1.5	1.8	2.0	2.2	2.4
MCCRACKEN	1.0	1.3	1.6	1.8	2.0	2.2	2.5
MCCREARY	1.0	1.2	1.5	1.7	1.9	2.1	2.4
MCLEAN	1.0	1.2	1.5	1.7	1.9	2.1	2.4
MADISON	0.9	1.1	1.4	1.6	1.9	2.1	2.3
MAGOFFIN	0.9	1.1	1.4	1.6	1.9	2.1	2.3
MARION	1.0	1.1	1.4	1.6	1.9	2.1	2.3
MARSHALL	1.0	1.2	1.6	1.8	2.0	2.2	2.5
MARTIN	0.9	1.1	1.4	1.6	1.9	2.1	2.3

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

30 MINUTE RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNT	1	2	5	10	25	50	100
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MASON	0.9	1.1	1.4	1.6	1.8	2.0	2.2
MEADE	1.0	1.2	1.4	1.6	1.9	2.1	2.3
MENIFEE	0.9	1.1	1.4	1.6	1.9	2.1	2.3
MERCER	0.9	1.1	1.4	1.6	1.9	2.1	2.3
METCALFE	1.0	1.2	1.5	1.7	1.9	2.1	2.4
MONROE	1.0	1.2	1.5	1.7	1.9	2.1	2.4
MONTGOMERY	0.9	1.1	1.4	1.6	1.8	2.1	2.3
MORGAN	0.9	1.1	1.4	1.6	1.8	2.1	2.3
MUHLENBERG	1.0	1.2	1.5	1.7	1.9	2.1	2.4
NELSON	1.0	1.1	1.4	1.6	1.9	2.1	2.3
NICHOLAS	0.9	1.1	1.4	1.6	1.8	2.0	2.2
OHIO	1.0	1.2	1.5	1.7	1.9	2.1	2.3
OLDHAM	0.9	1.1	1.4	1.6	1.8	2.0	2.2
OWEN	0.9	1.1	1.4	1.6	1.8	2.0	2.2
OWSLEY	0.9	1.1	1.4	1.6	1.9	2.1	2.3
PENDLETON	0.9	1.1	1.4	1.6	1.8	2.0	2.2
PERRY	0.9	1.1	1.4	1.7	1.9	2.1	2.3
PIKE	0.9	1.1	1.4	1.6	1.9	2.1	2.3
POWELL	0.9	1.1	1.4	1.6	1.9	2.1	2.3
PULASKI	1.0	1.1	1.4	1.7	1.9	2.1	2.3
ROBERTSON	0.9	1.1	1.4	1.6	1.8	2.0	2.2
ROCKCASTLE	0.9	1.1	1.4	1.6	1.9	2.1	2.3
ROWAN	0.9	1.1	1.4	1.6	1.8	2.0	2.2
RUSSELL	1.0	1.1	1.4	1.7	1.9	2.1	2.3
SCOTT	0.9	1.1	1.4	1.6	1.8	2.0	2.2
SHELBY	0.9	1.1	1.4	1.6	1.8	2.0	2.3
SIMPSON	1.0	1.2	1.5	1.7	1.9	2.1	2.4
SPENCER	0.9	1.1	1.4	1.6	1.9	2.0	2.3
TAYLOR	1.0	1.1	1.4	1.7	1.9	2.1	2.3
TODD	1.0	1.2	1.5	1.7	1.9	2.1	2.4
TRIGG	1.1	1.2	1.5	1.8	2.0	2.2	2.4
TRIMBLE	0.9	1.1	1.4	1.6	1.8	2.0	2.2
UNION	1.0	1.2	1.5	1.7	2.0	2.2	2.4
WARREN	1.0	1.2	1.5	1.7	1.9	2.1	2.4
WASHINGTON	1.0	1.1	1.4	1.6	1.9	2.1	2.3
WAYNE	1.0	1.2	1.5	1.7	1.9	2.1	2.4
WEBSTER	1.0	1.2	1.5	1.7	1.9	2.1	2.4
WHITLEY	1.0	1.2	1.5	1.7	1.9	2.1	2.4
WOLFE	0.9	1.1	1.4	1.6	1.9	2.1	2.3
WOODFORD	0.9	1.1	1.4	1.6	1.9	2.0	2.3

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

1 HOUR RAINFALL (INCHES)

PAGE 1 OF 3

COUNTY	FREQUENCY (YEARS)						
	1	2	5	10	25	50	100
ADAIR	1.2	1.4	1.8	2.1	2.4	2.7	2.9
ALLEN	1.2	1.5	1.8	2.1	2.4	2.7	2.9
ANDERSON	1.2	1.4	1.7	2.0	2.3	2.6	2.8
BALLARD	1.3	1.6	2.0	2.3	2.6	2.9	3.1
BARREN	1.2	1.4	1.8	2.1	2.4	2.7	2.9
BATH	1.1	1.3	1.7	2.0	2.3	2.6	2.8
BELL	1.2	1.4	1.8	2.2	2.4	2.7	3.0
BOONE	1.1	1.4	1.7	2.0	2.3	2.5	2.8
BOURBON	1.1	1.3	1.7	2.0	2.3	2.6	2.8
BOYD	1.1	1.3	1.7	2.0	2.3	2.6	2.9
BOYLE	1.2	1.4	1.8	2.1	2.4	2.6	2.9
BRACKEN	1.1	1.3	1.7	2.0	2.2	2.5	2.8
BREATHITT	1.1	1.3	1.8	2.1	2.4	2.6	2.9
BRECKINRIDGE	1.2	1.4	1.8	2.1	2.4	2.6	2.9
BULLITT	1.2	1.4	1.8	2.1	2.3	2.6	2.8
BUTLER	1.2	1.5	1.8	2.1	2.4	2.7	2.9
CALDWELL	1.3	1.5	1.9	2.2	2.5	2.8	3.0
CALLOWAY	1.3	1.6	2.0	2.2	2.6	2.8	3.1
CAMPBELL	1.1	1.3	1.7	2.0	2.3	2.5	2.8
CARLISLE	1.3	1.6	2.0	2.3	2.6	2.9	3.2
CARROLL	1.1	1.4	1.7	2.0	2.3	2.5	2.8
CARTER	1.1	1.3	1.7	2.0	2.3	2.6	2.8
CASEY	1.2	1.4	1.8	2.1	2.4	2.6	2.9
CHRISTIAN	1.3	1.5	1.9	2.2	2.5	2.8	3.0
CLARK	1.1	1.4	1.7	2.0	2.3	2.6	2.8
CLAY	1.2	1.4	1.8	2.1	2.4	2.7	2.9
CLINTON	1.2	1.4	1.8	2.1	2.4	2.7	2.9
CRITTENDEN	1.3	1.5	1.9	2.2	2.5	2.8	3.0
CUMBERLAND	1.2	1.4	1.8	2.1	2.4	2.7	2.9
DAVIESS	1.2	1.5	1.9	2.1	2.4	2.7	3.0
EDMONSON	1.2	1.5	1.8	2.1	2.4	2.7	2.9
ELLIOTT	1.1	1.3	1.7	2.0	2.3	2.6	2.9
ESTILL	1.1	1.4	1.7	2.1	2.3	2.6	2.9
FAYETTE	1.1	1.4	1.7	2.0	2.3	2.6	2.8
FLEMING	1.1	1.3	1.7	2.0	2.3	2.5	2.8
FLOYD	1.1	1.4	1.8	2.1	2.4	2.7	2.9
FRANKLIN	1.1	1.4	1.7	2.0	2.3	2.6	2.8
FULTON	1.3	1.6	2.0	2.3	2.7	2.9	3.2
GALLATIN	1.1	1.4	1.7	2.0	2.3	2.5	2.8
GARRARD	1.1	1.4	1.8	2.1	2.3	2.6	2.9

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

1 HOUR RAINFALL (INCHES)

PAGE 2 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100
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GRANT	1.1	1.4	1.7	2.0	2.3	2.5	2.8
GRAVES	1.3	1.6	2.0	2.2	2.6	2.8	3.1
GRAYSON	1.2	1.4	1.8	2.1	2.4	2.7	2.9
GREEN	1.2	1.4	1.8	2.1	2.4	2.7	2.9
GREENUP	1.1	1.3	1.7	2.0	2.3	2.6	2.8
HANCOCK	1.2	1.5	1.8	2.1	2.4	2.7	2.9
HARDIN	1.2	1.4	1.8	2.1	2.4	2.6	2.9
HARLAN	1.2	1.4	1.8	2.1	2.4	2.7	3.0
HARRISON	1.1	1.3	1.7	2.0	2.3	2.5	2.8
HART	1.2	1.4	1.8	2.1	2.4	2.7	2.9
HENDERSON	1.3	1.5	1.9	2.1	2.4	2.7	3.0
HENRY	1.2	1.4	1.7	2.0	2.3	2.6	2.8
HICKMAN	1.3	1.6	2.0	2.3	2.6	2.9	3.2
HOPKINS	1.3	1.5	1.9	2.2	2.5	2.7	3.0
JACKSON	1.2	1.4	1.8	2.1	2.4	2.6	2.9
JEFFERSON	1.2	1.4	1.8	2.0	2.3	2.6	2.8
JESSAMINE	1.1	1.4	1.7	2.1	2.3	2.6	2.8
JOHNSON	1.1	1.3	1.7	2.1	2.3	2.6	2.9
KENTON	1.1	1.4	1.7	2.0	2.3	2.5	2.8
KNOTT	1.1	1.4	1.8	2.1	2.4	2.7	2.9
KNOX	1.2	1.4	1.8	2.1	2.4	2.7	2.9
LARUE	1.2	1.4	1.8	2.1	2.4	2.6	2.9
LAUREL	1.2	1.4	1.8	2.1	2.4	2.7	2.9
LAWRENCE	1.1	1.3	1.7	2.0	2.3	2.6	2.9
LEE	1.1	1.4	1.8	2.1	2.3	2.6	2.9
LESLIE	1.2	1.4	1.8	2.1	2.4	2.7	2.9
LETCHER	1.2	1.4	1.8	2.1	2.4	2.7	3.0
LEWIS	1.1	1.3	1.7	2.0	2.3	2.5	2.8
LINCOLN	1.2	1.4	1.8	2.1	2.4	2.6	2.9
LIVINGSTON	1.3	1.5	2.0	2.3	2.5	2.8	3.1
LOGAN	1.2	1.5	1.9	2.2	2.4	2.7	3.0
LYON	1.3	1.5	2.0	2.2	2.5	2.8	3.0
MCCRACKEN	1.3	1.6	2.0	2.2	2.6	2.8	3.1
MCCREARY	1.2	1.4	1.8	2.2	2.4	2.7	2.9
MCLEAN	1.2	1.5	1.9	2.1	2.4	2.7	3.0
MADISON	1.1	1.4	1.8	2.1	2.3	2.6	2.9
MAGOFFIN	1.1	1.3	1.8	2.1	2.3	2.6	2.9
MARION	1.2	1.4	1.8	2.1	2.3	2.6	2.9
MARSHALL	1.3	1.6	2.0	2.2	2.6	2.8	3.1
MARTIN	1.1	1.3	1.7	2.1	2.3	2.6	2.9

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO. 2 (4-30-71), REVISED (6-1-79)

1 HOUR RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100
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MASON	1.1	1.3	1.7	2.0	2.3	2.5	2.8
MEADE	1.2	1.4	1.8	2.1	2.4	2.6	2.9
MENIFEE	1.1	1.3	1.7	2.0	2.3	2.6	2.9
MERCER	1.2	1.4	1.8	2.1	2.3	2.6	2.8
METCALFE	1.2	1.4	1.8	2.1	2.4	2.7	2.9
MONROE	1.2	1.4	1.8	2.1	2.4	2.7	2.9
MONTGOMERY	1.1	1.3	1.7	2.0	2.3	2.6	2.8
MORGAN	1.1	1.3	1.7	2.1	2.3	2.6	2.9
MUHLENBERG	1.2	1.5	1.9	2.1	2.5	2.7	3.0
NELSON	1.2	1.4	1.8	2.1	2.3	2.6	2.9
NICHOLAS	1.1	1.3	1.7	2.0	2.3	2.6	2.8
OHIO	1.2	1.5	1.8	2.1	2.4	2.7	2.9
OLDHAM	1.2	1.4	1.8	2.0	2.3	2.6	2.8
OWEN	1.1	1.4	1.7	2.0	2.3	2.6	2.8
OWSLEY	1.1	1.4	1.8	2.1	2.4	2.6	2.9
PENDLETON	1.1	1.3	1.7	2.0	2.3	2.5	2.8
PERRY	1.2	1.4	1.8	2.1	2.4	2.7	3.0
PIKE	1.1	1.4	1.8	2.1	2.4	2.7	3.0
POWELL	1.1	1.3	1.7	2.1	2.3	2.6	2.9
PULASKI	1.2	1.4	1.8	2.1	2.4	2.7	2.9
ROBERTSON	1.1	1.3	1.7	2.0	2.3	2.5	2.8
ROCKCASTLE	1.2	1.4	1.8	2.1	2.4	2.6	2.9
ROWAN	1.1	1.3	1.7	2.0	2.3	2.6	2.8
RUSSELL	1.2	1.4	1.8	2.1	2.4	2.7	2.9
SCOTT	1.1	1.4	1.7	2.0	2.3	2.6	2.8
SHELBY	1.2	1.4	1.8	2.0	2.3	2.6	2.8
SIMPSON	1.2	1.5	1.9	2.2	2.4	2.7	2.9
SPENCER	1.2	1.4	1.8	2.1	2.3	2.6	2.8
TAYLOR	1.2	1.4	1.8	2.1	2.4	2.7	2.9
TODD	1.3	1.5	1.9	2.2	2.5	2.7	3.0
TRIGG	1.3	1.5	2.0	2.2	2.5	2.8	3.0
TRIMBLE	1.2	1.4	1.8	2.0	2.3	2.6	2.8
UNION	1.3	1.5	1.9	2.2	2.5	2.8	3.0
WARREN	1.2	1.5	1.8	2.1	2.4	2.7	2.9
WASHINGTON	1.2	1.4	1.8	2.1	2.3	2.6	2.8
WAYNE	1.2	1.4	1.8	2.1	2.4	2.7	2.9
WEBSTER	1.3	1.5	1.9	2.2	2.4	2.8	3.0
WHITLEY	1.2	1.4	1.8	2.2	2.4	2.7	2.9
WOLFE	1.1	1.3	1.7	2.1	2.3	2.6	2.9
WOODFORD	1.1	1.4	1.7	2.0	2.3	2.6	2.8

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO. 2 (4-30-71), REVISED 6-1-79)

2 HOURS RAINFALL (INCHES)

PAGE 1 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100
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ADAIR	1.5	1.8	2.3	2.5	2.9	3.3	3.6
ALLEN	1.5	1.8	2.3	2.6	3.0	3.3	3.7
ANDERSON	1.5	1.7	2.2	2.5	2.8	3.2	3.4
BALLARD	1.7	1.9	2.4	2.8	3.2	3.5	3.9
BARREN	1.5	1.8	2.3	2.6	2.9	3.3	3.7
BATH	1.4	1.8	2.1	2.4	2.8	3.1	3.4
BELL	1.5	1.7	2.3	2.5	2.9	3.3	3.6
BOONE	1.4	1.7	2.1	2.4	2.7	3.1	3.3
BOURBON	1.4	1.7	2.1	2.4	2.8	3.1	3.4
BOYD	1.4	1.6	2.1	2.4	2.8	3.1	3.4
BOYLE	1.5	1.7	2.2	2.5	2.8	3.2	3.5
BRACKEN	1.4	1.6	2.1	2.4	2.7	3.1	3.3
BREATHITT	1.4	1.7	2.2	2.4	2.8	3.2	3.5
BRECKINRIDGE	1.5	1.8	2.2	2.5	2.9	3.2	3.6
BULLITT	1.5	1.8	2.2	2.5	2.8	3.2	3.5
BUTLER	1.6	1.8	2.3	2.6	2.9	3.3	3.7
CALDWELL	1.6	1.9	2.3	2.7	3.0	3.4	3.8
CALLOWAY	1.6	1.9	2.4	2.8	3.1	3.5	3.9
CAMPBELL	1.4	1.6	2.1	2.4	2.7	3.1	3.3
CARLISLE	1.7	1.9	2.4	2.8	3.2	3.5	3.9
CARROLL	1.5	1.7	2.1	2.4	2.8	3.1	3.4
CARTER	1.4	1.6	2.1	2.4	2.7	3.1	3.4
CASEY	1.5	1.7	2.2	2.5	2.9	3.2	3.5
CHRISTIAN	1.6	1.9	2.3	2.7	3.0	3.4	3.8
CLARK	1.4	1.7	2.2	2.4	2.8	3.1	3.4
CLAY	1.5	1.7	2.2	2.5	2.9	3.2	3.5
CLINTON	1.5	1.8	2.3	2.6	2.9	3.3	3.6
CRITTENDEN	1.6	1.9	2.3	2.7	3.0	3.4	3.8
CUMBERLAND	1.5	1.8	2.3	2.6	2.9	3.3	3.6
DAVIESS	1.6	1.8	2.3	2.6	2.9	3.3	3.6
EDMONSON	1.5	1.8	2.3	2.6	2.9	3.3	3.6
ELLIOTT	1.4	1.6	2.1	2.4	2.8	3.1	3.4
ESTILL	1.4	1.7	2.2	2.4	2.8	3.2	3.4
FAYETTE	1.4	1.7	2.1	2.4	2.8	3.1	3.4
FLEMING	1.4	1.6	2.1	2.4	2.7	3.1	3.4
FLOYD	1.4	1.6	2.2	2.4	2.8	3.2	3.4
FRANKLIN	1.5	1.7	2.1	2.4	2.8	3.1	3.4
FULTON	1.7	1.9	2.4	2.8	3.2	3.5	3.9
GALLATIN	1.5	1.7	2.1	2.4	2.7	3.1	3.3
GARRARD	1.5	1.7	2.2	2.5	2.8	3.2	3.5

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO. 2 (4-30-71), REVISED (6-1-79)

2 HOUR RAINFALL (INCHES)

PAGE 2 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100
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GRANT	1.4	1.7	2.1	2.4	2.7	3.1	3.3
GRAVES	1.7	1.9	2.4	2.8	3.1	3.5	3.9
GRAYSON	1.5	1.8	2.3	2.6	2.9	3.3	3.6
GREEN	1.5	1.8	2.2	2.5	2.9	3.3	3.6
GREENUP	1.4	1.6	2.0	2.3	2.7	3.0	3.3
HANCOCK	1.6	1.8	2.3	2.6	2.9	3.2	3.6
HARDIN	1.5	1.8	2.2	2.5	2.9	3.2	3.5
HARLAN	1.5	1.7	2.3	2.5	2.9	3.3	3.6
HARRISON	1.4	1.7	2.1	2.4	2.7	3.1	3.4
HART	1.5	1.8	2.3	2.5	2.9	3.3	3.6
HENDERSON	1.6	1.8	2.3	2.6	3.0	3.3	3.7
HENRY	1.5	1.7	2.1	2.4	2.8	3.1	3.4
HICKMAN	1.7	1.9	2.4	2.8	3.2	3.5	3.9
HOPKINS	1.6	1.9	2.3	2.7	3.0	3.3	3.7
JACKSON	1.4	1.7	2.2	2.5	2.9	3.2	3.5
JEFFERSON	1.5	1.7	2.2	2.5	2.8	3.2	3.5
JESSAMINE	1.5	1.7	2.2	2.4	2.8	3.2	3.4
JOHNSON	1.4	1.6	2.1	2.4	2.8	3.1	3.4
KENTON	1.4	1.6	2.1	2.4	2.7	3.0	3.3
KNOTT	1.4	1.7	2.2	2.4	2.9	3.2	3.5
KNOX	1.5	1.7	2.3	2.5	2.9	3.3	3.5
LARUE	1.5	1.8	2.2	2.5	2.9	3.2	3.6
LAUREL	1.5	1.7	2.2	2.5	2.9	3.2	3.5
LAWRENCE	1.4	1.6	2.1	2.4	2.8	3.1	3.4
LEE	1.4	1.7	2.2	2.4	2.8	3.2	3.4
LESLIE	1.5	1.7	2.3	2.5	2.9	3.2	3.5
LETCHER	1.4	1.7	2.3	2.5	2.9	3.2	3.5
LEWIS	1.4	1.6	2.1	2.4	2.7	3.0	3.3
LINCOLN	1.5	1.7	2.2	2.5	2.9	3.2	3.5
LIVINGSTON	1.6	1.9	2.4	2.7	3.1	3.4	3.8
LOGAN	1.6	1.8	2.3	2.7	3.0	3.3	3.7
LYON	1.6	1.9	2.4	2.7	3.1	3.4	3.8
MCCRACKEN	1.7	1.9	2.4	2.8	3.1	3.4	3.8
MCCREARY	1.5	1.8	2.3	2.6	2.9	3.3	3.6
MCLEAN	1.6	1.8	2.3	2.6	3.0	3.3	3.7
MADISON	1.5	1.7	2.2	2.4	2.8	3.2	3.4
MAGOFFIN	1.4	1.7	2.2	2.4	2.8	3.1	3.4
MARION	1.5	1.7	2.2	2.5	2.9	3.2	3.5
MARSHALL	1.6	1.9	2.4	2.8	3.1	3.4	3.8
MARTIN	1.4	1.6	2.2	2.4	2.8	3.1	3.4

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

2 HOUR RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100
MASON	1.4	1.6	2.1	2.4	2.7	3.0	3.3
MEADE	1.5	1.8	2.2	2.5	2.9	3.2	3.5
MENIFEE	1.4	1.7	2.1	2.4	2.8	3.1	3.4
MERCER	1.5	1.7	2.2	2.5	2.8	3.2	3.5
METCALFE	1.5	1.8	2.3	2.6	2.9	3.3	3.6
MONROE	1.5	1.8	2.3	2.6	2.9	3.3	3.7
MONTGOMERY	1.4	1.7	2.1	2.4	2.8	3.1	3.4
MORGAN	1.4	1.6	2.1	2.4	2.8	3.1	3.4
MUHLENBERG	1.6	1.9	2.3	2.7	3.0	3.3	3.7
NELSON	1.5	1.8	2.2	2.5	2.8	3.2	3.5
NICHOLAS	1.4	1.6	2.1	2.4	2.7	3.1	3.4
OHIO	1.6	1.8	2.3	2.4	2.9	3.3	3.7
OLDHAM	1.5	1.7	2.1	2.4	2.8	3.1	3.4
OWEN	1.5	1.7	2.1	2.4	2.8	3.1	3.4
OWSLEY	1.4	1.7	2.2	2.4	2.9	3.2	3.5
PENDLETON	1.4	1.7	2.1	2.4	2.7	3.1	3.3
PERRY	1.4	1.7	2.2	2.5	2.9	3.2	3.5
PIKE	1.4	1.7	2.2	2.4	2.9	3.2	3.5
POWELL	1.4	1.7	2.2	2.4	2.8	3.1	3.4
PULASKI	1.5	1.7	2.2	2.5	2.9	3.3	3.5
ROBERTSON	1.4	1.6	2.1	2.4	2.7	3.1	3.3
ROCKCASTLE	1.5	1.7	2.2	2.5	2.9	3.2	3.5
ROWAN	1.4	1.6	2.1	2.4	2.8	3.1	3.4
RUSSELL	1.5	1.7	2.3	2.5	2.9	3.3	3.6
SCOTT	1.4	1.7	2.1	2.4	2.7	3.1	3.3
SHELBY	1.5	1.7	2.2	2.4	2.8	3.2	3.4
SIMPSON	1.6	1.8	2.3	2.7	3.0	3.3	3.7
SPENCER	1.5	1.7	2.2	2.5	2.8	3.2	3.5
TAYLOR	1.5	1.8	2.2	2.5	2.9	3.2	3.5
TODD	1.6	1.8	2.3	2.9	3.0	3.3	3.8
TRIGG	1.6	1.9	2.4	2.7	3.1	3.4	3.8
TRIMBLE	1.5	1.7	2.1	2.4	2.8	3.1	3.4
UNION	1.6	1.9	2.3	2.7	3.0	3.3	3.7
WARREN	1.5	1.8	2.3	2.6	2.9	3.3	3.7
WASHINGTON	1.5	1.7	2.2	2.5	2.8	3.2	3.5
WAYNE	1.5	1.8	2.3	2.6	2.9	3.3	3.6
WEBSTER	1.6	1.9	2.3	2.7	3.0	3.3	3.7
WHITLEY	1.5	1.8	2.3	2.6	2.9	3.3	3.6
WOLFE	1.4	1.7	2.2	2.4	2.8	3.2	3.4
WOODFORD	1.5	1.7	2.2	2.4	2.8	3.2	3.4

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO. 2 (4-30-71), REVISED (6-1-79)

3 HOUR RAINFALL (INCHES)

PAGE 1 OF 3

COUNTY	FREQUENCY (YEARS)						
	1	2	5	10	25	50	100
ADAIR	1.6	2.0	2.4	2.8	3.3	3.5	3.9
ALLEN	1.7	2.0	2.5	2.8	3.3	3.6	4.0
ANDERSON	1.6	1.9	2.3	2.7	3.2	3.4	3.7
BALLARD	1.9	2.2	2.7	3.0	3.5	3.9	4.3
BARREN	1.7	2.0	2.5	2.8	3.3	3.6	3.0
BATH	1.5	1.8	2.3	2.6	3.1	3.3	3.6
BELL	1.6	1.9	2.4	2.8	3.3	3.5	3.9
BOONE	1.5	1.8	2.2	2.6	3.0	3.3	3.6
BOURBON	1.5	1.8	2.3	2.6	3.1	3.3	3.6
BOYD	1.5	1.8	2.2	2.6	2.9	3.2	3.6
BOYLE	1.6	1.9	2.4	2.7	3.2	3.4	3.8
BRACKEN	1.5	1.8	2.2	2.6	3.0	3.3	3.6
BREATHITT	1.5	1.9	2.3	2.7	3.1	3.4	3.7
BRECKINRIDGE	1.7	2.0	2.5	2.8	3.3	3.5	3.9
BULLITT	1.6	1.9	2.4	2.7	3.2	3.5	3.8
BUTLER	1.7	2.0	2.5	2.8	3.3	3.6	4.0
CALDWELL	1.8	2.1	2.6	2.9	3.4	3.7	4.2
CALLOWAY	1.8	2.1	2.7	3.0	3.4	3.8	4.2
CAMPBELL	1.5	1.8	2.2	2.6	3.0	3.3	3.6
CARLISLE	1.9	2.2	2.7	3.1	3.5	3.9	4.3
CARROLL	1.5	1.9	2.3	2.6	3.1	3.4	3.7
CARTER	1.5	1.8	2.2	2.6	3.0	3.3	3.6
CASEY	1.6	1.9	2.4	2.7	3.2	3.5	3.8
CHRISTIAN	1.8	2.1	2.6	2.9	3.4	3.7	4.1
CLARK	1.5	1.9	2.3	2.6	3.1	3.4	3.7
CLAY	1.6	1.9	2.4	2.8	3.2	3.4	3.8
CLINTON	1.7	2.0	2.5	2.8	3.3	3.6	3.9
CRITTENDEN	1.8	2.1	2.6	2.9	3.4	3.7	4.2
CUMBERLAND	1.7	2.0	2.5	2.8	3.3	3.6	3.9
DAVIESS	1.7	2.0	2.5	2.8	3.3	3.6	4.0
EDMONSON	1.7	2.0	2.5	2.8	3.3	3.6	4.0
ELLIOTT	1.5	1.8	2.2	2.6	3.0	3.3	3.6
ESTILL	1.6	1.9	2.3	2.7	3.2	3.4	3.7
FAYETTE	1.6	1.9	2.3	2.6	3.1	3.4	3.7
FLEMING	1.5	1.8	2.2	2.6	3.0	3.3	3.6
FLOYD	1.5	1.9	2.3	2.7	3.1	3.4	3.7
FRANKLIN	1.6	1.9	2.3	2.6	3.1	3.4	3.7
FULTON	1.9	2.2	2.7	3.1	3.5	3.9	4.4
GALLATIN	1.5	1.8	2.3	2.6	3.1	3.3	3.6
GARRARD	1.6	1.9	2.3	2.7	3.2	3.4	3.7

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO. 2 (4-30-71), REVISED (6-1-79)

3 HOUR RAINFALL (INCHES)

PAGE 2 OF 3

COUNTY	FREQUENCY (YEARS)						
	1	2	5	10	25	50	100
GRANT	1.5	1.8	2.3	2.6	3.1	3.3	3.6
GRAVES	1.9	2.2	2.7	3.0	3.5	3.9	4.3
GRAYSON	1.7	2.0	2.5	2.8	3.3	3.6	3.9
GREEN	1.7	2.0	2.4	2.8	3.3	3.5	3.9
GREENUP	1.5	1.8	2.2	2.5	2.9	3.2	3.5
HANCOCK	1.7	2.0	2.5	2.8	3.3	3.5	4.0
HARDIN	1.7	2.0	2.4	2.8	3.2	3.5	3.9
HARLAN	1.6	1.9	2.4	2.8	3.3	3.5	3.9
HARRISON	1.5	1.8	2.3	2.6	3.1	3.3	3.6
HART	1.7	2.0	2.5	2.8	3.3	3.5	3.9
HENDERSON	1.8	2.0	2.5	2.9	3.3	3.6	4.0
HENRY	1.6	1.9	2.3	2.7	3.1	3.4	3.7
HICKMAN	1.9	2.2	2.7	3.1	3.5	3.9	4.3
HOPKINS	1.8	2.1	2.6	2.9	3.4	3.7	4.1
JACKSON	1.6	1.9	2.3	2.7	3.2	3.4	3.7
JEFFERSON	1.6	1.9	2.4	2.7	3.2	3.4	3.8
JESSAMINE	1.6	1.9	2.3	2.7	3.2	3.4	3.7
JOHNSON	1.5	1.8	2.3	2.7	3.0	3.3	3.6
KENTON	1.5	1.8	2.2	2.6	3.0	3.3	3.6
KNOTT	1.5	1.9	2.3	2.8	3.2	3.4	3.8
KNOX	1.6	1.9	2.4	2.8	3.3	3.5	3.8
LARUE	1.6	2.0	2.4	2.7	3.2	3.5	3.9
LAUREL	1.6	1.9	2.4	2.8	3.2	3.5	3.8
LAWRENCE	1.5	1.8	2.2	2.6	3.0	3.3	3.6
LEE	1.5	1.9	2.3	2.7	3.2	3.4	3.7
LESLIE	1.6	1.9	2.4	2.8	3.2	3.4	3.8
LETCHER	1.5	1.9	2.3	2.8	3.2	3.4	3.8
LEWIS	1.5	1.8	2.2	2.6	3.0	3.3	3.6
LINCOLN	1.6	1.9	2.4	2.7	3.2	3.4	3.8
LIVINGTON	1.8	2.1	2.6	3.0	3.4	3.8	4.2
LOGAN	1.7	2.0	2.5	2.9	3.4	3.7	4.0
LYON	1.8	2.1	2.6	3.0	3.4	3.8	4.2
MCCRACKEN	1.9	2.1	2.7	3.0	3.4	3.8	4.3
MCCREARY	1.6	2.0	2.4	2.8	3.3	3.5	3.9
MCLEAN	1.7	2.0	2.5	2.9	3.3	3.6	4.0
MADISON	1.6	1.9	2.3	2.7	3.2	3.4	3.7
MAGOFFIN	1.5	1.8	2.3	2.7	3.1	3.3	3.7
MARION	1.6	1.9	2.4	2.7	3.2	3.5	3.8
MARSHALL	1.8	2.1	2.6	3.0	3.4	3.8	4.2
MARTIN	1.5	1.8	2.3	2.7	3.0	3.3	3.7

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

3 HOUR RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100
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MASON	1.5	1.8	2.2	2.6	3.0	3.3	3.6
MEADE	1.7	2.0	2.4	2.8	3.2	3.5	3.9
MENIFEE	1.5	1.8	2.3	2.6	3.1	3.3	3.6
MERCER	1.6	1.9	2.4	2.7	3.2	3.4	3.7
METCALFE	1.7	2.0	2.5	2.8	3.3	3.6	3.9
MONROE	1.7	2.0	2.5	2.8	3.3	3.6	4.0
MONTGOMERY	1.5	1.8	2.3	2.6	3.1	3.3	3.6
MORGAN	1.5	1.8	2.3	2.6	3.1	3.3	3.6
MUHLENBERG	1.7	2.0	2.5	2.9	3.3	3.7	4.0
NELSON	1.6	1.9	2.4	2.7	3.2	3.5	3.8
NICHOLAS	1.5	1.8	2.3	2.6	3.1	3.3	3.6
OHIO	1.7	2.0	2.5	2.8	3.3	3.6	4.0
OLDHAM	1.6	1.9	2.3	2.7	3.1	3.4	3.7
OWEN	1.5	1.8	2.3	2.6	3.1	3.3	3.7
OWSLEY	1.6	1.9	2.3	2.7	3.2	3.4	3.7
PENDLETON	1.5	1.8	2.2	2.6	3.1	3.3	3.6
PERRY	1.5	1.9	2.3	2.8	3.2	3.4	3.8
PIKE	1.5	1.9	2.3	2.7	3.1	3.4	3.8
POWELL	1.5	1.8	2.3	2.7	3.1	3.4	3.7
PULASKIE	1.6	1.9	2.4	2.8	3.3	3.5	3.8
ROBERTSON	1.5	1.8	2.2	2.6	3.0	3.3	3.6
ROCKCASTLE	1.6	1.9	2.4	2.7	3.2	3.4	3.8
ROWAN	1.5	1.8	2.2	2.6	3.0	3.3	3.6
RUSSELL	1.6	2.0	2.4	2.8	3.3	3.5	3.9
SCOTT	1.6	2.0	2.3	2.6	3.1	3.4	3.6
SHELBY	1.6	1.9	2.3	2.7	3.2	3.4	3.7
SIMPSON	1.7	2.0	2.5	2.9	3.4	3.7	4.0
SPENCER	1.6	1.9	2.4	2.7	3.2	3.4	3.8
TAYLOR	1.6	1.9	2.4	2.8	3.3	3.5	3.8
TODD	1.8	2.1	2.6	2.9	3.4	3.7	4.1
TRIGG	1.8	2.1	2.6	2.9	3.4	3.8	4.2
TRIMBLE	1.6	1.9	2.3	2.7	3.1	3.4	3.7
UNION	1.8	2.1	2.6	2.9	3.3	3.7	4.1
WARREN	1.7	2.0	2.5	2.8	3.3	3.6	4.0
WASHINGTON	1.6	1.9	2.4	2.7	3.2	3.5	3.8
WAYNE	1.6	2.0	2.4	2.8	3.3	3.5	3.9
WEBSTER	1.8	2.1	2.6	2.9	3.3	3.7	4.1
WHITLEY	1.6	1.9	2.4	2.8	3.3	3.5	3.9
WOLFE	1.5	1.9	2.3	2.7	3.1	3.4	3.7
WOODFORD	1.6	1.9	2.3	2.7	3.1	3.4	3.7

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

6 HOUR RAINFALL (INCHES)

PAGE 1 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
ADAIR	2.0	2.3	2.9	3.4	3.8	4.4	4.6	28.7
ALLEN	2.1	2.4	3.0	3.5	3.9	4.5	4.7	28.9
ANDERSON	1.9	2.2	2.8	3.2	3.7	4.2	4.4	28.1
BALLARD	2.2	2.6	3.2	3.7	4.2	4.7	5.1	28.7
BARREN	2.1	2.4	3.0	3.4	3.9	4.4	4.7	28.8
BATH	1.8	2.1	2.7	3.1	3.6	4.0	4.3	28.0
BELL	1.9	2.4	2.9	3.3	3.9	4.4	4.7	28.9
BOONE	1.9	2.2	2.7	3.1	3.5	4.0	4.2	27.5
BOURBON	1.9	2.2	2.7	3.2	3.6	4.0	4.3	28.0
BOYD	1.8	2.1	2.5	3.0	3.6	3.8	4.2	27.9
BOYLE	2.0	2.3	2.8	3.3	3.7	4.2	4.5	28.4
BRACKEN	1.8	2.1	2.7	3.1	3.5	3.9	4.2	27.7
BREATHITT	1.9	2.2	2.7	3.2	3.7	4.0	4.5	28.4
BRECKINRIDGE	2.0	2.4	2.9	3.4	3.8	4.3	4.6	28.3
BULLITT	2.0	2.3	2.9	3.3	3.7	4.2	4.5	28.2
BUTLER	2.1	2.4	3.0	3.5	3.9	4.4	4.7	28.7
CALDWELL	2.2	2.5	3.1	3.6	4.0	4.5	4.9	28.7
CALLOWAY	2.2	2.6	3.2	3.7	4.1	4.7	5.0	29.0
CAMPBELL	1.8	2.1	2.7	3.1	3.5	3.9	4.2	27.5
CARLISLE	2.2	2.6	3.3	3.7	4.2	4.7	5.1	28.9
CARROLL	1.9	2.2	2.7	3.2	3.6	4.0	4.3	27.7
CARTER	1.8	2.1	2.6	3.0	3.6	3.9	4.2	27.9
CASEY	2.0	2.3	2.9	3.3	3.8	4.3	4.5	28.6
CHRISTIAN	2.2	2.5	3.1	3.6	4.0	4.6	4.9	28.9
CLARK	1.9	2.2	2.7	3.2	3.7	4.1	4.3	28.1
CLAY	1.9	2.3	2.8	3.2	3.8	4.2	4.6	28.6
CLINTON	2.0	2.4	3.0	3.4	3.9	4.4	4.7	28.9
CRITTENDEN	2.2	2.5	3.1	3.6	4.0	4.5	4.9	28.6
CUMBERLAND	2.0	2.4	3.0	3.4	3.9	4.4	4.7	28.9
DAVIESS	2.1	2.4	3.0	3.4	3.9	4.4	4.7	28.3
EDMONSON	2.1	2.4	3.0	3.4	3.9	4.4	4.7	28.7
ELLIOTT	1.8	2.1	2.6	3.1	3.6	3.9	4.3	28.0
ESTILL	1.9	2.2	2.7	3.2	3.7	4.1	4.4	28.3
FAYETTE	1.9	2.2	2.8	3.2	3.7	4.1	4.4	28.1
FLEMING	1.8	2.1	2.6	3.1	3.6	3.9	4.2	27.9
FLOYD	1.8	2.2	2.7	3.1	3.8	3.9	4.5	28.4
FRANKLIN	1.9	2.2	2.8	3.2	3.6	4.1	4.4	28.0
FULTON	2.3	2.6	3.3	3.8	4.2	4.8	5.1	29.0
GALLATIN	1.9	2.2	2.7	3.2	3.5	4.0	4.3	27.7
GARRARD	1.9	2.2	2.8	3.2	3.7	4.2	4.4	28.3

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

6 HOUR RAINFALL (INCHES)

PAGE 2 OF 3

COUNTY	FREQUENCY (YEARS)							
	1	2	5	10	25	50	100	PMP
GRANT	1.9	2.2	2.7	3.1	3.5	4.0	4.3	27.7
GRAVES	2.2	2.6	3.3	3.7	4.1	4.7	5.0	28.9
GRAYSON	2.1	2.4	3.0	3.4	3.9	4.4	4.7	28.5
GREEN	2.0	2.3	2.9	3.4	3.8	4.3	4.6	28.6
GREENUP	1.8	2.1	2.5	3.0	3.5	3.8	4.1	27.7
HANCOCK	2.1	2.4	3.0	3.4	3.9	4.3	4.7	28.2
HARDIN	2.0	2.3	2.9	3.4	3.8	4.3	4.6	28.3
HARLAN	1.9	2.3	2.8	3.3	3.8	4.3	4.7	28.8
HARRISON	1.9	2.2	2.7	3.1	3.6	4.0	4.3	27.9
HART	2.0	2.3	2.9	3.4	3.9	4.4	4.6	28.6
HENDERSON	2.1	2.5	3.0	3.5	4.0	4.4	4.8	28.3
HENRY	1.9	2.2	2.8	3.2	3.6	4.1	4.4	27.9
HICKMAN	2.3	2.6	3.3	3.7	4.2	4.7	5.1	29.0
HOPKINS	2.1	2.5	3.1	3.5	4.0	4.5	4.8	28.6
JACKSON	1.9	2.3	2.8	3.2	3.8	4.2	4.5	28.5
JEFFERSON	2.0	2.3	2.8	3.3	3.7	4.2	4.5	28.0
JESSAMINE	1.9	2.2	2.8	3.2	3.7	4.1	4.4	28.2
JOHNSON	1.8	2.2	2.6	3.1	3.7	3.9	4.4	28.2
KENTON	1.8	2.1	2.7	3.1	3.5	3.9	4.2	27.5
KNOTT	1.9	2.2	2.7	3.2	3.8	4.0	4.5	28.5
KNOX	1.9	2.3	2.9	3.3	3.8	4.4	4.7	28.8
LARUE	2.0	2.3	2.9	3.4	3.8	4.3	4.6	28.4
LAUREL	1.9	2.3	2.8	3.3	3.8	4.3	4.6	28.7
LAWRENCE	1.8	2.1	2.6	3.0	3.6	3.9	4.3	28.1
LEE	1.9	2.2	2.7	3.2	3.7	4.1	4.4	28.4
LESLIE	1.9	2.3	2.8	3.3	3.8	4.2	4.6	28.7
LETCHER	1.9	2.3	2.8	3.2	3.8	4.1	4.6	28.6
LEWIS	1.8	2.1	2.6	3.0	3.5	3.9	4.2	27.8
LINCOLN	2.0	2.3	2.8	3.3	3.8	4.3	4.5	28.5
LIVINGTON	2.2	2.5	3.2	3.6	4.1	4.6	5.0	28.6
LOGAN	2.1	2.4	3.1	3.5	4.0	4.5	4.8	28.9
LYON	2.2	2.5	3.2	3.6	4.1	4.6	4.9	28.8
MCCRACKEN	2.2	2.6	3.2	3.7	4.1	4.6	5.0	28.7
MCCREARY	2.0	2.4	2.9	3.4	3.9	4.4	4.7	28.9
MCCLEAN	2.1	2.4	3.0	3.5	3.9	4.4	4.8	28.5
MADISON	1.9	2.2	2.8	3.2	3.7	4.2	4.4	28.3
MAGOFFIN	1.8	2.2	2.7	3.1	3.7	4.0	4.4	28.3
MARION	2.0	2.3	2.9	3.3	3.8	4.3	4.5	28.4
MARSHALL	2.2	2.6	3.2	3.7	4.1	4.6	5.0	28.8
MARTIN	1.8	2.1	2.6	3.0	3.7	3.9	4.4	28.2

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

6 HOUR RAINFALL (INCHES)

PAGE 3 OF 3

COUNTY	FREQUENCY (YEARS)							
	1	2	5	10	25	50	100	PMP
MASON	1.8	2.1	2.6	3.1	3.5	3.9	4.2	27.7
MEADE	2.0	2.3	2.9	3.3	3.8	4.3	4.6	28.2
MENIFEE	1.9	2.2	2.7	3.1	3.7	4.0	4.3	28.2
MERCER	1.9	2.2	2.8	3.3	3.7	4.2	4.4	28.3
METCALFE	2.0	2.4	3.0	3.4	3.9	4.4	4.7	28.8
MONROE	2.1	2.4	3.0	3.5	3.9	4.5	4.7	28.9
MONGOMERY	1.9	2.2	2.7	3.1	3.6	4.0	4.3	28.1
MORGAN	1.8	2.2	2.7	3.1	3.7	4.0	4.3	28.2
MUHLENBERG	2.1	2.5	3.1	3.5	4.0	4.5	4.8	28.6
NELSON	2.0	2.3	2.9	3.3	3.8	4.2	4.5	28.3
NICHOLAS	1.8	2.1	2.7	3.1	3.6	4.0	4.3	27.9
OHIO	2.1	2.4	3.0	3.4	3.9	4.4	4.7	28.5
OLDHAM	1.9	2.3	2.8	3.2	3.6	4.1	4.4	27.9
OWEN	1.9	2.2	2.7	3.2	3.6	4.0	4.3	27.8
OWSLEY	1.9	2.2	2.8	3.2	3.7	4.1	4.5	28.5
PENDLETON	1.8	2.1	2.7	3.1	3.5	4.0	4.2	27.7
PERRY	1.7	2.3	2.8	3.2	3.8	4.1	4.6	28.6
PIKE	1.8	2.2	2.7	3.1	3.8	4.0	4.5	28.4
POWELL	1.9	2.2	2.7	3.2	3.7	4.1	4.4	28.2
PULASKI	2.0	2.3	2.9	3.3	3.8	4.3	4.6	28.7
ROBERTSON	1.8	2.1	2.7	3.1	3.5	4.0	4.2	27.8
ROCKCASTLE	1.9	2.3	2.8	3.3	3.8	4.2	4.5	28.5
ROWAN	1.8	2.1	2.6	3.1	3.6	3.9	4.3	28.0
RUSSELL	2.0	2.3	2.9	3.4	3.7	4.4	4.6	28.8
SCOTT	1.9	2.2	2.7	3.2	3.6	4.1	4.3	27.9
SHELBY	1.9	2.2	2.8	3.2	3.7	4.1	4.4	28.0
SIMPSON	2.1	2.4	3.1	3.5	4.0	4.5	4.8	28.9
SPENCER	2.0	2.3	2.8	3.3	3.7	4.2	4.4	28.1
TAYLOR	2.0	2.3	2.9	3.4	3.8	4.3	4.5	28.5
TODD	2.2	2.5	3.1	3.5	4.0	4.6	4.8	28.9
TRIGG	2.2	2.5	3.1	3.6	4.1	4.3	4.9	28.9
TRIMBLE	1.9	2.2	2.8	3.2	3.6	4.1	4.4	27.8
UNION	2.1	2.5	3.1	3.5	4.0	4.5	4.8	28.4
WARREN	2.1	2.4	3.0	3.5	3.9	4.5	4.7	28.8
WASHINGTON	2.0	2.3	2.8	3.3	3.7	4.2	4.5	28.3
WAYNE	2.0	2.4	2.9	3.4	3.9	4.4	4.7	28.9
WEBSTER	2.1	2.5	3.1	3.5	4.0	4.5	4.8	28.5
WHITLEY	2.0	2.4	2.9	3.4	3.9	4.4	4.7	28.9
WOLFE	1.9	2.2	2.7	3.1	3.7	4.0	4.4	28.3
WOODFORD	1.9	2.2	2.8	3.2	3.7	4.1	4.4	28.1

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

12 HOUR RAINFALL (INCHES)

PAGE 1 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
ADAIR	2.4	2.8	3.5	4.0	4.5	5.1	5.5	33.8
ALLEN	2.5	2.9	3.7	4.2	4.6	5.3	5.7	34.2
ANDERSON	2.3	2.7	3.4	3.8	4.3	4.8	5.3	33.1
BALLARD	2.7	3.1	3.8	4.4	4.9	5.6	6.0	34.1
BARREN	2.5	2.9	3.6	4.1	4.6	5.2	5.6	33.9
BATH	2.2	2.6	3.2	3.6	4.2	4.6	5.2	32.6
BELL	2.4	2.8	3.4	3.9	4.5	4.9	5.6	34.2
BOONE	2.2	2.6	3.2	3.6	4.1	4.6	5.1	32.1
BOURBON	2.2	2.6	3.2	3.7	4.2	4.7	5.2	33.0
BOYD	2.1	2.5	3.0	3.5	4.0	4.4	5.0	32.5
BOYLE	2.3	2.7	3.4	3.9	4.4	4.9	5.4	33.3
BRACKEN	2.2	2.6	3.1	3.6	4.1	4.5	5.1	32.3
BREATHITT	2.2	2.6	3.2	3.7	4.2	4.7	5.3	33.5
BRECKINRIDGE	2.4	2.8	3.6	4.0	4.5	5.1	5.5	33.4
BULLITT	2.4	2.8	3.5	3.9	4.4	4.9	5.4	33.2
BUTLER	2.5	2.9	3.6	4.1	4.6	5.3	5.7	33.7
CALDWELL	2.6	3.0	3.7	4.3	4.8	5.4	5.8	34.0
CALLOWAY	2.7	3.1	3.8	4.4	4.9	5.6	6.0	34.4
CAMPBELL	2.2	2.6	3.0	3.6	4.1	4.5	5.1	32.1
CARLISLE	2.7	3.1	3.8	4.4	4.9	5.7	6.1	34.3
CARROLL	2.3	2.7	3.3	3.7	4.2	4.7	5.2	32.4
CARTER	2.1	2.5	3.0	3.5	4.0	4.4	5.0	32.6
CASEY	2.4	2.8	3.5	3.9	4.5	5.0	5.5	33.7
CHRISTIAN	2.6	3.0	3.7	4.3	4.7	5.5	5.8	34.2
CLARK	2.3	2.7	3.3	3.7	4.3	4.7	5.3	33.1
CLAY	2.3	2.7	3.3	3.8	4.4	4.8	5.4	33.8
CLINTON	2.5	2.9	3.6	4.1	4.6	5.2	5.6	34.2
CRITTENDEN	2.6	3.0	3.7	4.3	4.8	5.4	5.8	33.7
CUMBERLAND	2.5	2.9	3.6	4.1	4.6	5.2	5.6	34.2
DAVIESS	2.5	2.9	3.6	4.1	4.6	5.2	5.6	33.5
EDMONSON	2.5	2.9	3.7	4.1	4.6	5.2	5.6	33.8
ELLIOTT	2.1	2.5	3.1	3.6	4.1	4.5	5.1	32.9
ESTILL	2.3	2.7	3.3	3.7	4.3	4.8	5.3	33.4
FAYETTE	2.3	2.7	3.3	3.8	4.3	4.7	5.3	33.1
FLEMING	2.2	2.6	3.1	3.6	4.1	4.5	5.1	32.6
FLOYD	2.2	2.6	3.2	3.7	4.2	4.6	5.2	33.5
FRANKLIN	2.3	2.7	3.3	3.8	4.3	4.8	5.3	33.0
FULTON	2.7	3.2	3.9	4.4	5.0	5.8	6.2	34.5
GALLATIN	2.2	2.6	3.2	3.7	4.2	4.6	5.2	32.3
GARRARD	2.3	2.7	3.4	3.8	4.3	4.9	5.4	33.5

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

12 HOUR RAINFALL (INCHES)

PAGE 2 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
GRANT	2.2	2.6	3.2	3.7	4.2	4.6	5.2	32.2
GRAVES	2.7	3.1	3.8	4.4	4.9	5.7	6.0	34.4
GRAYSON	2.5	2.9	3.6	4.1	4.5	5.2	5.6	33.5
GREEN	2.4	2.8	3.5	4.0	4.5	5.1	5.5	33.7
GREENUP	2.1	2.5	3.0	3.5	4.0	4.4	5.0	32.4
HANCOCK	2.5	2.9	3.6	4.1	4.5	5.1	5.6	33.3
HARDIN	2.4	2.8	3.5	4.0	4.5	5.1	5.5	33.4
HARLAN	2.3	2.7	3.4	3.8	4.4	4.9	5.5	34.0
HARRISON	2.2	2.6	3.2	3.7	4.2	4.6	5.2	32.6
HART	2.5	2.8	3.6	4.1	4.5	5.2	5.5	33.7
HENDERSON	2.5	2.9	3.6	4.1	4.6	5.3	5.7	33.5
HENRY	2.3	2.7	3.3	3.8	4.3	4.8	5.3	32.6
HICKMAN	2.7	3.1	3.9	4.4	4.9	5.7	6.1	34.4
HOPKINS	2.6	3.0	3.7	4.2	4.7	5.4	5.8	33.8
JACKSON	2.3	2.7	3.3	3.8	4.3	4.8	5.4	33.5
JEFFERSON	2.4	2.8	3.4	3.9	4.4	4.9	5.4	33.0
JESSAMINE	2.3	2.7	3.3	3.8	4.3	4.8	5.3	33.3
JOHNSON	2.2	2.5	3.1	3.6	4.1	4.5	5.1	33.1
KENTON	2.2	2.6	3.2	3.6	4.1	4.5	5.1	32.1
KNOTT	2.2	2.6	3.2	3.7	4.2	4.7	5.3	33.8
KNOX	2.4	2.8	3.4	3.9	4.4	4.9	5.5	34.0
LARUE	2.4	2.8	3.5	4.0	4.5	5.1	5.5	33.5
LAUREL	2.4	2.8	3.4	3.9	4.4	4.9	5.5	33.8
LAWRENCE	2.1	2.5	3.0	3.5	4.0	4.5	5.1	32.9
LEE	2.3	2.7	3.3	3.7	4.3	4.7	5.3	33.5
LESLIE	2.3	2.7	3.3	3.8	4.3	4.8	5.4	33.8
LETCHER	2.3	2.6	3.3	3.7	4.3	4.7	5.4	33.8
LEWIS	2.1	2.5	3.0	3.5	4.0	4.4	5.0	32.4
LINCOLN	2.3	2.7	3.4	3.9	4.4	4.9	5.4	33.5
LIVINGSTON	2.6	3.0	3.8	4.3	4.8	5.5	5.9	34.0
LOGAN	2.6	2.9	3.7	4.2	4.7	5.4	5.7	34.2
LYON	2.6	3.0	3.8	4.3	4.8	5.5	5.9	34.1
MCCRACKEN	2.6	3.1	3.8	4.4	4.9	5.6	6.0	34.1
MCCREARY	2.4	2.8	3.5	4.0	4.5	5.1	5.6	34.1
MCLEAN	2.5	2.9	3.7	4.2	4.6	5.3	5.7	33.6
MADISON	2.3	2.7	3.3	3.8	4.3	4.8	5.3	33.3
MAGOFFIN	2.2	2.6	3.2	3.6	4.2	4.6	5.2	33.4
MARION	2.4	2.8	3.5	3.9	4.4	5.0	5.4	33.5
MARSHALL	2.6	3.1	3.8	4.3	4.8	5.6	5.9	34.2
MARTIN	2.1	2.5	3.1	3.6	4.0	4.5	5.1	33.1

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

12 HOUR RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
MASON	2.1	2.6	3.1	3.6	4.1	4.5	5.1	32.3
MEADE	2.4	2.8	3.5	4.0	4.5	5.0	5.5	33.2
MENIFEE	2.2	2.6	3.2	3.6	4.2	4.6	5.2	33.1
MERCER	2.3	2.7	3.4	3.9	4.4	4.9	5.4	33.2
METCALFE	2.5	2.9	3.6	4.1	4.6	5.2	5.6	33.9
MONROE	2.5	2.9	3.6	4.1	4.6	5.3	5.7	34.2
MONTGOMERY	2.2	2.6	3.2	3.7	4.2	4.6	5.2	33.1
MORGAN	2.2	2.6	3.1	3.6	4.1	4.6	5.2	33.2
MUHLENBERG	2.5	2.9	3.7	4.2	4.7	5.3	5.7	33.8
NELSON	2.4	2.8	3.5	3.9	4.4	5.0	5.4	33.3
NICHOLAS	2.2	2.6	3.2	3.6	4.2	4.6	5.2	32.6
OHIO	2.5	2.9	3.6	4.1	4.6	5.2	5.6	33.6
OLDHAM	2.3	2.7	3.4	3.8	4.3	4.8	5.3	32.9
OWEN	2.2	2.7	3.3	3.7	4.2	4.7	5.2	32.5
OWSLEY	2.3	2.7	3.3	3.8	4.3	4.8	5.3	33.5
PENDLETON	2.2	2.6	3.2	3.6	4.2	4.6	5.2	32.2
PERRY	2.3	2.7	3.3	3.7	4.3	4.8	5.4	33.7
PIKE	2.2	2.5	3.2	3.7	4.1	4.6	5.2	33.5
POWELL	2.2	2.6	3.2	3.7	4.2	4.7	5.3	33.3
PULASKI	2.4	2.8	3.5	3.9	4.5	5.0	5.5	33.8
ROBERTSON	2.2	2.6	3.1	3.6	4.1	4.5	5.1	32.4
ROCKCASTLE	2.3	2.7	3.4	3.8	4.4	4.9	5.4	33.5
ROWAN	2.2	2.6	3.1	3.6	4.1	4.5	5.1	32.6
RUSSELL	2.4	2.8	3.5	4.0	4.5	5.1	5.5	33.9
SCOTT	2.3	2.7	3.3	3.7	4.2	4.7	5.2	32.8
SHELBY	2.3	2.7	3.4	3.8	4.3	4.8	5.3	33.0
SIMPSON	2.6	2.9	3.7	4.2	4.7	5.4	5.7	34.2
SPENCER	2.3	2.7	3.4	3.9	4.4	4.9	5.4	33.1
TAYLOR	2.4	2.8	3.5	4.0	4.5	5.0	5.5	33.6
TODD	2.6	3.0	3.7	4.2	4.7	5.4	5.8	34.2
TRIGG	2.6	3.0	3.8	4.3	4.8	5.5	5.9	34.2
TRIMBLE	2.3	2.7	3.3	3.8	4.3	4.8	5.3	32.4
UNION	2.6	3.0	3.7	4.3	4.7	5.3	5.8	33.5
WARREN	2.5	2.9	3.6	4.1	4.6	5.3	5.7	33.9
WASHINGTON	2.4	2.8	3.4	3.9	4.4	4.9	5.4	33.3
WAYNE	2.4	2.8	3.5	4.0	4.6	5.1	5.6	34.1
WEBSTER	2.6	3.0	3.7	4.2	4.7	5.3	5.8	33.5
WHITLEY	2.4	2.8	3.5	3.9	4.5	5.0	5.6	34.1
WOLFE	2.2	2.6	3.2	3.7	4.2	4.7	5.2	33.2
WOODFORD	2.3	2.7	3.3	3.8	4.3	4.8	5.3	33.1

## DIVISION OF WATER RESOURCES

DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

24 HOUR RAINFALL (INCHES)

PAGE 1 OF 3

## FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
ADAIR	2.8	3.3	4.1	4.6	5.4	5.9	6.4	36.5
ALLEN	2.8	3.4	4.3	4.8	5.6	6.1	6.6	37.0
ANDERSON	2.7	3.1	3.9	4.4	5.2	5.6	6.2	35.0
BALLARD	3.1	3.6	4.5	5.1	5.8	6.5	7.0	36.5
BARREN	2.8	3.3	4.2	4.7	5.5	6.0	6.5	36.5
BATH	2.5	3.0	3.7	4.2	4.9	5.4	5.9	35.0
BELL	2.6	3.1	3.9	4.5	5.2	5.8	6.3	37.0
BOONE	2.6	3.0	3.7	4.2	4.9	5.4	5.9	34.0
BOURBON	2.6	3.0	3.8	4.3	5.0	5.4	6.0	35.0
BOYD	2.5	2.7	3.5	4.0	4.6	5.0	5.5	35.0
BOYLE	2.7	3.2	4.0	4.5	5.2	5.7	6.3	35.5
BRACKEN	2.5	3.0	3.7	4.2	4.9	5.3	5.8	34.5
BREATHITT	2.6	3.0	3.7	4.3	4.9	5.4	5.9	36.0
BRECKINRIDGE	2.8	3.3	4.1	4.6	5.4	5.9	6.4	35.5
BULLITT	2.7	3.2	4.0	4.5	5.2	5.7	6.3	35.5
BUTLER	2.9	3.4	4.2	4.8	5.5	6.1	6.6	36.0
CALDWELL	3.0	3.4	4.3	4.9	5.6	6.3	6.8	36.5
CALLOWAY	3.1	3.5	4.4	5.0	5.8	6.5	6.9	37.0
CAMPBELL	2.5	3.0	3.7	4.2	4.9	5.3	5.8	34.0
CARLISLE	3.1	3.6	4.5	5.1	5.8	6.5	7.0	37.0
CARROLL	2.6	3.1	3.8	4.3	5.1	5.5	6.1	34.5
CARTER	2.5	2.8	3.6	4.0	4.7	5.1	5.6	35.0
CASEY	2.7	3.2	4.0	4.5	5.3	5.8	6.3	36.0
CHRISTIAN	3.0	3.4	4.3	4.9	5.7	6.3	6.8	36.5
CLARK	2.6	3.0	3.8	4.3	5.0	5.5	6.1	35.5
CLAY	2.6	3.0	3.8	4.4	5.1	5.6	6.2	36.5
CLINTON	2.8	3.3	4.2	4.7	5.5	6.0	6.5	37.0
CRITTENDEN	3.0	3.5	4.3	4.7	5.6	6.3	6.8	36.0
CUMBERLAND	2.8	3.3	4.2	4.7	5.5	6.0	6.5	37.0
DAVIESS	2.8	3.3	4.2	4.7	5.5	6.0	6.5	35.5
EDMONSON	2.8	3.3	4.2	4.7	5.5	6.0	6.5	36.0
ELLIOTT	2.5	2.8	3.6	4.1	4.7	5.2	5.7	35.5
ESTILL	2.6	3.0	3.8	4.3	5.0	5.5	6.1	35.5
FAYETTE	2.6	3.1	3.8	4.3	5.1	5.5	6.1	35.5
FLEMING	2.5	2.9	3.6	4.1	4.8	5.3	5.8	35.0
FLOYD	2.5	2.9	3.7	4.2	4.8	5.3	5.7	36.0
FRANKLIN	2.6	3.1	3.9	4.4	5.1	5.5	6.1	35.0
FULTON	3.1	3.7	4.5	5.2	5.9	6.6	7.1	37.5
GALLATIN	2.6	3.1	3.8	4.3	5.0	5.4	6.0	34.5
GARRARD	2.6	3.1	3.9	4.4	5.2	5.6	6.2	36.0

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

24 HOUR RAINFALL (INCHES)

PAGE 2 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
GRANT	2.6	3.1	3.7	4.2	5.0	5.4	6.0	34.5
GRAVES	3.1	3.6	4.5	5.1	5.8	6.5	7.0	37.0
GRAYSON	2.8	3.3	4.2	4.7	5.5	6.0	6.2	36.0
GREEN	2.8	3.3	4.1	4.6	5.4	5.9	6.4	36.0
GREENUP	2.5	2.8	3.5	4.0	4.6	5.0	5.5	35.0
HANCOCK	2.8	3.3	4.1	4.7	5.4	6.0	6.5	35.5
HARDIN	2.7	3.2	4.1	4.6	5.3	5.9	6.4	35.5
HARLAN	2.6	3.0	3.8	4.4	5.1	5.7	6.1	37.0
HARRISON	2.6	3.0	3.7	4.2	5.0	5.4	6.0	35.0
HART	2.8	3.3	4.1	4.6	5.4	5.9	6.4	36.0
HENDERSON	2.9	3.4	4.2	4.8	5.5	6.1	6.6	35.5
HENRY	2.6	3.1	3.9	4.4	5.1	5.5	6.1	34.5
HICKMAN	3.1	3.6	4.5	5.2	5.9	6.6	7.0	37.0
HOPKINS	2.9	3.4	4.3	4.8	5.5	6.2	6.7	36.0
JACKSON	2.9	3.1	3.8	4.4	5.1	5.6	6.2	36.0
JEFFERSON	2.7	3.2	4.0	4.5	5.2	5.7	6.2	35.0
JESSAMINE	2.6	3.1	3.9	4.4	5.1	5.5	6.2	35.5
JOHNSON	2.5	2.8	3.6	4.1	4.7	5.2	5.7	35.5
KENTON	2.5	3.0	3.7	4.2	4.9	5.3	5.8	34.0
KNOTT	2.5	2.9	3.7	4.3	4.9	5.5	5.9	36.5
KNOX	2.6	3.1	3.9	4.5	5.2	5.8	6.3	37.0
LARUE	2.7	3.2	4.1	4.6	5.3	5.8	6.4	35.5
LAUREL	2.6	3.1	3.9	4.5	5.2	5.7	6.3	36.5
LAWRENCE	2.5	2.8	3.6	4.0	4.7	5.1	5.6	35.5
LEE	2.6	3.0	3.8	4.3	5.0	5.5	6.1	36.0
LESLIE	2.6	3.0	3.8	4.4	5.0	5.6	6.1	36.5
LETCHER	2.5	2.9	3.7	4.3	4.9	5.6	5.9	36.5
LEWIS	2.5	2.8	3.6	4.0	4.7	5.1	5.6	35.0
LINCOLN	2.7	3.2	3.9	4.5	5.2	5.7	6.3	36.0
LIVINGSTON	3.0	3.5	4.4	4.9	5.7	6.1	6.9	36.0
LOGAN	2.9	3.4	4.3	4.8	5.6	6.2	6.7	36.5
LYON	3.0	3.5	4.4	4.9	5.7	6.4	6.8	36.5
MCCRACKEN	3.0	3.6	4.4	5.0	5.8	6.4	6.9	36.5
MCREARY	2.7	3.2	4.0	4.6	5.3	5.9	6.4	37.0
MCLEAN	2.9	3.4	4.2	4.8	5.5	6.1	6.6	35.5
MADISON	2.6	3.1	3.8	4.3	5.1	5.6	6.1	35.5
MAGOFFIN	2.5	2.9	3.7	4.2	4.8	5.3	5.8	36.0
MARION	2.7	3.2	4.0	4.5	5.3	5.8	6.3	36.0
MARSHALL	3.0	3.5	4.4	5.0	5.7	6.4	6.9	37.0
MARTIN	2.5	2.8	3.6	4.1	4.7	5.2	5.6	36.0

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

24 HOUR RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
MASON	2.5	2.9	3.6	4.1	4.8	5.3	5.8	34.5
MEADE	2.7	3.2	4.1	4.6	5.3	5.8	6.4	35.0
MENIFEE	2.5	2.9	3.7	4.2	4.9	5.4	5.9	35.5
MERCER	2.7	3.2	3.9	4.4	5.2	5.6	6.2	35.5
METCALFE	2.8	3.3	4.2	4.7	5.5	6.0	6.5	36.5
MONROE	2.8	3.4	4.2	4.7	5.6	6.0	6.6	37.0
MONTGOMERY	2.6	3.0	3.7	4.2	5.0	5.4	6.0	35.5
MORGAN	2.5	2.9	3.7	4.1	4.8	5.3	5.8	35.5
MUHLENBERG	2.9	3.4	4.3	4.8	5.5	6.2	6.7	36.0
NELSON	2.7	3.2	4.0	4.5	5.3	5.7	6.3	35.5
NICHOLAS	2.6	3.0	3.7	4.2	4.9	5.4	5.9	35.0
OHIO	2.8	3.3	4.2	4.7	5.5	6.0	6.5	36.0
OLDHAM	2.7	3.2	3.9	4.4	5.2	5.6	6.2	34.5
OWEN	2.6	3.1	3.8	4.3	5.1	5.5	6.1	34.5
OWSLEY	2.6	3.1	3.8	4.3	5.1	5.5	6.1	36.5
PENDLETON	2.6	3.1	3.7	4.2	4.9	5.3	5.9	34.5
PERRY	2.5	3.0	3.8	4.3	5.0	5.5	6.0	36.5
PIKE	2.5	2.9	3.6	4.2	4.8	5.4	5.7	36.5
POWELL	2.6	3.0	3.8	4.3	5.0	5.5	6.0	35.5
PULASKI	2.7	3.2	4.0	4.5	5.3	5.8	6.3	36.5
ROBERTSON	2.5	3.0	3.7	4.2	4.9	5.3	5.9	34.5
ROCKCASTLE	2.6	3.1	3.9	4.4	5.2	5.7	6.2	36.0
ROWAN	2.5	2.9	3.6	4.1	4.8	5.3	5.8	35.0
RUSSELL	2.8	3.3	4.1	4.6	5.4	5.9	6.4	36.5
SCOTT	2.6	3.1	3.8	4.3	5.1	5.5	6.1	35.0
SHELBY	2.7	3.2	3.9	4.4	5.2	5.6	6.2	35.0
SIMPSON	2.9	3.4	4.3	4.8	5.6	6.1	6.7	37.0
SPENCER	2.7	3.2	4.0	4.5	5.2	5.6	6.2	35.0
TAYLOR	2.7	3.2	4.1	4.6	5.3	5.8	6.4	36.0
TODD	2.9	3.4	4.3	4.9	5.6	6.3	6.7	36.5
TRIGG	3.0	3.5	4.4	5.0	5.7	6.4	6.8	37.0
TRIMBLE	2.6	3.1	3.9	4.4	5.1	5.5	6.1	34.5
UNION	2.9	3.4	4.3	4.8	5.5	6.2	6.7	35.5
WARREN	2.9	3.4	4.2	4.8	5.5	6.1	6.6	36.5
WASHINGTON	2.7	3.2	4.0	4.5	5.2	5.7	6.3	35.5
WAYNE	2.8	3.3	4.1	4.6	5.4	5.9	6.4	37.0
WEBSTER	2.9	3.4	4.3	4.8	5.5	6.2	6.7	36.0
WHITLEY	2.7	3.2	4.0	4.5	5.3	5.9	6.4	37.0
WOLFE	2.5	2.9	3.7	4.2	4.9	5.4	5.9	36.0
WOODFORD	2.6	3.1	3.9	4.4	5.1	5.6	6.2	35.0

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

2 DAY RAINFALL (INCHES)

PAGE 1 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
ADAIR	0.0	3.8	4.6	5.3	6.3	6.7	7.5	40.0
ALLEN	0.0	3.9	4.8	5.5	6.5	7.0	7.8	40.5
ANDERSON	0.0	3.6	4.4	5.1	6.0	6.4	7.2	39.0
BALLARD	0.0	4.2	5.2	5.9	4.8	7.6	8.3	40.5
BARREN	0.0	3.9	4.7	5.5	6.4	6.9	7.7	40.0
BATH	0.0	3.4	4.1	4.9	5.6	6.1	6.9	39.0
BELL	0.0	3.6	4.5	5.1	6.0	6.7	7.3	41.0
BOONE	0.0	3.4	4.1	4.8	5.6	6.0	6.8	38.0
BOURBON	0.0	3.5	4.2	4.9	5.7	6.1	7.0	38.5
BOYD	0.0	3.2	3.9	4.6	5.2	5.8	6.4	38.5
BOYLE	0.0	3.6	4.4	5.2	6.1	6.5	7.3	39.5
BRACKEN	0.0	3.4	4.1	4.8	5.5	6.0	6.8	38.0
BREATHITT	0.0	3.4	4.2	4.9	5.6	6.3	6.9	39.5
BRECKINRIDGE	0.0	3.8	4.6	5.3	6.3	6.7	7.5	39.0
BULLITT	0.0	3.7	4.5	5.2	6.2	6.5	7.3	39.0
BUTLER	0.0	3.9	4.8	5.5	6.4	6.9	7.7	40.0
CALDWELL	0.0	4.0	5.0	5.7	6.6	7.2	7.9	40.0
CALLOWAY	0.0	4.1	5.1	5.9	6.8	7.6	8.2	41.0
CAMPBELL	0.0	3.4	4.1	4.7	5.5	6.0	6.8	38.0
CARLISLE	0.0	4.2	5.2	6.0	6.8	7.7	8.3	41.0
CARROLL	0.0	3.5	4.2	4.9	5.8	6.2	7.0	38.0
CARTER	0.0	3.2	4.0	4.7	5.3	5.9	6.6	38.5
CASEY	0.0	3.7	4.5	5.2	6.2	6.6	7.4	40.0
CHRISTIAN	0.0	4.0	5.0	5.7	6.6	7.2	7.9	40.5
CLARK	0.0	3.5	4.2	5.0	5.8	6.2	7.1	39.0
CLAY	0.0	3.5	4.4	5.0	5.9	6.5	7.3	40.0
CLINTON	0.0	3.8	4.7	5.6	6.4	6.9	7.6	40.5
CRITTTENDEN	0.0	4.0	5.0	5.7	6.6	7.2	7.9	40.0
CUMBERLAND	0.0	3.8	4.7	5.4	6.4	6.9	7.6	40.5
DAVIESS	0.0	3.8	4.7	5.4	6.4	6.9	7.6	39.5
EDMONSON	0.0	3.8	4.7	5.5	6.4	6.8	7.6	40.0
ELLIOTT	0.0	3.3	4.0	4.7	5.4	6.0	6.7	39.0
ESTILL	0.0	3.5	4.3	5.0	5.8	6.3	7.1	39.5
FAYETTE	0.0	3.5	4.3	5.0	5.9	6.3	7.1	39.0
FLEMING	0.0	3.3	4.0	4.8	5.5	6.0	6.8	38.5
FLOYD	0.0	3.3	4.0	4.8	5.5	6.2	6.7	40.0
FRANKLIN	0.0	3.6	4.2	5.0	5.9	6.3	7.1	38.5
FULTON	0.0	4.3	5.3	6.1	7.0	7.9	8.5	41.0
GALLATIN	0.0	3.5	4.2	4.9	5.7	6.1	7.0	38.0
GARRARD	0.0	3.6	4.4	5.1	6.0	6.4	7.2	39.5

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

2 DAY RAINFALL (INCHES)

PAGE 2 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
GRANT	0.0	3.5	4.2	4.9	5.7	6.1	7.0	38.0
GRAVES	0.0	4.2	5.3	5.9	6.8	7.6	8.3	41.0
GRAYSON	0.0	3.8	4.7	5.4	6.3	6.8	7.6	39.5
GREEN	0.0	3.8	4.6	5.3	6.3	6.7	7.5	40.0
GREENUP	0.0	3.2	3.9	4.6	5.2	5.8	6.4	38.5
HANCOCK	0.0	3.8	4.7	5.4	6.3	6.8	7.6	39.0
HARDIN	0.0	3.7	4.6	5.3	6.3	6.6	7.4	39.5
HARLAN	0.0	3.5	4.4	4.9	5.8	6.6	7.2	41.0
HARRISON	0.0	3.5	4.0	4.9	5.7	6.1	7.0	38.5
HART	0.0	3.8	4.7	5.4	6.3	6.8	7.6	39.5
HENDERSON	0.0	3.9	4.8	5.5	6.4	6.9	7.7	39.0
HENRY	0.0	3.6	4.3	5.0	5.9	6.2	7.1	38.5
HICKMAN	0.0	4.2	5.2	6.0	6.9	7.8	8.4	41.0
HOPKINS	0.0	3.9	4.9	5.6	6.5	7.0	7.8	39.5
JACKSON	0.0	3.5	4.3	5.1	5.9	6.4	7.2	40.0
JEFFERSON	0.0	3.6	4.4	5.1	6.1	6.4	7.3	38.5
JESSAMINE	0.0	3.6	4.3	5.1	6.0	6.2	7.1	39.0
JOHNSON	0.0	3.3	4.0	4.7	5.4	6.0	6.7	39.5
KENTON	0.0	3.4	4.1	4.8	5.5	6.0	6.8	38.0
KNOTT	0.0	3.4	4.1	4.8	5.6	6.3	6.9	40.0
KNOX	0.0	3.6	4.5	5.1	6.0	6.6	7.3	40.5
LARUE	0.0	3.7	4.6	5.3	6.2	6.6	7.4	39.5
LAUREL	0.0	3.6	4.4	5.1	6.0	6.6	7.3	40.0
LAWRENCE	0.0	3.2	3.9	4.7	5.3	6.0	6.5	39.0
LEE	0.0	3.5	4.2	5.0	5.8	6.3	7.0	39.5
LESLIE	0.0	3.5	4.3	5.0	5.8	6.5	7.1	40.5
LETCHER	0.0	3.4	4.2	4.8	5.6	6.4	6.9	40.5
LEWIS	0.0	3.2	4.0	4.7	5.4	5.9	6.6	38.5
LINCOLN	0.0	3.6	4.4	5.2	6.1	6.5	7.3	39.5
LIVINGSTON	0.0	4.0	5.1	5.8	6.7	7.4	8.0	40.0
LOGAN	0.0	3.9	4.9	5.6	6.5	7.0	7.8	40.5
LYON	0.0	4.0	5.0	5.8	6.7	7.3	8.0	40.0
MCCRACKEN	0.0	4.1	5.1	5.9	6.7	7.6	8.2	40.5
MCCREARY	0.0	3.7	4.6	5.3	6.2	6.8	7.5	40.5
MCLEAN	0.0	3.9	4.8	5.5	6.5	6.9	7.7	39.5
MADISON	0.0	3.5	4.3	5.1	5.9	6.3	7.1	39.5
MAGOFFIN	0.0	3.3	4.1	4.8	5.5	6.2	6.8	39.5
MARION	0.0	3.7	4.5	5.2	6.2	6.6	7.4	39.5
MARSHALL	0.0	4.1	5.1	5.9	6.7	7.5	8.1	40.5
MARTIN	0.0	3.2	3.9	4.7	5.3	6.0	6.6	39.5

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

2 DAY RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	1	2	5	10	25	50	100	PMP
MASON	0.0	3.3	4.0	4.8	5.5	5.9	6.7	38.0
MEADE	0.0	3.7	4.6	5.3	6.2	6.6	7.4	39.0
MENIFEE	0.0	3.4	4.1	4.9	5.6	6.1	6.9	39.0
MERCER	0.0	3.6	4.4	5.1	6.0	6.4	7.2	39.0
METCALFE	0.0	3.8	4.7	5.4	6.4	6.8	7.6	40.0
MONROE	0.0	3.9	4.8	5.5	6.5	6.9	7.7	40.5
MONGOMERY	0.0	3.4	4.2	4.9	5.7	6.2	7.0	39.0
MORGAN	0.0	3.3	4.1	4.8	5.5	6.1	6.8	39.0
MUHLENBERG	0.0	3.9	4.9	5.6	6.5	7.0	7.8	40.0
NELSON	0.0	3.7	4.5	5.2	6.2	6.5	7.3	39.0
NICHOLAS	0.0	3.4	4.1	4.9	5.6	6.1	6.9	38.5
OHIO	0.0	3.8	4.7	5.5	6.4	6.9	7.7	39.5
OLDHAM	0.0	3.6	4.4	5.0	6.0	6.3	7.2	38.5
OWEN	0.0	3.5	4.2	4.9	5.8	6.2	7.0	38.5
OWSLEY	0.0	3.5	4.3	5.0	5.8	6.4	7.1	40.0
PENDLETON	0.0	3.4	4.1	4.8	5.6	6.0	6.9	38.0
PERRY	0.0	3.4	4.2	4.9	5.7	6.4	7.0	40.0
PIKE	0.0	3.3	4.0	4.7	5.4	6.2	6.7	40.0
POWELL	0.0	3.5	4.2	5.0	5.7	6.2	7.0	39.5
PULASKI	0.0	3.7	4.5	5.2	6.1	6.6	7.4	40.0
ROBERTSON	0.0	3.4	4.1	4.8	5.6	6.0	6.8	38.5
ROCKCASTLE	0.0	3.6	4.4	5.1	6.0	6.5	7.2	40.0
ROWAN	0.0	3.3	4.0	4.8	5.5	6.0	6.8	39.0
RUSSELL	0.0	3.8	4.6	5.3	6.3	6.7	7.5	40.0
SCOTT	0.0	3.5	4.2	5.0	5.8	6.2	7.1	38.5
SHELBY	0.0	3.6	4.4	5.1	6.0	6.3	7.2	38.5
SIMPSON	0.0	3.9	4.9	5.6	6.5	7.0	7.8	40.5
SPENCER	0.0	3.6	4.4	5.1	6.1	6.4	7.2	39.0
TAYLOR	0.0	3.7	4.6	5.3	6.2	6.6	7.4	39.5
TODD	0.0	3.9	4.9	5.7	6.6	7.2	7.9	40.5
TRIGG	0.0	4.0	5.0	5.8	6.7	7.4	8.0	40.5
TRIMBLE	0.0	3.6	4.3	5.0	5.9	6.2	7.1	38.0
UNION	0.0	3.9	4.9	5.6	6.5	7.1	7.8	39.5
WARREN	0.0	3.9	4.8	5.5	6.5	6.9	7.7	40.0
WASHINGTON	0.0	3.6	4.4	5.2	6.1	6.5	7.3	39.0
WAYNE	0.0	3.7	4.6	5.3	6.3	6.8	7.5	40.5
WEBSTER	0.0	3.9	4.9	5.6	6.5	7.0	7.8	39.5
WHITLEY	0.0	3.7	4.6	5.2	6.1	6.7	7.4	41.0
WOLFE	0.0	3.4	4.1	4.9	5.6	6.2	6.9	39.5
WOODFORD	0.0	3.6	4.3	5.0	6.0	6.3	7.1	39.0

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

4 DAY RAINFALL (INCHES)

PAGE 1 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
ADAIR	4.4	5.6	6.3	7.4	8.0	8.7
ALLEN	4.6	5.8	6.6	7.9	8.5	9.0
ANDERSON	4.2	5.3	5.9	6.8	7.5	8.3
BALLARD	4.9	6.2	7.2	8.5	9.4	10.1
BARREN	4.5	5.7	6.5	7.7	8.3	8.9
BATH	4.0	4.9	5.6	6.5	7.2	8.0
BELL	4.1	5.3	6.0	7.0	7.9	8.5
BOONE	4.0	5.0	5.5	6.5	7.1	7.9
BOURBON	4.1	5.0	5.7	6.6	7.3	8.1
BOYD	3.8	4.7	5.4	6.1	6.8	7.5
BOYLE	4.2	6.3	6.0	6.9	7.7	8.4
BRACKEN	4.0	4.9	5.5	6.4	7.1	7.9
BREATHITT	4.0	4.9	5.7	6.6	7.4	8.0
BRECKINRIDGE	4.4	5.6	6.3	7.3	7.9	8.8
BULLITT	4.3	5.4	6.0	6.9	7.7	8.5
BUTLER	4.6	5.7	6.6	7.8	8.3	9.0
CALDWELL	4.7	5.9	6.9	8.2	8.9	9.5
CALLOWAY	4.1	5.1	5.9	6.8	7.6	8.2
CAMPBELL	4.0	4.9	5.5	6.4	7.0	7.9
CARLISLE	5.0	6.2	7.2	8.6	9.6	10.2
CARROLL	4.1	5.1	5.7	6.6	7.2	8.1
CARTER	3.9	4.7	5.4	6.2	6.9	7.6
CASEY	4.3	5.4	6.1	7.0	7.8	8.6
CHRISTIAN	4.7	5.9	6.9	8.2	8.9	9.5
CLARK	4.1	5.1	5.8	6.6	7.4	8.1
CLAY	4.0	5.1	5.9	6.9	7.7	8.2
CLINTON	4.5	5.7	6.4	7.6	8.2	8.8
CRITTENDEN	4.7	5.9	6.9	8.3	8.9	9.6
CUMBERLAND	4.5	5.7	6.4	7.6	8.2	8.9
DAVIESS	4.5	5.7	6.5	7.7	8.2	8.9
EDMONSON	4.5	5.7	6.5	7.6	8.2	8.9
ELLIOTT	3.9	4.8	5.5	6.3	7.0	7.7
ESTILL	4.1	5.1	5.8	6.7	7.5	8.2
FAYETTE	4.1	5.1	5.8	6.7	7.4	8.2
FLEMING	4.0	4.9	5.5	6.4	7.1	7.8
FLOYD	3.9	4.8	5.6	6.5	7.1	7.7
FRANKLIN	4.2	5.2	5.8	6.7	7.4	8.2
FULTON	5.1	6.3	7.4	8.8	9.7	10.4
GALLATIN	4.1	5.0	5.6	6.5	7.2	8.0
GARRARD	4.2	5.2	6.0	6.8	7.6	8.3

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

4 DAY RAINFALL (INCHES)

PAGE 2 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
GRANT	4.1	5.0	5.6	6.5	7.2	8.0
GRAVES	5.0	6.2	7.2	8.6	9.4	10.1
GRAYSON	4.5	5.6	6.4	7.5	8.0	8.8
GREEN	4.4	5.6	6.3	7.3	7.9	8.7
GREENUP	3.8	4.7	5.3	6.1	6.8	7.5
HANCOCK	4.5	5.6	6.3	7.4	7.9	8.8
HARDIN	4.4	5.5	6.2	7.2	7.8	8.7
HARLAN	4.0	5.0	5.9	6.8	7.7	8.2
HARRISON	4.1	5.0	5.7	6.5	7.2	8.0
HART	4.4	5.6	6.4	7.4	8.0	8.8
HENDERSON	4.6	5.8	6.6	7.8	8.5	9.0
HENRY	4.2	5.2	5.8	6.7	7.3	8.2
HICKMAN	5.0	6.3	7.3	8.7	9.5	10.2
HOPKINS	4.7	5.8	6.7	8.0	8.7	9.3
JACKSON	4.1	5.1	5.9	6.8	7.6	8.3
JEFFERSON	4.3	5.3	6.0	6.9	7.6	8.4
JESSAMINE	4.2	5.2	5.9	6.8	7.5	8.3
JOHNSON	3.9	4.8	5.5	6.4	7.1	7.7
KENTON	4.0	4.9	5.5	6.4	7.0	7.9
KNOTT	3.9	4.9	5.7	6.6	7.3	7.9
KNOX	4.1	5.3	6.0	7.0	7.8	8.4
LARUE	4.4	5.5	6.2	7.2	7.8	8.7
LAUREL	4.1	5.3	6.0	7.0	7.8	8.4
LAWRENCE	3.9	4.7	5.4	6.3	6.9	7.6
LEE	4.0	5.0	5.8	6.7	7.5	8.1
LESLIE	4.0	5.0	5.8	6.8	7.6	8.2
LETCHER	3.9	4.9	5.7	6.7	7.4	7.9
LEWIS	3.9	4.8	5.4	6.2	7.0	7.7
LINCOLN	4.2	5.3	6.0	6.9	7.7	8.4
LIVINGSTON	4.8	6.0	7.0	8.3	9.1	9.8
LOGAN	4.7	5.8	6.7	8.1	8.6	9.2
LYON	4.8	6.0	7.0	8.3	9.1	9.7
MCCRACKEN	4.9	6.1	7.1	8.5	9.3	10.0
MCCREARY	4.3	5.5	6.3	7.4	8.1	8.7
MCLEAN	4.6	5.8	6.6	7.8	8.4	9.0
MADISON	4.1	5.2	5.9	6.8	7.5	8.2
MAGOFFIN	3.9	4.9	5.6	6.5	7.2	7.8
MARION	4.3	5.4	6.1	7.0	7.8	8.6
MARSHALL	4.9	6.1	7.1	8.4	9.2	9.9
MARTIN	3.9	4.8	5.5	6.4	7.0	7.6

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

4 DAY RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
MASON	4.0	4.8	5.5	6.3	7.0	7.8
MEADE	4.4	5.5	6.1	7.1	7.8	8.6
MENIFEE	4.0	4.9	5.7	6.4	7.3	8.0
MERCER	4.2	5.3	6.0	6.5	7.7	8.4
METCALFE	4.5	5.7	6.4	7.5	8.1	8.8
MONROE	4.5	5.7	6.5	7.8	8.4	8.9
MONTGOMERY	4.0	5.0	5.7	6.6	7.3	8.1
MORGAN	3.9	4.8	5.6	6.5	7.2	7.9
MUHLENBERG	4.6	5.8	6.7	8.0	8.5	9.1
NELSON	4.3	5.4	6.1	7.0	7.7	8.5
NICHOLAS	4.0	4.9	5.6	6.5	7.2	8.0
OHIO	4.5	5.7	6.5	7.7	8.2	8.9
OLDHAM	4.2	5.2	5.8	6.8	7.4	8.3
OWEN	4.1	5.1	5.7	6.6	7.3	8.1
OWSLEY	4.0	5.0	5.8	6.8	7.5	8.2
PENDLETON	4.0	4.9	5.6	6.4	7.1	7.9
PERRY	4.0	5.0	5.8	6.7	7.5	8.0
PIKE	3.9	4.8	5.6	6.5	7.0	7.7
POWELL	4.0	5.0	5.8	6.6	7.4	8.1
PULASKI	4.3	5.4	6.1	7.1	7.9	8.6
ROBERTSON	4.0	4.9	5.5	6.4	7.1	7.9
ROCKCASTLE	4.2	5.3	6.0	6.9	7.7	8.4
ROWAN	3.9	4.8	5.5	6.4	7.1	7.8
RUSSELL	4.4	5.6	6.3	7.4	8.0	8.7
SCOTT	4.1	5.1	5.8	6.6	7.3	8.2
SHELBY	4.2	5.2	5.9	6.8	7.5	8.3
SIMPSON	4.6	5.8	6.7	8.0	8.6	9.2
SPENCER	4.3	5.3	6.0	6.9	7.6	8.4
TAYLOR	4.4	5.5	6.2	7.1	7.8	8.6
TODD	4.7	5.9	6.8	8.1	8.8	9.4
TRIGG	4.8	6.0	7.0	8.3	9.1	9.7
TRIMBLE	4.2	5.2	5.8	6.7	7.3	8.2
UNION	4.6	5.9	6.7	8.0	8.7	9.3
WARREN	4.6	5.8	6.6	7.8	8.4	9.0
WASHINGTON	4.3	5.4	6.0	6.9	7.7	8.5
WAYNE	4.4	5.6	6.3	7.4	8.1	8.7
WEBSTER	4.6	5.8	6.7	8.0	8.6	9.2
WHITLEY	4.2	5.4	6.1	7.4	8.0	8.6
WOLFE	4.0	4.9	5.7	6.6	7.3	8.0
WOODFORD	4.2	5.2	5.9	6.7	7.5	8.3

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

7 DAY RAINFALL (INCHES)

PAGE 1 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
ADAIR	5.1	6.4	7.2	8.5	9.4	10.3
ALLEN	5.3	6.7	7.6	8.8	9.8	10.7
ANDERSON	4.9	6.1	6.8	8.0	8.8	9.6
BALLARD	5.8	7.2	8.2	9.6	10.7	11.8
BARREN	5.2	6.6	7.4	8.7	9.6	10.5
BATH	4.5	5.7	6.5	7.6	8.4	9.3
BELL	4.8	6.2	6.9	8.2	9.2	10.1
BOONE	4.6	5.7	6.4	7.3	8.0	8.9
BOURBON	4.6	5.8	6.5	7.7	8.5	9.3
BOYD	4.2	5.4	6.1	7.3	7.8	8.9
BOYLE	4.9	6.2	6.9	8.1	9.0	9.8
BRACKEN	4.5	5.6	6.4	7.4	8.1	9.0
BREATHITT	4.6	5.8	6.6	7.8	8.5	9.4
BRECKINRIDGE	5.2	6.4	7.2	8.4	9.3	10.0
BULLITT	5.0	6.2	6.9	8.1	9.0	9.7
BUTLER	5.3	6.7	7.5	8.7	9.6	10.4
CALDWELL	5.5	6.9	7.9	9.1	10.1	11.0
CALLOWAY	5.7	7.2	8.2	9.5	10.6	11.5
CAMPBELL	4.5	5.6	6.4	7.4	8.0	8.9
CARLISLE	5.8	7.3	8.3	9.7	10.7	11.8
CARROLL	4.7	5.8	6.6	7.7	8.4	9.1
CARTER	4.3	5.5	6.2	7.3	7.9	8.9
CASEY	5.0	6.3	7.0	8.3	9.2	10.0
CHRISTIAN	5.5	6.9	7.9	9.1	10.1	10.9
CLARK	4.7	5.9	6.6	7.8	8.6	9.5
CLAY	4.8	6.0	6.8	8.0	8.9	9.8
CLINTON	5.2	6.5	7.3	8.6	9.6	10.7
CRITTENDEN	5.5	6.9	7.9	9.1	10.0	11.1
CUMBERLAND	5.2	6.5	7.4	8.6	9.6	10.6
DAVIESS	5.3	6.6	7.4	8.6	9.6	10.3
EDMONSON	5.2	6.6	7.4	8.6	9.6	10.3
ELLIOTT	4.4	5.6	6.3	7.5	8.1	9.1
ESTILL	4.7	5.9	6.7	7.9	8.7	9.6
FAYETTE	4.7	5.9	6.7	7.9	8.7	9.5
FLEMING	4.5	5.7	6.4	7.5	8.2	9.1
FLOYD	4.4	5.6	6.5	7.6	8.1	9.0
FRANKLIN	4.8	6.0	6.7	7.9	8.6	9.4
FULTON	5.9	7.4	8.5	9.9	11.0	12.0
GALLATIN	4.7	5.8	6.5	7.6	8.2	9.1
GARRARD	4.9	6.4	6.8	8.0	9.0	9.8

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

7 DAY RAINFALL (INCHES)

PAGE 2 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
GRANT	4.6	5.8	6.5	7.6	8.3	9.1
GRAVES	5.8	7.3	8.3	9.6	10.7	11.7
GRAYSON	5.2	6.5	7.3	8.5	9.4	10.2
GREEN	5.1	6.4	7.2	8.4	9.4	10.2
GREENUP	4.3	5.4	6.1	7.2	7.8	8.8
HANCOCK	5.2	6.5	7.3	8.4	9.3	10.1
HARDIN	5.1	6.4	7.1	8.3	9.2	9.8
HARLAN	4.7	5.9	6.8	8.0	8.8	9.6
HARRISON	4.6	5.8	6.5	7.6	8.3	9.2
HART	5.2	6.5	7.3	8.5	9.5	10.2
HENDERSON	5.3	6.7	7.5	8.7	9.6	10.6
HENRY	4.8	5.9	6.7	7.8	8.5	9.3
HICKMAN	5.8	7.3	8.4	9.8	10.8	11.9
HOPKINS	5.4	6.8	7.7	8.9	9.9	10.8
JACKSON	4.8	6.0	6.8	8.0	8.9	9.8
JEFFERSON	5.0	6.1	6.8	8.0	8.8	9.6
JESSAMINE	4.8	6.0	6.7	8.0	8.8	9.6
JOHNSON	4.4	5.6	6.4	7.5	8.1	9.0
KENTON	4.6	5.7	6.4	7.4	8.0	8.9
KNOTT	4.5	5.7	6.6	7.7	8.4	9.2
KNOX	7.8	6.1	6.9	8.2	9.1	10.0
LARUE	5.1	6.4	7.1	8.3	9.3	10.0
LAUREL	4.9	6.2	6.9	8.2	9.1	10.0
LAWRENCE	4.3	5.5	6.3	7.4	7.9	8.9
LEE	4.7	5.9	6.7	7.9	8.6	9.6
LESLIE	4.7	5.9	6.8	7.9	8.7	9.6
LETCHER	4.6	5.7	6.6	7.8	8.4	9.1
LEWIS	4.4	5.5	6.3	7.3	8.0	8.9
LINCOLN	4.9	6.2	6.9	8.1	9.0	9.9
LIVINGSTON	5.6	7.0	8.0	9.3	10.3	11.3
LOGAN	5.4	6.8	7.8	8.9	9.9	10.7
LYON	5.6	7.0	8.0	9.2	10.6	11.2
MCCRACKEN	5.7	7.2	8.2	9.5	10.5	11.6
MCCREARY	5.0	6.4	7.1	8.4	9.4	10.5
MCLEAN	5.3	6.7	7.5	8.7	9.7	10.5
MADISON	4.8	6.0	6.7	8.0	8.8	9.7
MAGOFFIN	4.5	5.7	6.5	7.6	8.2	9.2
MARION	5.0	6.3	7.0	8.2	9.2	9.9
MARSHALL	5.7	7.1	8.1	9.4	10.5	11.4
MARTIN	4.4	5.5	6.3	7.4	7.9	8.8

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

7 DAY RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
MASON	4.5	5.6	6.3	7.4	8.0	9.0
MEADE	5.1	6.3	7.0	8.2	9.1	9.8
MENIFEE	4.5	5.8	6.5	7.7	8.4	9.3
MERCER	4.9	6.1	6.8	8.1	8.9	9.7
METCALFE	5.2	6.5	7.3	8.6	9.6	10.5
MONROE	5.3	6.6	7.5	8.7	9.7	10.7
MONTGOMERY	4.6	5.8	6.5	7.7	8.5	9.4
MORGAN	4.5	5.7	6.4	7.6	8.3	9.2
MUHLENBERG	5.4	6.8	7.7	8.8	9.8	10.6
NELSON	5.0	6.2	6.9	8.2	9.1	9.8
NICHOLAS	4.6	5.7	6.5	7.6	8.3	9.2
OHIO	5.3	6.6	7.5	8.7	9.6	10.3
OLDHAM	4.9	6.0	6.8	7.9	8.6	9.4
OWEN	4.7	5.8	6.6	7.7	8.4	9.2
OWSLEY	4.7	5.9	6.7	7.9	8.8	9.6
PENDLETON	4.6	5.7	6.4	7.5	8.2	9.0
PERRY	4.6	5.8	6.6	7.9	8.5	9.4
PIKE	4.5	5.5	6.4	7.5	8.0	8.9
POWELL	4.6	5.9	6.6	7.8	8.6	9.5
PULASKI	5.0	6.3	7.0	8.3	9.3	10.1
ROBERTSON	4.5	5.7	6.4	7.5	8.2	9.0
ROCKCASTLE	4.9	6.1	6.8	8.1	9.0	9.9
ROWAN	4.4	5.6	6.4	7.5	8.2	9.1
RUSSELL	5.1	6.4	7.2	8.5	9.4	10.3
SCOTT	4.7	5.9	6.6	7.8	8.5	9.3
SHELBY	4.9	6.0	6.8	7.9	8.7	9.5
SIMPSON	5.4	6.8	7.7	8.9	9.9	10.8
SPENCER	4.9	6.1	6.8	8.0	8.9	9.7
TAYLOR	5.1	6.3	7.0	8.3	9.3	10.0
TODD	5.5	6.9	7.8	9.0	10.0	10.8
TRIGG	5.6	7.1	8.0	9.3	10.3	11.2
TRIMBLE	4.8	5.9	6.7	7.8	8.5	9.3
UNION	5.5	6.8	7.7	8.9	9.9	10.9
WARREN	5.3	6.7	7.5	8.8	9.7	10.5
WASHINGTON	5.0	6.2	6.9	8.1	9.0	9.8
WAYNE	5.1	6.4	7.2	8.5	9.5	10.5
WEBSTER	5.4	6.8	7.7	8.9	9.9	10.8
WHITLEY	5.0	6.3	7.0	8.3	9.3	10.3
WOLFE	4.6	5.8	6.5	7.8	8.5	9.4
WOODFORD	4.8	6.0	6.7	7.9	8.7	9.5

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

10 DAY RAINFALL (INCHES)

PAGE 1 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
ADAIR	5.7	7.1	8.1	9.5	10.5	11.3
ALLEN	5.9	7.5	8.5	9.7	10.9	11.8
ANDERSON	5.5	6.7	7.6	8.9	9.8	10.6
BALLARD	6.3	7.9	9.3	10.3	11.9	13.2
BARREN	5.8	7.3	8.4	9.6	10.7	11.5
BATH	5.2	6.4	7.3	8.4	9.3	10.5
BELL	5.5	6.9	7.7	9.2	10.0	11.0
BOONE	5.2	6.3	7.2	8.3	9.0	9.9
BOURBON	5.3	6.5	7.4	8.6	9.4	10.3
BOYD	4.8	6.1	6.9	8.1	8.8	9.8
BOYLE	5.5	6.8	7.7	9.1	10.1	10.8
BRACKEN	5.1	6.3	7.1	8.3	9.0	9.9
BREATHITT	5.2	6.5	7.3	8.7	9.5	10.4
BRECKINRIDGE	5.7	7.0	8.2	9.3	10.3	11.2
BULLITT	5.5	6.9	7.8	9.1	10.1	10.9
BUTLER	5.8	7.4	8.5	9.6	10.7	11.6
CALDWELL	6.0	7.6	8.9	9.9	11.2	12.0
CALLOWAY	6.3	7.9	9.3	10.2	11.7	12.8
CAMPBWLL	5.1	6.3	7.1	8.3	8.9	9.9
CARLISLE	6.3	8.0	9.4	10.3	11.9	13.3
CARROLL	5.3	6.5	7.4	8.6	9.4	10.2
CARTER	5.0	6.2	7.0	8.3	9.0	9.9
CASEY	5.6	7.0	7.9	9.3	10.3	11.0
CHRISTIAN	6.0	7.7	8.9	9.9	11.2	12.0
CLARK	5.3	6.6	7.5	8.7	9.6	10.4
CLAY	5.4	6.7	7.5	9.0	9.8	10.7
CLINTON	5.8	7.3	8.2	9.4	10.8	11.5
CRITTENDEN	6.0	7.6	9.0	9.9	11.3	12.1
CUMBERLAND	5.8	7.3	8.2	9.6	10.8	11.5
DAVIESS	5.8	7.3	8.4	9.5	10.6	11.5
EDMONSON	5.8	7.3	8.4	9.6	10.6	11.4
ELLIOTT	5.0	6.3	7.1	8.3	9.1	10.0
ESTILL	5.4	6.6	7.5	8.8	9.7	10.6
FAYETTE	5.4	6.6	7.5	8.8	9.6	10.5
FLEMING	5.1	6.3	7.2	8.3	9.1	10.0
FLOYD	4.9	6.2	7.0	8.4	9.1	10.0
FRNAKLIN	5.4	6.6	7.5	8.8	9.6	10.4
FULTON	6.5	8.1	9.6	10.5	12.2	13.6
GALLATIN	5.2	6.4	7.3	8.4	9.2	10.2
GARRARD	5.5	6.7	7.6	9.0	9.9	10.8

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

10 DAY RAINFALL (INCHES)

PAGE 2 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
GRANT	5.2	6.4	7.3	8.4	9.2	10.0
GRAVES	6.3	7.9	9.3	10.3	11.9	13.0
GRAYSON	5.7	7.2	8.3	9.5	10.5	11.3
GREEN	5.7	7.1	8.1	9.4	10.4	11.2
GREENUP	4.9	6.1	6.9	8.1	8.8	9.8
HANCOCK	5.7	7.2	8.3	9.4	10.3	11.3
HARDIN	5.6	7.0	8.1	9.3	10.2	11.1
HARLAN	5.2	6.7	7.3	8.9	9.6	10.7
HARRISON	5.3	6.4	7.3	8.5	9.3	10.1
HART	5.7	7.2	8.2	9.5	10.5	11.3
HENDERSON	5.8	7.4	8.6	9.6	10.8	11.7
HENRY	5.4	6.6	7.5	8.7	9.5	10.3
HICKMAN	6.4	8.0	9.5	10.4	12.0	13.4
HOPKINS	5.9	7.5	8.8	9.8	11.0	11.8
JACKSON	5.4	6.7	7.6	9.0	9.8	10.7
JEFFERSON	5.5	6.8	7.7	9.0	9.9	10.7
JESSAMINE	5.4	6.7	7.6	8.9	9.8	10.6
JOHNSON	5.0	6.2	7.0	8.4	9.1	10.0
KENTON	5.1	6.3	7.2	8.3	8.9	9.9
KNOTT	5.0	6.4	7.1	8.6	9.3	10.3
KNOX	5.5	6.9	7.7	9.2	10.0	11.0
LARUE	5.6	7.0	8.0	9.3	10.3	11.1
LAUREL	5.5	6.8	7.7	9.3	10.1	11.0
LAWRENCE	4.9	6.2	6.9	8.3	8.9	9.9
LEE	5.3	6.6	7.4	8.8	9.5	10.5
LESLIE	5.3	6.7	7.4	8.9	9.7	10.7
LETCHER	4.9	6.4	7.1	8.7	9.3	10.1
LEWIS	5.0	6.2	7.1	8.3	9.0	9.8
LINCOLN	5.5	6.8	7.7	9.2	10.1	10.9
LIVINGSTON	6.1	7.7	9.1	10.0	11.5	12.5
LOGAN	6.0	7.6	8.7	9.8	11.0	11.8
LYON	6.1	7.7	9.1	10.0	11.4	12.4
MCCRACKEN	6.2	7.9	9.2	10.2	11.8	12.9
MCCREARY	5.7	7.1	8.0	9.5	10.5	11.3
MCLEAN	5.9	7.4	8.6	9.7	10.8	11.6
MADISON	5.4	6.6	7.6	8.9	9.8	10.7
MAGOFFIN	5.1	6.3	7.1	8.5	9.2	10.2
MARION	5.6	6.9	7.8	9.2	10.2	11.0
MARSHALL	6.2	7.8	9.2	10.1	11.7	12.7
MARTIN	4.8	6.1	6.8	8.3	9.0	9.8

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)

10 DAY RAINFALL (INCHES)

PAGE 3 OF 3

FREQUENCY (YEARS)

COUNTY	2	5	10	25	50	100
MASON	5.1	6.3	7.1	8.3	9.0	9.9
MEADE	5.6	7.0	8.0	9.2	10.1	11.0
MENIFEE	5.2	6.4	7.3	8.5	9.5	10.3
MERCER	5.5	6.8	7.7	9.0	9.9	10.7
METCALFE	5.8	7.3	8.2	9.6	10.7	11.5
MONROE	5.9	7.4	8.4	9.7	10.9	11.7
MONTGOMERY	5.3	6.5	7.4	8.4	9.4	10.3
MORGAN	5.1	6.4	7.2	8.5	9.3	10.2
MUHLENBERG	5.9	7.5	8.6	9.8	10.9	11.7
NELSON	5.6	7.0	7.8	9.2	10.1	10.9
NICHOLAS	5.2	6.4	7.3	8.4	9.2	10.1
OHIO	5.8	7.3	8.4	9.6	10.6	11.5
OLDHAM	5.4	6.7	7.6	8.8	9.6	10.4
OWEN	5.3	6.5	7.4	8.6	9.4	10.2
OWSLEY	5.4	6.6	7.4	8.8	9.7	10.6
PENDLETON	5.2	6.3	7.2	8.4	9.1	10.0
PERRY	5.2	6.5	7.2	8.8	9.5	10.4
PIKE	4.9	6.1	6.8	8.4	8.9	9.9
POWELL	5.3	6.5	7.4	8.6	9.6	10.5
PULASKI	5.6	6.9	7.8	9.3	10.3	11.1
ROBERTSON	5.2	6.4	7.2	8.4	9.1	10.0
ROCKCASTLE	5.5	6.8	7.7	9.1	10.0	10.9
ROWAN	5.1	6.3	7.2	8.4	9.2	10.1
RUSSELL	5.7	7.1	8.0	9.5	10.6	11.3
SCOTT	5.3	6.5	7.5	8.7	9.5	10.3
SHELBY	5.4	6.7	7.6	8.9	9.7	10.4
SIMPSON	6.0	7.5	8.7	9.8	11.0	11.8
SPENCER	5.5	6.8	7.7	9.0	9.9	10.6
TAYLOR	5.6	7.0	8.0	9.3	10.3	11.1
TODD	6.0	7.3	8.8	9.9	11.1	11.9
TRIGG	6.1	7.8	9.0	10.0	11.5	12.3
TRIMBLE	5.3	6.6	7.5	8.7	9.5	10.2
UNION	5.9	7.5	8.8	9.5	11.0	11.9
WARREN	5.9	7.4	8.5	9.7	10.8	11.7
WASHINGTON	5.5	6.8	7.7	9.1	10.0	10.8
WAYNE	5.8	7.2	8.0	9.5	10.7	11.4
WEBSTER	5.9	7.5	8.7	9.7	11.0	11.8
WHITLEY	5.7	7.0	7.9	9.3	10.3	11.2
WOLFE	5.2	6.5	7.3	8.6	9.5	10.4
WOODFORD	5.4	6.6	7.6	8.9	9.7	10.5

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)  
 ONE DAY AND TEN DAY DIRECT DISCHARGES (INCHES)  
 QUICK RETUN FLOWS (CSM)

PAGE 1 OF 3

COUNTY	ONE DAY			TEN DAY			QUICK RETURN FLOWS (CSM)
	25	50	100	25	50	100	
	FREQUENCY (YEARS)						
ADAIR	4.0	4.3	4.7	7.9	8.6	9.3	7.5
ALLEN	4.1	4.5	4.9	8.2	8.9	9.7	7.6
ANDERSON	3.9	4.2	4.6	7.8	8.5	9.2	7.0
BALLARD	4.1	4.5	4.9	8.2	8.9	9.7	6.3
BARREN	4.1	4.4	4.8	8.2	8.8	9.6	7.6
BATH	3.7	4.0	4.3	7.3	7.9	8.6	6.4
BELL	3.7	4.0	4.3	7.3	7.9	8.6	7.6
BOONE	3.7	4.0	4.3	7.3	7.9	8.6	6.2
BOURBON	3.7	4.0	4.4	7.5	8.1	8.8	6.7
BOYD	3.2	3.5	3.8	6.4	6.9	7.5	4.9
BOYLE	3.9	4.2	4.6	7.8	8.5	9.2	7.2
BRACKEN	3.6	3.9	4.3	7.2	7.8	8.5	6.3
BREATHITT	3.6	3.9	4.2	7.1	7.7	8.4	6.8
BRECKINRIDGE	4.2	4.5	4.9	8.3	9.0	9.8	6.9
BULLITT	4.0	4.4	4.8	8.1	8.7	9.5	7.0
BUTLER	4.2	4.6	5.0	8.4	9.1	9.9	7.2
CALDWELL	4.3	4.6	5.0	8.5	9.2	10.0	6.7
CALLOWAY	4.3	4.6	5.0	8.5	9.2	10.0	6.8
CAMPBELL	3.6	3.9	4.2	7.1	7.7	8.4	6.2
CARLISLE	4.1	4.4	4.2	8.2	8.8	9.6	6.4
CARROLL	3.9	4.2	4.6	7.8	8.5	9.2	6.4
CARTER	3.4	3.7	4.0	6.8	7.4	8.0	5.2
CASEY	3.9	4.2	4.6	7.8	8.5	9.2	7.4
CHRISTIAN	4.3	4.6	5.0	8.5	9.2	10.0	7.0
CLARK	3.7	4.0	4.4	7.5	8.1	8.8	6.8
CLAY	3.7	4.0	4.6	7.3	7.9	8.6	7.4
CLINTON	4.0	4.3	4.7	7.9	8.6	9.3	7.7
CRITTENDEN	4.3	4.6	5.0	8.5	9.2	10.0	6.5
CUMBERLAND	4.0	4.3	4.7	8.0	8.6	9.4	7.6
DAVIESS	4.3	4.6	5.0	8.5	9.2	10.0	6.7
EDMONSON	4.1	4.5	4.9	8.2	8.9	9.7	7.3
ELLIOTT	3.4	6.7	4.1	6.9	7.5	8.1	5.5
ESTILL	3.7	4.0	4.4	7.4	8.0	8.7	7.0
FAYETTE	3.8	4.1	4.5	7.7	8.3	9.0	6.9
FLEMING	3.6	3.9	4.2	7.1	7.7	8.4	6.3
FLOYD	3.4	3.6	4.0	6.7	7.3	7.9	6.0
FRANKLIN	3.9	4.2	4.6	7.7	8.4	9.1	6.8
FULTON	3.9	4.2	4.6	7.8	8.5	9.2	6.4
GALLATIN	3.8	4.1	4.5	7.7	8.3	9.0	6.4
GARRARD	3.9	4.2	4.6	7.7	8.4	9.1	7.2

DIVISION OF WATER RESOURCES  
 DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION  
 ENGINEERING MEMORANDUM NO.2 (4-30-71), REVISED (6-1-79)  
 ONE DAY AND TEN DAY DIRECT DISCHARGES (INCHES)  
 QUICK RETUN FLOWS (CSM)

PAGE 2 OF 3

COUNTY	ONE DAY			TEN DAY			QUICK RETURN FLOWS (CSM)
	25	50	100	25	50	100	
	FREQUENCY (YEARS)						
GRANT	3.8	4.1	4.5	7.6	8.2	8.9	6.4
GRAVES	4.3	4.6	5.0	8.5	9.2	10.0	6.6
GRAYSON	4.2	4.5	4.9	8.3	9.0	9.8	7.8
GREEN	4.0	4.3	4.7	8.0	8.6	9.4	7.4
GREENUP	3.3	3.5	3.9	6.5	7.1	7.7	4.9
HANCOCK	4.2	4.6	5.0	8.4	9.1	9.9	6.7
HARDIN	4.1	4.4	4.8	8.2	8.8	9.6	7.1
HARLAN	3.5	3.8	4.2	7.1	7.6	8.6	7.4
HARRISON	3.7	4.0	4.4	7.5	8.1	8.8	6.6
HART	4.1	4.4	4.8	8.2	8.8	9.6	7.3
HENDERSON	4.3	4.6	5.0	8.5	9.2	10.0	6.4
HENRY	3.9	4.2	4.6	7.8	8.5	9.2	6.6
HICKMAN	4.0	4.4	4.8	8.1	8.7	9.5	6.5
HOPKINS	4.3	4.6	5.0	8.5	9.2	10.0	6.8
JACKSON	3.7	4.0	4.4	7.5	8.1	8.8	7.3
JEFFERSON	4.0	4.3	4.7	8.0	8.6	9.4	6.7
JESSAMINE	3.9	4.2	4.6	7.7	8.4	9.1	7.0
JOHNSON	3.4	3.6	4.0	6.7	7.3	7.9	5.5
KENTON	3.6	3.9	4.3	7.2	7.8	8.5	6.2
KNOTT	3.4	6.7	4.0	6.8	7.4	8.0	6.7
KNOX	3.7	4.0	4.4	7.4	8.0	8.7	7.6
LARUE	4.0	4.4	4.8	8.1	8.7	9.5	7.2
LAUREL	3.8	4.1	4.5	7.6	8.2	8.9	7.5
LAWRENCE	3.3	3.5	3.9	6.5	7.4	7.7	5.0
LEE	3.7	4.0	4.3	7.3	7.9	8.6	7.0
LESLIE	3.6	3.9	4.2	7.1	7.7	8.4	7.3
LETCHER	3.4	3.7	4.0	6.8	7.4	8.0	7.0
LEWIS	3.5	3.8	4.1	7.0	7.5	8.2	5.7
LINCOLN	3.9	4.2	4.6	7.7	8.4	9.1	7.3
LIVINGSTON	4.3	4.6	5.0	8.5	9.2	10.0	6.5
LOGAN	4.3	4.6	5.0	8.5	9.2	10.0	7.3
LYON	4.3	4.6	5.0	8.5	9.2	10.0	6.7
MCCRACKEN	4.3	4.6	5.0	8.5	9.2	10.0	6.4
MCCREARY	3.9	4.2	4.6	7.7	8.4	9.1	7.7
MCLEAN	4.3	4.6	5.0	8.5	9.2	10.0	6.7
MADISON	3.8	4.1	4.5	7.7	8.3	9.0	7.1
MAGOFFIN	3.4	3.7	4.1	6.9	7.5	8.1	6.0
MARION	4.0	4.3	4.7	7.9	8.6	9.3	7.3
MARSHALL	4.3	4.6	5.0	8.5	9.2	10.0	6.7
MARTIN	3.3	3.6	3.9	6.6	7.2	7.8	5.0

DIVISION OF WATER RESOURCES  
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 ONE DAY AND TEN DAY DIRECT DISCHARGES (INCHES)  
 QUICK RETUN FLOWS (CSM)

PAGE 3 OF 3

COUNTY	ONE DAY			TEN DAY			QUICK RETURN FLOWS (CSM)
	25	50	100	25	50	100	
	FREQUENCY (YEARS)						
MASON	3.6	3.9	4.2	7.1	7.7	8.4	6.2
MEADE	4.1	4.5	4.9	8.2	8.9	9.7	6.8
MENIFEE	3.6	3.9	4.3	7.2	7.8	8.5	6.5
MERCER	3.9	4.2	4.6	7.8	8.5	9.2	7.2
METCALFE	4.1	4.4	4.8	8.2	8.8	9.6	7.5
MONROE	4.1	4.4	4.8	8.2	8.8	9.6	7.7
MONTOMERY	3.7	4.0	4.4	7.4	8.0	8.7	6.7
MORGAN	3.5	3.8	4.2	7.1	7.6	8.3	6.0
MUHLENBERG	4.3	4.6	5.0	8.5	9.2	10.0	7.0
NELSON	4.0	4.3	4.7	8.0	8.6	9.4	7.0
NICHOLAS	3.7	4.0	4.3	7.3	7.9	8.6	6.5
OHIO	4.2	4.6	5.0	8.4	9.1	9.9	7.0
OLDHAM	4.0	4.3	4.7	7.9	8.6	9.3	6.7
OWEN	3.9	4.2	4.6	7.7	8.4	9.1	6.5
OWSLEY	3.7	4.0	4.3	7.3	7.9	8.6	7.2
PENDLETON	3.7	4.0	4.4	7.4	8.0	8.7	6.4
PERRY	3.5	3.8	4.2	7.1	7.6	8.3	7.0
PIKE	3.3	3.5	3.9	6.5	7.1	7.7	6.0
POWELL	3.7	4.0	4.3	7.3	7.9	8.6	6.8
PULASKI	3.9	4.2	4.6	7.7	8.4	9.1	7.5
ROBERTSON	3.6	3.9	4.3	7.2	7.8	8.5	6.4
ROCKCASTLE	3.8	4.1	4.5	7.7	8.3	9.0	7.3
ROWAN	3.5	3.8	4.2	7.1	7.6	8.3	6.0
RUSSELL	4.0	4.3	4.7	7.9	8.6	9.3	7.6
SCOTT	3.8	4.1	4.5	7.7	8.3	9.0	6.7
SHELBY	4.0	4.3	4.7	7.9	8.6	9.3	6.8
SIMPSON	4.2	4.6	5.0	8.4	9.4	9.9	7.5
SPENCER	4.0	4.3	4.7	7.9	8.6	9.3	6.9
TAYLOR	4.0	4.3	4.7	8.0	8.6	9.4	7.4
TODD	4.3	4.6	5.0	8.5	9.2	10.0	7.2
TRIGG	4.3	4.6	5.0	8.5	9.2	10.0	6.9
TRIMBLE	4.0	4.3	4.7	7.9	8.6	9.3	6.4
UNION	4.3	4.6	5.0	8.5	9.2	10.0	6.4
WARREN	4.2	4.5	4.9	8.3	9.0	9.8	7.5
WASHINGTON	4.0	4.3	4.7	7.9	8.6	9.3	7.2
WAYNE	3.9	4.2	4.6	7.8	8.5	9.2	7.7
WEBSTER	4.3	4.6	5.0	8.5	9.2	10.0	6.6
WHITLEY	3.8	4.1	4.5	7.6	8.2	8.9	7.7
WOLFE	3.6	3.9	4.3	7.2	7.8	8.5	6.6
WOODFORD	3.9	4.2	4.6	7.7	8.4	9.1	7.0