

## MIFAB Rainfall Considerations for Roof Drains

Flat roof drainage is accomplished through a system of roof drains, vertical leaders, and horizontal storm drains sized and located in accordance with established criteria in conformance with local plumbing and building codes. Therefore, when considering the design of a roof drainage system, it is recommended that local code authorities be consulted regarding the rainfall rate acceptable in their jurisdiction for design purposes. National rainfall rate information is provided in the chart below, listing rainfall rates in millimeters per hour for selected cities.

When the rainfall rate for the locale of the project has been resolved, sizing of the roof drains, leaders and horizontal drainage piping can proceed.

### Rainfall Rates for Selected Cities (inches per hour)

Based on a storm of one hour duration and a 100 year return period.  
Source: Environment Canada-National Climate Data and Information Archive

<b>ALABAMA</b>	<b>IDAHO</b>	<b>MICHIGAN</b>	<b>NORTH CAROLINA</b>	<b>TEXAS</b>
Birmingham 3.8	Boise 0.9	Alpena 2.5	Asheville, 4.1	Abilene 3.6
Huntsville 3.6	Pocatello 1.2	Detroit 2.8	Charlotte 3.7	Amarillo 3.5
Mobile 4.6	<b>ILLINOIS</b>	Escabana 2.4	Greensboro 3.5	Brownsville 4.5
Montgomery 4.2	Cairo 3.3	Grand Rapids 2.8	Raleigh 3.7	Corpus Christi 4.5
<b>ALASKA</b>	Chicago 3.0	Lansing 2.8	Wilmington 4.2	Dallas 4.0
Fairbanks 1.0	Peoria 3.1	Marquette 2.4	<b>NORTH DAKOTA</b>	El Paso 2.4
Juneau 0.6	Springfield 3.3	Sault Ste. Marie 2.2	Bismarck 2.8	Houston 4.6
<b>ARIZONA</b>	<b>INDIANA</b>	<b>MISSISSIPPI</b>	Fargo 3.2	Lubbock 3.3
Flagstaff 2.4	Evansville 3.2	Biloxi 4.7	Grand Forks 3.0	Odessa 3.2
Nogales 3.1	Fort Wayne 2.9	Columbus 3.9	Williston 2.6	San Antonio 4.2
Phoenix 2.5	Indianapolis 3.1	Jackson 4.0	<b>OHIO</b>	Tyler 3.9
Yuma 1.6	South Bend 3.0	Natchez 4.4	Cincinnati 3.0	<b>UTAH</b>
<b>ARKANSAS</b>	Terre Haute 3.2	<b>MISSOURI</b>	Cleveland 2.8	Cedar City 1.6
Fort Smith 3.6	<b>IOWA</b>	Columbia 3.3	Columbus 2.8	Salt Lake City 1.3
Little Rock 3.7	Burlington 3.3	Kansas City 3.6	Toledo 2.8	<b>VERMONT</b>
Texarkana 3.8	Davenport 3.3	St. Louis 3.3	Youngstown 2.7	Brattleboro 2.5
<b>CALIFORNIA</b>	Des Moines 3.5	Springfield 3.4	Zanesville 2.8	Burlington 2.2
Barstow 1.4	Dubuque 3.3	<b>MONTANA</b>	<b>OKLAHOMA</b>	<b>VIRGINIA</b>
Crescent City 1.5	Sioux City 3.6	Billings 1.9	Oklahoma City 3.8	Bristol 2.7
Fresno 1.1	<b>KANSAS</b>	Havre 1.6	Tulsa 3.8	Charlottesville 2.9
Los Angeles 2.1	Atwood 3.3	Helena 1.5	<b>OREGON</b>	Norfolk 3.4
Needles 1.6	Dodge City 3.4	Missoula 1.3	Medford 1.4	Richmond 3.3
Sacramento 1.6	Topeka 3.7	<b>NEBRASKA</b>	Pendleton 1.0	Roanoke 3.2
San Diego 1.3	Wichita 3.7	Grand Island 3.5	Portland 1.3	<b>WASHINGTON</b>
San Francisco 1.5	<b>KENTUCKY</b>	Omaha 3.8	<b>PENNSYLVANIA</b>	Bellingham 1.1
<b>COLORADO</b>	Ashland 3.0	Sidney 3.2	Erie 2.6	Seattle 1.1
Denver 2.4	Bowling Green 3.2	Valentine 3.2	Harrisburg 2.8	Spokane 1.0
Durango 1.8	Lexington 3.1	<b>NEVADA</b>	Philadelphia 3.1	Yakima 1.0
Grand Junction 1.7	Louisville 3.2	Carson City 1.1	Pittsburgh 2.6	<b>WEST VIRGINIA</b>
Pueblo 2.5	Middlesboro 2.8	Elko 1.0	Scranton 2.7	Charleston 2.8
<b>CONNECTICUT</b>	Paducah 3.3	Las Vegas 1.5	Williamsport 2.6	Elkins 2.7
Hartford 2.7	<b>LOUISIANA</b>	<b>NEW HAMPSHIRE</b>	<b>RHODE ISLAND</b>	Parkersburg 2.8
New Haven 2.8	Baton Rouge 4.8	Berlin 2.5	Providence 2.6	<b>WISCONSIN</b>
<b>DELAWARE</b>	Lake Charles 4.7	Claremont 2.5	<b>SOUTH CAROLINA</b>	Ashland 2.5
Georgetown 3.0	New Orleans 4.8	Portsmouth 2.4	Charleston 4.3	Eau Claire 3.0
Wilmington 3.1	Shreveport 3.9	<b>NEW JERSEY</b>	Columbia 4.0	Green Bay 2.5
<b>DISTRICT OF COLUMBIA</b>	<b>MAINE</b>	Atlantic City 3.0	Greenville 4.2	La Crosse 3.1
Washington 3.2	Bangor 2.2	Newark 3.1	<b>SOUTH DAKOTA</b>	Madison 3.0
<b>FLORIDA</b>	Caribou 2.0	Trenton 3.1	Aberdeen 3.3	Milwaukee 3.0
Jacksonville 4.3	Portland 2.4	<b>NEW MEXICO</b>	Pierre 3.2	<b>WYOMING</b>
Key West 4.3	<b>MARYLAND</b>	Albuquerque 2.0	Rapid-City 2.9	Casper 1.9
Miami 4.7	Baltimore 3.2	Hobbs 3.0	Sioux Falls 3.6	Cheyenne 2.2
Pensacola 4.6	Hagerstown 2.8	Las Cruces 2.0	<b>TENNESSEE</b>	Rock Springs 1.3
Tampa 4.5	Salisbury 3.1	Santa Fe 2.0	Chattanooga 3.5	Sheridan 1.7
<b>GEORGIA</b>	<b>MASSACHUSETTS</b>	<b>NEW YORK</b>	Knoxville 3.2	Yellowstone Park 1.4
Atlanta 3.7	Boston 2.5	Albany 2.6	Memphis 3.7	
Macon 3.9	New Bedford 2.6	Binghamton 2.3	Nashville 3.3	
Savannah 4.3	Pittsfield 2.8	Buffalo 3.0		
Thomasville 4.3	Springfield 2.7	2.3New York 3.0		
<b>HAWAII</b>		Syracuse 2.3		
Hilo 6.2		Watertown 2.2		
Honolulu 3.0				