# AN INDEX TO STORM RAINFALL IN CANADA 

BY
D.M. POLLOCK

CLI-1-75

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#### Abstract

The 'Storm Rainfall in Canada' series was first published in 1961, seven years after "Hurricane Hazel" caused a severe flood in the vicinity of Toronto. This continuing publication was designed as a reference document for use when evaluating the risk of a large rainstorm causing flooding in the various Canadian watersheds. By April, 1975, approximately 900 storms had been analyzed and 448 of these storm analyses published. This index to the "Storm Rainfall in Canada' series provides a list of errors made in the analyses already published and a brief description of the methods used for the analysis.


## UN INDEX POUR LA SÉRIE PLUIES ORAGEUSES AU CANADA


#### Abstract

RÉSUMÉ

La première publication de la série "Pluies orageuses au Canada" remonte à 1961 soit sept ans après les graves inondations des environs de Toronto provoquées par l'ouragan Hazel. Cette publication devait servir de référence pour l'évaluation du risque d'inondation par une grosse pluie orageuse dans les différents bassins hydrographiques du Canada. De 1961 à avril 1975, on a analysé environ 900 orages et 448 analyses ont été publiées. Dans la présente publication on trouvera un index pour la série "Pluies orageuses au Canada," une liste d'erreurs pour les analyses déjà publiées et une brève description des méthodes d'analyse.


## 1. INTRODUCTION

When the 'Storm Rainfall in Canada' series started in 1961, it covered only storms in Quebec and the Prairies. At that time, storms in the Prairies were selected for analysis if they gave over four inches of rain in two days or exceeded the 10 -year return period point rainfall for the month. The storms in Quebec were selected if they produced more than two inches in one day, three inches in two days, or four inches in three days. As the selection of storms in other areas of Canada started, criteria similar to that for Quebec were used, except for the Northwest Territories, where slightly smaller storms were accepted. After many years of storm analysis work, many storms had been published for each region and the selection criteria were gradually changed to eliminate all but the very largest storms. The original, less stringent criteria were kept for storms in the spring, when snowmelt and high soil moisture makes flooding more probable. Many storms, which have met the selection criteria, were not published because there were insufficient observing stations for a reliable analysis, or a much larger storm had already been published for the same month and location, or the center of the storm was in the United States.

Because the selection criteria have been changing and the number of observing stations increasing, any change in the number of storms analyzed per year should not be interpreted as a change in the number of storms which occurred. No storms have been analyzed for the period prior to 1900 and only a few have been analyzed for the period prior to 1920 because insufficient observing stations were operating to determine accurately the isohyetal patterns. Few storm analyses have been published for British Columbia because the mountainous terrain makes the analysis difficult and unreliable. In addition, these storms generally cannot be transposed to a different location.

Storms published prior to June 1966 were identified with the following code letters: M for Saint John River Basin, MN for Nova Scotia, PR for the three Prairie Provinces, B for British Columbia, and Q for Quebec. These code letters were follc'ved by $n$ identifying number. After June 1966, storms were published with the code letters: BC, ALTA, SASK, MAN, ONT, QUE, NB, NS, and NFLD for the nine provinces; LAB for Labrador, and NWT for the Northwest Territories and the Yukon. These code letters were followed by a number giving the month in which the storm occurred and another number giving the last two digits of the year in which the storm occurred. If more than one storm was published for a given month and year, the second storm was identified by a (2) following the month. The storms published prior to June 1966 have not been republished with the new code, but new codes were assigned and are used in the appendix with the old code given in the notes.

## 2. DESCRIPTION OF THE STORM ANALYSIS METHOD

The method which was used to do a Depth-Area-Duration analysis of these storms can be considered as consisting of six major parts, 2.1 to 2.6 . Parts $2.4,2.5$, and 2.6 describe a method for estimating the maximum Depth-Area values as a function of duration without doing an isohyetal analysis for every time increment within the storm. To analyze a 60 -hour storm in 6 -hour increments using the isohyetal method would involve the analysis of 55 isohyetal maps.

### 2.1 Identification of a Storm

The identification of a storm may have been done by scanning all the records for a province or other geographical region and looking for all events larger than a specified lower limit such as 2 inches in one day or 3 inches in two consecutive days. Or attention may have been drawn to a storm which caused flooding or damage. At this stage an approximate time and space boundary of the storm was determined, with the tendency to choose a larger area or longer time if there was any doubt as to the size of storm to be analyzed.

### 2.2 Collection of Data

Once the approximate boundaries were settled, all raingauge data for the storm were collected and tabulated. The original documents were used where possible because they often contained notes by the observer on the time of heaviest precipitation, start and stop of precipitation, etc. If small amounts of the precipitation occurred in the form of snow, it was included in the storm totals because it should have been melted on the ground by the rain and contributed immediately to the runoff. If a large amount of the precipitation was snow, the storm is not analyzed any further. In general, data on streamflow were not used because of the difficulty of including these data in the analyses. "Bucket survey" data were available in a few cases and those data were included in the analysis.

### 2.3 Total Duration Depth-Area Analysis

The total time of the storm was decided and the total precipitation for that time was plotted on a map and isohyets drawn. Normally the 2 inch isohyet was considered to be the boundary of the storm area.

Each isohyet was then planimetered to find the area enclosed by that isohyet. For each area between isohyets or within a central isohyet, the volume of water was computed by multiplying the average depth of precipitation by the area. The average depth of precipitation inside each isohyet was then computed by dividing the total volume of precipitation within the area by the total area. In this process of computing the total storm Depth-Area curve, individual centers of heavy precipitation were not combined until the analysis reached an isohyet that encloses both centers. Until that time the largest of the centers (in depth for each area) is used.

### 2.4 Weighting Factors Using Thiessen Polygons

As a first step in estimating the maximum Depth-Area values as a function of duration, the isohyetal map used in 2.3 had a set of Thiessen polygons drawn so as to cover the entire area of the storm. For each area between isohyets or within the central isohyet, the percentage of that area which fell within each station's polygon was computed from planimeter readings. These percentages were then tabulated for each isohyet.

### 2.5 Mass Curves

Mass curves (graphs of the accumulated depth of precipitation as a function of time) were prepared for each observing station whose Thiessen polygon encompassed any portion of the area of the storm. In preparing these graphs, the hourly measurements at recording raingauge stations were used as a guide to the shape of the graphs for the non-recording raingauges. Normally, the accumulated precipitation is abstracted from the graphs at six-hourly intervals and tabulated. If the storm was very short duration, a shorter time interval was used.

### 2.6 Computing Depth-Area-Duration Values

For each isohyet, the time distribution of precipitation computed in 2.5 was multiplied by the weighting factors computed in 2.4 and summed over the relevant stations. The results were multiplied by the ratio of the total storm value for that isohyet computed in 2.3 , to the total storm value just computed. This corrects the magnitude of the values just computed to agree with the isohyetal analysis and total duration Depth-Area analysis. As mentioned in 2.3, individual centers of precipitation are not combined; when two or more centers exist, the largest is used.

## 3. CORRECTIONS

The following is a summary of corrections required by the published storms:
3.1 NS-10(2)-59 Two storms were published with the label NS-10-59. The storm of Oct. 23-28, 1959 should have been labelled NS-10(2)-59. Republishing is not planned.
3.2 NS-6-59 An amendment to page 3 was printed and distributed in May 1963.
3.3 NS-8-49, NS-9-36 and NS-8-63 were printed twice, first with the code letters MN-30, M-12 and MN-53 and then reprinted with the newer code letters.
3.4 QUE-5-23, QUE-8-26, QUE-8-32, QUE-8-49, QUE-11-50, QUE-10 (2)-52, and NS-1-56. Amendments to all page 3's were printed and distributed in October 1962 . An amendment to page 4 of NS-1-56 was issued at the same time. These amendments were required because of excessive smoothing of the depth-area-duration curves.
3.5 QUE-8(2)-40 An amendment to page 3 was printed and distributed in July 1962.
3.6 QUE-9-24 and QUE-9(2)-24 Amendments to page 3 were printed and distributed in May 1962.
3.7 QUE-5-49 An amendment to page 2 was printed and distributed in May 1962.
3.8 QUE-8-13 An amendment to page 3 was printed.
3.9 QUE-11-24 and QUE-11(2)-27 Portions of these two analyses were interchanged while being printed. The complete analyses were reprinted and distributed in June 1969.
3.10 ONT-8-64 An amendment to page 3 was printed.
3.11 MAN-7-14 and MAN-7-11 The observing station, "Stony Mountain" was plotted too far north. The correct locations is $50^{\circ} 04^{\prime} \mathrm{N}$ and $97^{\circ} 14^{\prime} \mathrm{W}$. This affected the isohyetal analysis but not the depth-area-duration graph. Republishing is not planned.
3.12 SASK-6-35 An amendment to page 4 was printed.
3.13 ALTA-6-37 and ALTA-7-37 amendments to page 3 were printed.
3.14 NFLD-2-65 The duration should be 54 hours, starting at 1200 LST on Feb. 26, instead of 60 hours starting at 0600 . Reprinting is not planned.

## 4. BIBLIOGRAPHY

Boughner, C.C., 1955
Hurricane Hazel, Weather, Vol X No. 6, pp. 200-205
Bruce, J.P., 1957
Hydrometeorological Analyses of the Storm of August 28-30, 1956 in Ontario, Meteorological Branch, CIR 2886, TEC 246
Bruce, J.P. and D.V. Anderson, 1957
The Storm and Floods of October, 1954 in Southern Ontario, International Assoc., Scientific Hydrology, IUGG, General Assembly, Toronto, Vol. III, pp. 331-341

Bruce, J.P. and D.N. McMullen, 1959
An Exceptional Rainfall in Ontario - July 29, 1959, Meteorological Branch, CIR 3287, CLI-22

Buckler, S.J. and D.M. Pollock, 1972
A Report on the Rainfall of June - July, 1971 In the Swan Hills Area of Alberta, Hydrometeorological Report No.7, Prairie Hydrometeorological Centre, Atmospheric Environment Service
Burrows, W.R., 1966
Heavy Rainfalls at Edmonton, Meteorological Branch, CIR 4477, TEC 626
Chisholm, A.J., 1962,
The Alberta Storm of June 30 - July 1, 1961, Meteorological Branch, CIR 3610, TEC 398
Dickison, R.B.B., P.H. Curry, and B.R. MacDougall, 1968
Areal Rainfall Return Frequencies for the Saint John River Basin,
Meteorological Branch, TEC 697

Knox, J.L., 1955
The Storm "Hazel" Bulletin Amer. Met. Society, Vol. 36, No. 6, pp. 239-246
Lee, R. and U. Sporns, 1962
A Study of Exceptional Rainfall in the Saint John River Basin in New Brunswick from May 25-28, 1961, Meteorological Branch, CIR 3674, TEC 415

Mason, A.H., M.K. Thomas, and D.W. Boyd, 1955
The October 15-16, 1954 Storm, "Hurricane Hazel" in Ontario, Meteorological Branch, CIR 2606, TEC 210

McKay, G.A. and W. Stichling, 1961
Rainfall and Runoff From a Prairie Thunderstorm (Regina, June 26, 1960), Meteorological Branch, CIR 3524, TEC 368

McKay, G.A., 1963
The Analysis of Storm Rainfall Information, Met. Report No. 10, Hydromet. Division, PFRA, Regina, Saskatchewan.

McMorine, J.G.S. and G.A. McKay, 1962
Storm Rainfall and Runoff at Buffalo Gap, Sask. May 30, 1961, Met. Report \#3, Hydrology Div., PFRA, Regina, Saskatchewan

McMullen, D.N., 1962
Timmins Flood, August 31 - September 1 1961, a Design flood for Ontario Meteorological branch CIR 3746, TEC-428

McMullen, D.N., 1964
Storm of November 10, 1962 Over Southern Ontario, Hydrometeorological Research Report No. 1, Conservation Authorities Branch, Ontario Dept. Of Energy and Resources Management

McMullen, D.N., 1967
The Storm of August 2, 1964 and the Resultant Flood on the Maitland and Saugeen Rivers, Hydrometeorological Research Report No. 3, Conservation Authorities Branch, Ontario Dept. of Energy and Resources Management

Mukammal, E.I., 1958
Study of the Boissevain Storm of August 11-12, 1957 in Manitoba, Meteorological Branch, CIR 3128, TEC 286

Pollock, D.M., 1974
The Rainstorm of May 16, 1974 in Southern Ontario, Atmospheric Environment Service, CLI-3-74

Schaefer, D.G., 1973
A Record Breaking Summer Rainstorm Over the Lower Fraser Valley, Atmospheric Environment Service, TEC 787

Shenfeld, L., and F.D. Thompson, 1962
The Thunderstorm of August 9th, 1961 at Hamilton, Ontario, Meteorological Branch, CIR 3683, TEC 417

Sporns, U., 1963
Frequency and Severity of Storms in the Lower Fraser Valley, B.C., Meteorological Branch, CIR 3848, TEC 469

Thomas, M.K. and J.P. Bruce, 1957
Storm "Audrey" in Ontario, June 1957. Meteorological Branch, CIR 2961, TEC 256

Thomas, M.K. and H.A. Thomspon, 1962
Heavy Rainfall in Canadian Arctic During August 1960, Weatherwise, Vol. 15, No. 4
Tyner, R.V., 1955
Storm of Dec. 1-2, 1964 in the Maritime Provinces, Meteorological Branch, CIR 4187, TEC 557

Tyner, R.V., 1966
A Note On Tropical Storm Becky - 1966, Meteorological Branch, CIR 4516, TEC 635
Wilson, J.W. and D.M. Pollock, 1974
Rainfall Measurements During Hurricane Agnes by Three Overlapping Radars, Journal of Applied Meteorology, Vol 13, No. 8, pp. 835-844
World Meteorological Organization, 1969
Manual for Depth-Area-Duration Analysis of Storm Precipitation, World Meteorological Organization, No. 237, TP. 129

## APPENDIX

## LISTS OF STORM ANALYSES

These lists refer to storm analyses that have been taken to three different stages of completion. Only data on the completed, published storms are readily available. Where these lists have the notes, see MR4-21 or see R6-1-28, the reference is to the publication of "Storm Rainfall in the United States" by the US Corps of Engineers. The term hurricane is used even when the storm had decreased below hurricane strength before the storm reached Canada.

## Stage 1 Identification of the Storm

Analyses that were terminated at this stage have only the following information: date of storm, number of days with rain, station with the largest rainfall and its latitude and longitude, and the largest rainfall.

## Stage 2 Completed Analyses

Analyses that were terminated at this stage have all columns in the appendix completed except for the Code. An analysis may not have been puhlished because: the rainstorm was too small, or the heaviest rain occurred in the United States, or a lack of observing stations made the analysis unreliable.

## Stage 3 Completed and Published Analyses

These analyses have all columns in the appendix completed including the Code. Copies of these published analyses are readily available from the Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario.

## BRITISH COLUMBIA

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (1'Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1956 | June 6-9 |  | Seymour Falls | 49 | 123 | 7.43 |  |  |  |
| 1959 | May 6-9 |  | Ethelda Bay | 53 | 130 | 5.41 |  |  |  |
| 1959 | June 4-6 |  | Falls River | 54 | 130 | 4.43 |  |  |  |
| 1961 | Jan 6-12 | BC-1-61 | Nitinat | 49 | 124 | $12.91$ | 150 |  |  |
| 1961 | Jan 6-12 | BC-1(2)-61 | Nitinat | 49 | 124 | 12.91 | 150 | 22000 |  |
| 1961 | Jan 6-12 | BC-1(3)-61 | Seymour Falls | 49 | 123 | 11.09 | 150 | 6500 |  |
| 1961 | Jan 12-17 | BC-1(4)-61 | Bear Creek | 49 | 124 | 15.93 | 126 |  |  |
| 1961 | Jan 12-17 | BC-1(5)-61 | Bear Creek | 49 | 124 | 15.93 | 126 | 13000 |  |
| $1961$ | Jan 12-17 | BC-1(6)-61 | Seymour Falls | 49 | 123 | 20.87 | 126 | 15000 |  |
| 1964 | Sept 23-24 | BC-9-64 | Sinclair Mills | $54$ | 122 | 3.06 | 48 | $13000$ |  |
| 1965 | Oct 19-22 | BC-10-65 | Zeballos | 50 | 127 | 13.71 | 90 | 76000 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1930 | May 25-27 |  | Aklavik | 68 | 135 | 2.21 | 36 | 75600 |  |
| 1930 | Aug 19-23 |  | Fort Smith | 60 | 112 | 3.03 | 72 | 13400 |  |
| 1933 | Sept 10-12 |  | Fort Norman | 65 | 125 | 2.74 | 48 | 19200 |  |
| 1934 | July 16-19 |  | Chesterfield | 63 | 90 | 2.60 | 96 | 26800 |  |
| 1935 | May 16-18 |  | Lake Harbour | 63 | 70 | 2.90 |  |  |  |
| 1935 | July 23-25 | NWT-7-35 | Fort Simpson | 62 | 121 | 3.40 | 60 | 25800 |  |
| 1935 | Aug 20-23 |  | Fort Norman | 65 | 125 | 1.63 |  |  |  |
| 1935 | June 27-30 |  | Clyde | 70 | 68 | 3.28 |  |  |  |
| 1936 | July 22-25 |  | Hay River | 61 | 116 | 2.44 | 78 | 31900 |  |
| 1937 | Aug 23-24 |  | Fort Simpson | 61 | 121 | 2.44 | 48 | 9400 |  |
| 1938 | Aug 11-13 |  | Fort Norman | 64 | 125 | 2.44 | 30 | 23500 |  |
| 1939 | July 24-29 | NWT-7-39 | Lake Harbour | 63 | 70 | 4.59 | 120 | 23000 |  |
| 1939 | Aug 16-18 | NWT-8-39 | Craig Harbour | 76 | 81 | 4.50 | 66 | 7100 |  |
| 1940 | July 27-31 |  | Fort Ross | 72 | 94 | 6.38 |  |  |  |
| 1944 | June 9-12 |  | Fort Simpson | 61 | 121 | 3.32 | 72 | 8700 |  |
| 1945 | June 1-4 | NWT-6-45 | Providence | 61 | 117 | 3.06 | 18 | 17000 |  |
| 1947 | June 29-30 | NWT-6-47 | Snag | 62 | 140 | 2.50 | 30 | 24000 | (1" Isohyet) |
| 1947 | July 27-28 | NWT-7-47 | Dawson | 64 | 139 | 2.24 | 24 | 25000 | (1" Isohyet) |
| 1948 | June 7-8 | NWT-6-48 | Coppermine | 67 | 115 | 2.50 | 30 | 36200 |  |
| 1948 | July 28-30 | NWT-7-48 | Port Radium | 66 | 118 | 3.18 | 66 | 38900 |  |
| 1948 | Aug 20-24 | NWT-8-48 | Fort Resolution | 61 | 113 | 3.31 | 102 | 388700 |  |
| 1949 | Aug 13-15 | NWT-8-49 | Fort Good Hope | 66 | 128 | 4.04 |  | 109200 |  |
| 1953 | Sept 5 |  | Nottingham Is. | 63 | 78 | 2.17 |  |  |  |
| 1955 | July 11-14 |  | Fort Good Hope | 66 | 128 | 3.99 | 90 | 53000 |  |
| 1956 | June 19-21 | NWT-6-56 | Old Crow | 67 | 140 | 4.80 | 60 | 118200 |  |
| 1956 | July 7-8 |  | Fort Good Hope | 66 | 128 | 2.64 | 42 | 42000 |  |
| 1959 | Aug 17-19 |  | Cape Dyer | 66 | 61 | 3.70 |  |  |  |
| 1959 | Sept 3-6 | NWT-9-59 | Fort Norman | 65 | 125 | 4.16 | 78 | 15200 |  |
| 1960 | July 7-10 | NWT-7-60 | Fort Simpson | 62 | 121 | 3.42 | 84 | 52200 |  |
| 1961 | Aug 21-22 |  | West Baffin Is. | 68 | 73 | 2.24 | 30 | 14000 |  |
| 1962 | July 2-4 | NWT-7-62 | Fort Smith | 60 | 112 | 3.42 | 60 | 37200 |  |
| 1963 | July 11 |  | Snag | 62 | 140 | 2.04 | 30 | 8100 |  |
| 1963 | July 20-21 |  | Cape Warwick | 61 | 65 | 3.24 | 42 | 21200 |  |
| 1964 | Aug 2-4 | NWT-8-64 | Dewar Lakes | 68 | 71 | 3.63 | 60 | 37700 |  |
| 1964 | Sept 4-5 | NWT-9-64 | Hay River | 61 | 115 | 3.11 | 36 | 32600 |  |
| 1964 | Dec 5-8 |  | Yakutat, Alaska | 59 | 139 | 6.77 | 96 | 81300 |  |
| 1965 | July 23-27 | NWT-7-65 | Brevoort Is. | 63 | 64 | 4.40 | 102 | 23100 |  |
| 1972 | July 20-26 |  | Quiet Lake | 61 | 134 | 4.38 | 150 | 81500 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1902 | May 17-22 | Alta-5-02 | Lethbridge | 50 | 113 | 7.80 | 108 | 58600 | PR-1 |
| 1908 | May 31-June 6 | Alta-5-08 | Cardston | 49 | 113 | 8.90 | 144 | 34400 | PR-4 |
| 1911 | Sept 3-6 | Alta-9-11 | Knobles Ranch | 49 | 112 | 7.62 | 72 | 54600 | PR-5 |
| 1912 | June 13-16 |  | Pekisko | 50 | 114 | 3.97 |  |  |  |
| 1912 | July 3-8 |  | Lineham | 51 | 114 | 4.51 |  |  |  |
| 1912 | July 20-25 |  | Okotoks | 51 | 114 | 3.44 |  |  |  |
| 1915 | June 24-27 |  | Lake Louise | 51 | 116 | 2.66 |  |  |  |
| 1915 | July 10-15 |  | Bismark | 53 | 114 | 3.15 |  |  |  |
| 1916 | Aug 8-9 |  | Seven Persons | 50 | 111 | 4.98 |  |  |  |
| 1916 | Aug 16-19 | Alta-8-16 | Olds | 52 | 114 | 6.10 | 78 | 17500 |  |
| 1919 | Aug 3-4 |  | High River | 50 | 114 | 4.46 |  |  |  |
| 1923 | May 30-June 2 | Alta-5-23 | Bassano | 51 | 112 | 7.50 | 84 | 21900 | PR-7 |
| 1923 | June 21-23 |  | Pekisko | 50 | 114 | 4.17 |  |  |  |
| 1925 | July 6-7 |  | Wastina | 52 | 111 | 3.61 |  |  |  |
| 1926 | May 29-30 | Alta-5-26 | Camrose | 53 | 113 | 3.35 | 30 | 11300 |  |
| 1926 | June 18-20 | Alta-6-26 | Claresholm | 50 | 114 | 4.12 | 42 | 10000 |  |
| 1927 | May 18-23 | Alta-5-27 | Foremost | 49 | 111 | 5.78 | 138 | 55700 |  |
| 1927 | Aug 13-14 | Alta-8-27 | Medicine Hat | 50 | 111 | 4.80 | 30 | 7200 |  |
| 1927 | July 13-15 |  | Pincher Creek | 50 | 114 | 3.52 |  |  |  |
| 1929 | June 1-4 | Alta-6-29 | Exshaw | 51 | 115 | 6.51 | 90 | 18500 |  |
| 1932 | April 20-23 | Alta-4-32 | Hillsdown | 52 | 114 | 4.50 | 84 | 15400 | PR-17A |
| 1932 | May 31-June 4 | Alta-5-32 | Pekisko | 50 | 114 | 5.86 | 108 | 34900 |  |
| 1935 | June 30-July 2 | Alta-6-35 | Jasper | 53 | 118 | 5.47 | 66 | 51700 |  |
| 1935 | July 28-29 |  | Fort McMurray | 57 | 111 | 4.21 |  |  |  |
| 1937 | June 10-14 | Alta-6-37 | Waterton Park | 49 | 114 | 6.04 | 102 | 17400 | PR-24 |
| 1937 | July 12-16 | Alta-7-37 | Edmonton | 54 | 113 | 6.07 | 96 | 40200 | PR-25A |
| 1938 | May 17-19 | Alta-5-38 | Mountain View | 49 | 114 | 5.10 | 60 | 9000 | PR-26 |
| 1938 | Aug 5-8 | Alta-8-38 | Red Deer | 52 | 114 | 7.14 | 72 | 36300 |  |
| 1940 | Sept 4-6 | Alta-9-40 | Kananaskis | 51 | 115 | 4.00 | 48 | 9000 | PR-30 |
| 1942 | May 9-12 | Alta-5-42 | Pekisko | 50 | 114 | 6.36 | 78 | 10600 | PR-34 |
| 1942 | June 24-28 | Alta-6-42 | Mossleigh | 51 | 113 | 6.36 | 84 | 17500 | PR-35A |
| 1944 | May $21-23$ |  | Jasper | 53 | 118 | 3.48 |  |  |  |
| 1944 | June 12-16 | Alta-6-44 | Thorsby | 53 | 114 | 7.30 | 102 | 78700 | PR-39 |
| 1947 | Aug 22-23 | Alta-8-47 | Rockyford | 51 | 113 | 4.96 | 48 | 32000 | PR-47 |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA (2"Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1947 | Sept 16-19 | Alta-9-47 | Beaver Mines | 49 | 114 | 5.50 | 102 | 10600 |  |
| 1951 | April 29-May 2 | Alta-4-51 | Beaver Mines | 49 | 114 | 7.10 | 90 | 64300 | PR-53 |
| 1953 | June 1-4 | Alta-6-53 | Taber | 50 | 112 | 5.08 | 78 | 68000 | PR-57 |
| 1953 | July 30-Aug 1 | Alta-7-53 | Sion | 54 | 114 | 6.62 | 60 | 27100 | PR-59 |
| 1954 | July 4-5 | Alta-7-54 | Saskatoon Mountain | 55 | 119 | 5.49 | 42 | 10000 | PR-54 |
| 1955 | July 24-26 | Alta-7-55 | Chipman | 54 | 113 | 5.32 | 72 | 34900 | PR-65 |
| 1956 | June 4-6 |  | Bald Mtn | 55 | 119 | 4.80 |  |  |  |
| 1956 | Aug 1-2 |  | Pollockville | 51 | 112 | 3.88 |  |  |  |
| 1956 | Aug 3-4 | Alta-8-56 | Sweathouse | 55 | 117 | 4.63 | 42 | 25200 |  |
| 1957 | July 30-Aug 1 |  | Salt Prairie | 56 | 116 | 5.49 |  |  |  |
| 1957 | Aug 8-11 | Alta-8-57 | Campsie | 54 | 115 | 8.65 | 72 | 26500 |  |
| 1958 | June 26-30 | Alta-6-58 | Yellow Head | 53 | 117 | 5.74 | 90 | 32800 |  |
| 1960 | June 19-21 |  | Bald Mtn | 55 | 119 | 4.18 |  |  |  |
| 1960 | July 22-24 | Alta-7-60 | Stoney Mtn | 56 | 111 | 7.19 | 66 | 35900 |  |
| 1960 | Sept 4-7 | Alta-9-60 | Pelican Mtn | 56 | 114 | 5.10 | 66 | 59200 |  |
| 1961 | June 29-July 1 | Alta-6-61 | Flat Top | 55 | 115 | 5.03 | 42 | 38500 |  |
| 1962 | June 3-6 | Alta-6-62 | Cowpar | 56 | 110 | 5.40 | 90 | 56300 |  |
| 1962 | July 12-16 | Alta-7-62 | Castor | 52 | 112 | 6.42 | 84 | 34700 |  |
| 1963 | June 21-22 | Alta-6-63 | Taber | 50 | 112 | 4.98 | 42 | 56100 |  |
| 1963 | June 28-30 | Alta-6 (2)-63 | Hailstone Butte | 50 | 114 | 7.42 | 48 | $14800$ |  |
| 1963 | July 21-23 | Alta-7-63 | Bison | 57 | 117 | 4.85 | 48 | 36100 |  |
| 1964 | May 1-7 | Alta-5-64 | Mtn View Birdseye | 49 | 114 | 7.00 | 96 | 40600 |  |
| 1964 | June 7-8 |  | Waterton Lakes R.R. | 49 | 114 | 9.90 | 42 |  |  |
| 1964 | June 15-16 |  | Junction | 51 | 115 | 4.68 |  |  |  |
| 1964 | June 27-28 | Alta-6-64 | White Mtn | 56 | 119 | 5.64 | 36 | 197000 |  |
| $1964$ | July 14-16 |  | O'Chiese Lo | 53 | 115 | $4.46$ |  |  |  |
| 1964 | July 29-Aug 2 | Alta-7-64 | White Mtn | 56 | 119 | 5.97 | 90 | 45700 |  |
| 1965 | June 25-28 | Alta-6-65 | Pimple | 54 | 115 | 6.21 | 66 | 94700 |  |
| 1965 | July 7-9 | Alta-7-65 | Kakwa | 54 | 119 | 4.94 | 42 | 28400 |  |
| 1965 | Aug 12-13 | Alta-8-65 | Goose Mtn | 55 | 116 | 4.10 | 24 | 18700 |  |
| $1966$ | May 29-31 |  | Forget-me-not | 51 | 115 | 4.72 |  |  |  |
| 1966 | June 3-4 |  | Waterton Lakes (R.Cab.) | 49 | 114 | 5.13 |  |  |  |
| 1966 | July 1-4 | Alta-7-66 | Arrowwood | 51 | 113 | 4.85 | 72 | 33200 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1966 | Aug 3-6 | Alta-8(2)-66 | Blackstone | 53 | 116 | 4.73 | 90 | 38400 |  |
| 1966 | Aug 27-28 | Alta-8-66 | Ansell | 54 | 116 | 4.26 | 30 | 18300 |  |
| 1967 | July 13-14 | Alta-7-67 | Wadlin | 58 | 115 | 4.25 | 30 | 7900 |  |
| 1967 | Aug 4 |  | Primrose Lo | 55 | 110 | 4.09 |  |  |  |
| 1968 | June 10-13 | Alta-6-68 | White Mtn | 56 | 119 | 4.47 | 72 | 32000 |  |
| 1968 | July 19-20 |  | Huxley | 52 | 113 | 3.78 |  |  |  |
| 1969 | June 19-29 | Alta-6-69 | Pekisko | 50 | 114 | 9.00 | 246 | 45900 |  |
| 1969 | Aug 3-6 | Alta-8-69 | Grave Flats | 53 | 117 | 6.95 | 60 | 33000 |  |
| 1969 | Sept $2-5$ | Alta-9-69 | House Mtn | 55 | 116 | 5.20 | 84 | 89100 |  |
| 1970 | June 12-14 | Alta-6(2)-70 | Caldwell | 49 | 114 | 4.67 | 42 | 33300 |  |
| 1970 | June 27-July 1 | Alta-6-70 | Pelican Mtn | 56 | 114 | 8.91 | 96 | 192700 |  |
| 1971 | June 13-17 | Alta-6-71 | House Mtn | 55 | 116 | 6.35 | 96 | 61400 |  |
| 1971 | July 1-7 | Alta-7-71 | House Mtn | 55 | 116 | 5.38 | 138 | 86800 |  |
| 1972 | June 23-25 | Alta-6-72 | Aurora | 53 | 116 | 6.02 | 60 | 26100 |  |
| 1972 | June 10-12 | Alta-6(2)-72 | Nose Mtn | 55 | 120 | 8.05 | 60 | 35000 |  |
| 1973 | June 14-16 | Alta-6-73 | Sedalia | 52 | 111 | 8.60 | 66 | 124400 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED
$\left.\begin{array}{llllllll}\hline & & & & \text { LAT LONG } & \text { DEPTH } \\ \text { (Inches) }\end{array}\right)$

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> $\left(2^{\prime \prime}\right.$ Isohyet) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  | NOTES |  |  |  |

## MANITOBA

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1911 | July 7-9 | Man-7-11 | Rapid City | 50 | 100 | 4.04 | 42 | 11600 |  |
| 1911 | Aug 2-4 |  | Hillview | 50 | 101 | 4.97 |  |  |  |
| 1912 | Sept 4-5 | Man-9-12 | Russell | 51 | 101 | 4.14 | 36 | 11100 |  |
| 1913 | Aug 14-15 |  | Winnipeg | 50 | 97 | 3.22 |  |  |  |
| 1914 | July 12 | Man-7-14 | Winnipeg | 50 | 97 | 5.26 | 42 | 7071 |  |
| 1915 | Sept 6-8 |  | Hamiota | 50 | 101 | 3.65 |  |  |  |
| 1919 | June 28-30 | Man-6-19 | Russell | 51 | 101 | 5.87 | 66 | 12100 |  |
| 1921 | July 1-3 | Man-7-21 | Kenora | 50 | 94 | 4.92 | 42 | 21900 |  |
| 1924 | April 14-15 | Man-4-24 | Minnedosa | 50 | 100 | 3.15 | 66 | 26800 | PR-9 |
| 1927 | May 7-9 | Man-5-27 | Richardton, N.D. | 47 | 102 | 6.30 | 54 | 41500 | PR-11 |
| 1928 | July 5-8 | Man-7-28 | Berthold Agency, N:D. | 48 | 102 | 7.80 | 90 | 37900 | PR-15 |
| 1932 | April 22-23 | Man-4-32 | Hamiota | 50 | 101 | 2.71 | 48 | 10000 | PR-17B |
| 1935 | June 29-July 1 | Man-6-35 | Tilston | 49 | 101 | 13.00 | 78 | 36900 | PR-22A |
| 1937 | June 3-6 | Man-6-37 | Drake, N.D. | 48 | 100 | 6.88 | 66 | 66800 | PR-23 |
| 1944 | Aug 29-Sept 1 | Man-8-44 | Grand Forks, N.D. | 48 | 97 | 6.41 | 60 | 46700 | PR-41 |
| 1949 | Oct 9-11 |  | Ste Anne | 50 | 97 | 4.00 | 40 | 39800 |  |
| 1952 | Aug 29-Sept 1 | Man-8-52 | Rivers | 50 | 100 | 5.85 | 78 | 23500 | PR-56 |
| 1954 | June 5-8 | Man-6-54 | Balta, N.D. | 48 | 100 | 6.70 | 72 | 56400 | PR-61 |
| 1955 | Oct 9-11 | Man-10-55 | Ste Anne | 50 | 97 | 4.00 | 42 | 39800 | PR-52 |
| 1956 | June 18-19 | Man-6-56 | Dauphin | 51 | 100 | 3.98 | 18 | 14500 |  |
| $1957$ | July 11 |  | Emerson | 49 | 97 | 4.10 |  |  |  |
| $1957$ | Aug 10-12 | Man-8-57 | Boisevain | 49 | 100 | 10.51 | 60 | 10800 |  |
| $1958$ | July 3-5 | Man-7-58 | Riverton | 51 | 97 | 5.29 | 54 | $40100$ | PR-67 |
| 1959 | June 8-11 | Man-6-59 | Marchand | 49 | 96 | 7.10 | 72 | 5700 | PR-58 |
| 1960 | May 24-26 | Man-5-60 | Ninga | 49 | 100 | 4.80 | 48 | 22800 | PR-94 |
| 1962 | June 14-15 | Man-6-62 | Waskada | 49 | 101 | 5.00 | 30 | 8600 |  |
| $1965$ | July 19-20 | Man-7-65 | Belcourt, N.D. | 49 | 100 | 5.90 | 60 | 21400 |  |
| $1965$ | Sept 3-4 | Man-9-65 | Riding Mtn Park | 51 | 100 | 4.04 | 42 | 26000 |  |
| 1966 | June 30-July 2 | Man-6-66 | Gnadenthal | 49 | 98 | 8.04 | 60 | 53900 |  |
| 1968 | July 12-13 |  | Green Ridge | 49 | 97 | 5.30 |  | 5390 |  |
| $\begin{aligned} & 1968 \\ & 1968 \end{aligned}$ | July 28-30 |  | Stonewall | 50 | 97 | 5.16 |  |  |  |
| $\begin{aligned} & 1968 \\ & 1969 \end{aligned}$ | Aug 23-24 <br> June 25-26 | Man-8-68 | Peace Gardens | 49 | 100 | 5.79 | $30$ | $17400$ |  |
| $\begin{aligned} & 1969 \\ & 1969 \end{aligned}$ | June 25-26 Sept 4-5 | Man-6-69 | Riding Mtn Park | 51 56 | 100 | 5.31 | 48 | $20600$ |  |
| 1969 | Sept 4-5 |  | Pickerel Narrows | 56 | 101 | 3.54 |  |  |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1919 | July 1-3 | Ont-7-19 | Rainy River | 49 | 95 | 6.80 | 54 | 51100 |  |
| 1920 | Nov 30 |  | Port Stanley | 43 | 81 | 3.18 |  |  |  |
| 1921 | Apr 22-24 |  | Madawaska | 45 | 78 | 3.10 |  | 21100 |  |
| 1921 | July 8-11 | Ont-7-21 | London | 43 | 81 | 5.40 | 72 | 5600 |  |
| 1921 | July 18-19 | Ont-7(2)-21 | Belleville | 44 | 77 | 4.20 | 36 | 14600 |  |
| 1922 | June 9-11 | Ont-6-22 | Stratford | 43 | 81 | 4.60 | 72 | 25800 |  |
| 1922 | July 9-12 | Ont-7-22 | Tobermory | 45 | 82 | 5.38 | 72 | 39000 |  |
| 1922 | Sept 9-11 | Ont-9-22 | Kinmount | 45 | 79 | 5.42 | 66 | 24400 |  |
| 1923 | June 4-5 |  | Morrisburg | 45 | 75 | 3.55 |  |  |  |
| 1923 | June 21-23 |  | Quorn | $49$ | 91 | 4.25 | 66 | 21100 |  |
| 1923 | July 13-14 |  | Kenora | 50 | 94 | 3.90 |  |  |  |
| 1923 | Oct 16-20 | Ont-10-23 | Sault Ste Marie | 46 | 84 | 4.98 | 108 | 44800 |  |
| 1924 | Sept 28-30 |  | Welland | 43 | 79 | 4.20 |  |  |  |
| 1925 | May 31-June 3 |  | Shoal Lake | 50 | 95 | 4.88 |  |  |  |
| 1926 | June 20-22 |  | Schreiber | 49 | 87 | 3.35 |  |  |  |
| 1926 | July 8-10 | Ont-7-26 | Haliburton | 45 | 78 | 5.70 | 60 | 113200 |  |
| 1926 | Aug 20-24 |  | Stratford | 43 | 81 | 4.87 | 96 | 20600 |  |
| 1926 | Sept 1 |  | Whitefish | 49 | 94 | 3.21 |  |  |  |
| 1926 | Sept 23-25 | Ont-9-26 | Fremont, Ohio | 41 | 83 | 5.77 | 66 | 35000 |  |
| 1927 | June 20-22 |  | Ignace | 49 | 92 | 4.53 | 54 | 20600 |  |
| 1927 | June 25 | Ont-6(2)-27 | Haliburton | 45 | 78 | 4.00 | 18 | 2400 |  |
| 1927 | July 16-17 | Ont-7-27 | White River | 49 | 85 | 4.43 | 48 | 35000 |  |
| 1927 | July 22-24 | Ont-7(2)-27 | Woodstock | 43 | 81 | 4.71 | 66 | 34500 |  |
| 1930 | June 25-27 | Ont-6-30 | Quinze Dam | 47 | 79 | 6.00 | 48 | 30000 |  |
| 1931 | July 1-2 |  | Sioux Lookout | 50 | 92 | 4.06 |  |  |  |
| 1932 | May 25-27 | Ont-5-32 | Lucan | 43 | 81 | 4.25 | 60 | 9900 |  |
| 1932 | Aug 15-18 | Ont-8-32 | Montreal River | 47 | 79 | 6.72 | 66 | 54800 |  |
| 1932 | Sept 3-4 | Ont-9-32 | Walkerton | 44 | 81 | 4.07 | 30 | 21500 |  |
| 1935 | July 3-5 | Ont-7-35 | Mine Centre | 49 | 93 | 6.57 | 60 | 29200 |  |
| 1936 | Sept 5-7 | Ont-9-36 | Ignace | 49 | 92 | 4.75 | 36 | 23700 |  |
| 1937 | April 25-28 | Ont-4-37 | Delhi | 43 | 81 | 5.92 | 96 | 23300 |  |
| $1937$ | May 30-31 |  | Longlac | 50 | 86 | 3.80 |  |  |  |
| 1937 | July 9-11 | Ont-7-37 | Minaki | 50 | 95 | 5.54 | 66 | 22900 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1937 | July 14-17 |  | Emo | 49 | 94 | 6.00 |  |  |  |
| 1937 | July 25-27 | Ont-7(2)-37 | Wawaitin | 48 | 81 | 7.02 | 48 | 36700 |  |
| 1937 | Aug 6-7 |  | Caledonia | 43 | 80 | 3.84 |  |  |  |
| 1937 | Aug 10 |  | Georgetown | 44 | 80 | 3.76 |  |  |  |
| 1937 | Aug 28-30 | Ont-8-37 | Quorn | 49 | 91 | 4.30 | 48 | 18800 |  |
| 1937 | Sept 9-11 | Ont-9-37 | Quinze Dam | 47 | 79 | 6.62 | 66 | 39000 |  |
| 1938 | July 28 |  | Peterboro | 44 | 78 | 3.06 |  |  |  |
| 1938 | Aug 10 | Ont-8-38 | Guelph | 44 | 80 | 4.07 | 18 | 2900 |  |
| 1938 | Aug 15-17 |  | Goderich | 44 | 82 | 3.92 |  |  |  |
| $1938$ | $\text { Sept } 21-22$ | Ont-9-38 | Orillia | 45 | 79 | 4.50 | 36 | 38200 |  |
| 1939 | Aug 19-21 | Ont-8-39 | Chapleau | 48 | 83 | 4.91 | 48 | $24100$ |  |
| 1940 | Aug 17-19 | Ont-8-40 | Montreal River | 47 | 79 | 5.85 | 48 | 31400 |  |
| 1941 | June 5-7 | Ont-6-41 | Longlac | 50 | 86 | 4.67 | 48 | 88400 |  |
| 1941 | June 26-28 | Ont-6(2)-41 | Heaslip | 48 | 80 | 4.31 | 48 | 27000 |  |
| 1941 | Aug 30-Sept 1 | Ont-8-41 | Meyersburg | 44 | 78 | 4.54 | 42 | 9500 |  |
| 1941 | Sept 13-16 | Ont-9-41 | Two Harbours, Min. | 47 | 91 | 4.73 | 78 | 70100 |  |
| $1941$ | Sept 18 -22 | Ont-9(2)-41 | Sioux Lookout | 50 | 92 | 6.58 | 90 | 77100 |  |
| 1941 | Dec 23.24 | Ont-12-41 | Trenton | 44 | 78 | 5.20 | 42 | 6600 |  |
| 1942 | May 29-31 | Ont-5-42 | Hamilton | 43 | 80 | 4.53 | 54 | 5600 |  |
| 1942 | July 16-19 | Ont-7-42 | Delhi | 43 | 81 | 5.42 | 84 | 11600 |  |
| 1942 | Aug 12-13 |  | Rat Rapids | 51 | 90 | 4.07 | 72 |  |  |
| 1942 | $\text { Aug } 28-31$ | Ont-8-42 | Fort Francis | 49 | 93 | 5.53 | 72 | 26300 |  |
| $1942$ | Sept 7-10 | Ont-9-42 | Lucan | 43 | 81 | 4.80 | 72 | 34000 |  |
| $1942$ | $\text { Sept } 25-27$ | Ont-9(2)-42 | Coldwater | 45 | 80 | 6.23 | 60 | 19200 |  |
| $1943$ | Sept 5.8 | Ont-9-43 | Quorn | 49 | 91 | 6.65 | $78$ | $80000$ | PR 37 A |
| $1943$ | Sept 5-8 | Ont-9(2)-43 | Quorn | 49 | 91 | 7.06 | 90 | 57900 |  |
| $1944$ | May 31 |  | Malton A | 44 | 80 | 3.65 |  |  |  |
| $1944$ | June 23-24 | Ont-6-44 | Camp Borden | 44 | 80 | 5.82 | 30 | 8300 |  |
| $1944$ | July 19-20 |  | Orillia | 45 | 79 | 3.88 | 36 | 3700 |  |
| $1944$ | Aug 8-10 | Ont-8-44 | Winton, Min. | 48 | 92 | 5.96 | 72 | 34600 |  |
| $1944$ $1944$ | Sept 3-4 | Ont-9-44 | Stratford | $43$ | $81$ | 5.16 | 30 | 5200 |  |
| $\begin{aligned} & 1944 \\ & 1945 \end{aligned}$ | Sept 27.28 <br> June 16-18 |  | Leamington Port Dover | 42 43 | 83 80 | 3.88 4.09 |  |  |  |
| 1945 | June 16-18 |  | Port Dover | 43 | 80 | 4.09 | 60 | 5700 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1945 | July 13-15 | Ont-7-45 | Walkerton | 44 | 81 | 4.60 | 60 | 30200 |  |
| 1945 | Sept 17-18 | Ont-9-45 | Niagara Falls | 43 | 79 | 4.06 | 36 | 37500 |  |
| 1945 | Sept 30-Oct 2 | Ont-10-45 | Hinckley (New York) | 43 | 75 | 5.20 | 48 | 60700 |  |
| 1946 | June 16-18 | Ont-6-46 | Chatham | 42 | 82 | 4.24 | 60 | 17600 |  |
| 1946 | Aug 3-4 |  | Oak Ridges | 44 | 79 | 3.95 |  |  |  |
| 1946 | Aug 16-18 |  | Chatham | 42 | 82 | 4.35 | 72 | 1700 |  |
| 1946 | Oct 5-6 |  | Atikokan | 49 | 92 | 3.65 |  |  |  |
| 1947 | July 29 |  | Pickle Lake | 51 | 90 | 3.50 | 30 | 27300 |  |
| 1947 | Aug 18-20 |  | Sand Hill | 44 | 80 | 4.18 | 36 | 1800 |  |
| 1947 | Sept 18-19 |  | Sudbury | 46 | 81 | 3.55 | 24 | 8700 |  |
| 1948 | July 21-22 |  | Waterford | 43 | 80 | 4.15 | 24 | 1200 |  |
| 1948 | July 28-31 | Ont-7(2)-48 | Fort Francis | 49 | 93 | 4.80 | 60 | 41200 |  |
| 1948 | Sept 18-19 |  | Malton A | 44 | 80 | 5.35 |  |  |  |
| 1949 | July 9 |  | Lucknow | 44 | 81 | 3.96 | 24 | 6900 |  |
| 1950 | Aug 27-30 | Ont-8-50 | Grimsby | 43 | 80 | 5.43 | 72 | 2600 |  |
| 1950 | Sept 10-11 | Ont-9-50 | Sarnia | 43 | 82 | 4.85 | 36 | 1500 |  |
| 1951 | July 3-5 | Ont-7-51 | Alexandria Bay, N.Y. | 44 | 76 | 5.17 | 72 | 24600 |  |
| 1953 | June 15 |  | Caramat | 50 | 86 | 3.85 |  |  |  |
| 1953 | Aug 4-5 |  | Tweed | 44 | 77 | 3.65 | 24 | 7300 |  |
| 1953 | Sept 1-3 | Ont-9-53 | Quorn | 49 | 91 | 5.45 | 54 | 17500 |  |
| 1953 | Sept 10-13 | Ont-9(2)-53 | Chapleau | 48 | 83 | 6.67 | 96 | 65000 |  |
| 1954 | Feb 15-16 | Ont-2-54 | Niagara Falls | 43 | 79 | 4.06 | 36 | 19500 |  |
| 1954 | Aug 23-25 | Ont-8-54 | Owen Sound | 45 | 81 | 5.09 | 42 | 4700 |  |
| 1954 | Oct 14-16 | Ont-10-54 | Snelgrove | 44 | 80 | 8.41 | 48 | 23000 | Hurricane Hazel |
| 1955 | Aug 4-7 | Ont-8-55 | Orillia | 45 | 79 | 5.91 | 78 | 9900 |  |
| 1955 | Aug 13-14 |  | Millgrove | 43 | 80 | 3.72 | 24 | 11000 |  |
| 1955 | Aug 29-31 |  | Hound Chute | 47 | 80 | 4.32 | 60 | 30800 |  |
| 1955 | Oct 5-7 | Ont-10-55 | Simcoe | 43 | 80 | 6.07 | 66 | 35200 |  |
| 1955 | Oct 12-17 | Ont-10(2)-55 | Smithfield | 44 | 78 | 7.95 | 108 | 24700 |  |
| 1956 | June 26-27 |  | Aquasabon | 49 | 87 | 4.13 |  |  |  |
| 1956 | July 13-14 |  | Biscotasing | 47 | 82 | 3.22 |  |  |  |
| 1956 | July 20-21 |  | Brampton | 44 | 80 | 3.52 | 36 | 1700 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1956 | Aug 8-10 | Ont-8-56 | Abitibi Canyon | 50 | 82 | 4.65 | 36 | $2400$ |  |
| 1956 | Aug 21-24 | Ont-8(2)-56 | Foymount | 45 | 77 | 5.15 | $60$ | $32900$ |  |
| 1956 | Aug 28-30 |  | Elmira | 44 | 81 | 5.64 |  |  |  |
| 1957 | June 22 | Ont-6-57 | Mine Centre | 49 | 93 | 3.70 | 24 | 8900 |  |
| 1957 | June 29-30 | Ont-6(2)-57 | Bear Island | 47 | 80 | 6.23 | 90 | 122497 | Hurricane Audrey |
| 1957 | July 7-8 |  | Pelee Island | 42 | 83 | 4.63 | 24 | 5800 |  |
| 1957 | Sept 1-5 | Ont-9-57 | Kipawa | 47 | 79 | 6.43 | 90 | 90000 |  |
| 1958 | Aug 20-21 | Ont-8-58 | Clinton | 44 | 82 | 4.47 | 42 | 3300 |  |
| 1959 | June 10-12 |  | Winisk A | 55 | 85 | 5.15 |  |  |  |
| 1959 | Aug 26-28 | Ont-8-59 | Woodstock | 43 | 81 | 4.91 | 60 | 4000 |  |
| 1960 | May 6-10 | Ont-5-60 | Uxbridge | 44 | 79 | 4.67 | 90 | 31000 |  |
| 1961 | July 2 |  | Woodstock | 43 | 81 | 2.38 |  |  |  |
| 1961 | Aug 31-Sept 1 | Ont-9(2)-61 | Timmins A | 49 | 81 | 4.77 | 12 | 20000 |  |
| 1961 | Sept 9-10 | Ont-9-61 | Winton Power Plant | 48 | 92 | 5.27 | 48 | 33600 |  |
| 1962 | May 29-30 | Ont-5-62 | Hunta | 49 | 81 | 4.67 | 42 | 25300 |  |
| 1962 | Aug 19-21 |  | Cornwall | 45 | 75 | 4.35 | 48 | 1300 |  |
| 1963 | July 29 | Ont-7-63 | Port Dover | 43 | 80 | 4.18 | 24 | 2200 |  |
| 1963 | Aug 12-13 | Ont-8-63 | Grimsby | 43 | 80 | 4.01 | 30 | 5400 |  |
| 1964 | June 17-19 | Ont-6-64 | Pine Portage | 49 | 88 | 4.22 | 60 | 39400 |  |
| 1964 | Aug 1-3 | Ont-8-64 | Walkerton | 44 | 81 | $6 . \mathrm{Cl}$ | 54 | 35100 |  |
| 1964 | Aug 10-12 | Ont-8(2)-64 | Pays Plat | 49 | 88 | 4.88 | 60 | 9500 |  |
| 1965 | May 15-17 |  | Timmins | 48 | 81 | 3.56 |  |  |  |
| 1965 | June 23 |  | Hunta | 49 | 81 | 2.97 |  |  |  |
| 1965 | June 28 |  | Toronto Curran | 44 | 79 | 3.47 |  |  |  |
| 1965 | Aug 6-8 |  | Walkerton | 44 | 81 | 4.92 |  |  |  |
| 1966 | June 30-July 2 | Ont-6-66 | Sioux Lookout | 50 | 92 | 5.70 | 60 | 40000 |  |
| 1966 | July 11-12 | Ont-7-66 | Sandusky | 41 | 82 | 10.41 | 24 | 7700 |  |
| 1966 | July 30-31 |  | Emo (2) | 49 | 94 | 4.60 |  |  |  |
| 1966 | Aug 7-9 |  | Geraldton | 50 | 87 | 4.23 |  |  |  |
| 1966 | Aug 12-13 |  | Sleeman | 49 | 94 | 4.09 |  |  |  |
| 1967 | June 7-10 | Ont-6-67 | Fergus | 44 | 80 | 6.28 | 90 | 15300 |  |
| 1967 | June 12 |  | Sharon | 44 | 79 | 3.29 |  |  |  |
| 1967 | June 28-29 | Ont-6(2)-67 | New Glasgow | 42 | 82 | 4.93 | 18 | 4600 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1967 | Aug 18-19 |  | Foldens | 43 | 81 | 3.07 |  |  |  |
| 1967 | Aug 27-28 | Ont-8-67 | Eugenia | 44 | 81 | 4.91 | 42 | 14000 |  |
| 1967 | Sept 27-28 |  | Stirling | 44 | 78 | 3.75 |  |  |  |
| 1967 | Dec 20-21 | Ont-12-67 | New Glasgow | 42 | 82 | 3.52 | 24 | 14900 |  |
| 1968 | May 26-27 |  | Harrow | 42 | 83 | 4.01 |  |  |  |
| 1968 | June 5 |  | Sleeman | 49 | 94 | 4.02 |  |  |  |
| 1968 | June 24-25 |  | Mt. Clemens (Mich.) | 43 | 83 | 5.49 |  |  |  |
| 1968 | July 13-15 |  | Kakabeka | 48 | 90 | 5.32 |  |  |  |
| 1968 | July 17-18 |  | Timmins | 49 | 81 | 4.65 |  |  |  |
| 1968 | Aug 5-7 | Ont-8-68 | Fergus | 44 | 80 | 4.96 |  |  |  |
| 1968 | Aug 19 |  | Meaford | 45 | 81 | 4.04 | 24 | 3200 |  |
| 1968 | Aug 21-22 | Ont-8(2)-68 | Milton Kelso | 43 | 80 | 4.37 | 30 | 22300 |  |
| 1968 | Sept 10-11 |  | Bell Rock | 44 | 77 | 4.13 | 42 | 6000 |  |
| 1969 | June 26-27 |  | West Guilford | 45 | 79 | 4.45 |  |  |  |
| 1969 | July 24-29 | Ont-7-69 | Earlton | 48 | 80 | 7.35 | 132 | 25600 |  |
| 1969 | July 24-25 |  | Brampton | 44 | 80 | 4.58 |  |  |  |
| 1969 | Aug 16 | Ont-8-69 | Hornby | 44 | 80 | 5.66 |  | 3000 |  |
| 1969 | Aug 16-19 | Ont-8(2)-69 | Lancaster | 45 | 74 | 5.69 | 60 | 6700 |  |
| 1970 | May 30-June 2 | Ont-5-70 | Elliot Lake | 46 | 82 | 6.05 | 90 | 27500 |  |
| 1970 | July 31 |  | Brampton | 44 | 80 | 2.77 |  |  |  |
| 1970 | Aug 30 |  | Toronto | 44 | 80 | 3.72 |  |  |  |
| 1971 | July 26-27 |  | Toronto | 44 | 80 | 3.46 | 24 |  |  |

## QUEBEC

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA <br> (1"Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1912 | Aug 9-13 | Que-8-12 | Cap Rouge | 47 | 71 | 8.51 | 108 | 30100 |  |
| 1916 | July 16-18 | Que-7-16 | Shawinigan Falls | 47 | 73 | 4.33 | 48 | $30600$ |  |
| 1917 | June 16-18 | Que-6-17 | LacMegantic | 45 | 71 | 3.45 | 24 | 11000 |  |
| $1917$ | July 21-22 | Que-7-17 | Drummondville | 46 | 72 | 6.35 | 18 | 1700 |  |
| 1917 | July 29-31 | Que-7(2)-17 | Beauceville | 46 | 71 | 5.48 | 18 | 10100 |  |
| 1919 | July 27-30 |  | Beauceville | 46 | 71 | 4.10 | 72 | 10800 |  |
| 1920 | Mar 5-6 |  | Huberdeau | 46 | 74 | 3.35 |  | 8400 |  |
| 1920 | Sept 28-Oct 2 |  | Donnacona | 46 | 71 | 4.21 | 90 | 36900 |  |
| 1922 | June 17-23 |  | Durham N-Hamp. | 43 | 71 | 9.35 | 144 | 43900 |  |
| $1922$ | June 17-23 | Que-6-22 | Drummondville | $46$ | 72 | $9.20$ | $156$ | 45400 | M-75C |
| 1922 | June 17-19 | Que-6(2)-22 | Farnham | 45 | 73 | 5.03 | 60 | 27800 |  |
| 1922 | June 21-23 | Que-6(3)-22 | Drummondville | 46 | 72 | 5.02 | 48 | 11700 |  |
| 1922 | Sept 9-15 | Que-9-22 | Lake Kempt | 48 | 74 | 5.47 | 150 | 46300 | Q-1 |
| 1922 | Sept 10-12 | Que-9(2)-22 | Lake Kempt | 48 | 74 | 5.23 | 72 | 24200 |  |
| 1923 | May 15-20 | Que-5-23 | Lake Onatchiway | 49 | 71 | 5.88 | 138 | 110200 | Q-2 |
| $1923$ | $\text { June } 25-30$ | Que-6-23 | Thetford Mines | 46 | 71 | 3.65 | $150$ | 24431 | Q-3 |
| 1923 | Aug 19-22 |  | Seven Falls | 47 | 71 | 4.19 | 84 | 31000 |  |
| 1923 | Oct 23-26 | Que-10-23 | Seven Falls | 47 | 71 | 5.51 | 96 | 86400 | Q-4 |
| 1923 | Oct 24-26 | Que-10(2)-23 | Seven Falls | 47 | 71 | 5.51 | 60 | 73600 |  |
| 1924 | Apr 18-23 | Que-4-24 | Ste Anne de la Pocatiere | 47 | 70 | 3.25 | 144 | 66000 | Q-5 |
| $1924$ | $\text { Apr } 22-23$ | Que-4(2)-24 | Ste Anne de la Pocatiere | 47 | 70 | 3.25 | 36 | 8400 |  |
| $1924$ | Sept 9-15 | Que-9-24 | La Malbaie | 48 | 70 | 7.76 | 138 | $27000$ | Q-6 |
| 1924 | Sept 28-Oct 2 | Que-9(2)-24 | Maniwaki | 46 | 76 | 7.10 | $114$ | $93500$ | Q-7 |
| 1924 | Sept 9-11 | Que-9(3)-24 | La Malbaie | 47 | 70 | 7.10 | 72 | 40600 |  |
| $1924$ | Sept 29 -Oct 1 | Que-9(4)-24 | Seven Falls | 47 | 71 | 6.20 | 54 | 73600 |  |
| $1924$ | Nov 22-24 | Que-11-24 | Drummondville | 46 | 72 | 3.68 | 42 | 14800 |  |
| 1926 | Aug 6-8 | Que-8-26 | Millinocket, USA | 46 | 69 | 4.76 | 72 | 61200 | Q-8 |
| 1927 | July 6-8 | Que-7-27 | Clarke City | 50 | 67 | 3.80 | 72 | $49900$ | Q-9 |
| 1927 | Nov 2-5 | Que-11-27 | Drummondville | 46 | 72 | 5.84 | 66 | 40100 |  |
| $1927$ | Nov 14-18 | Que-11(2)-27 | Donnacona | 47 | 72 | 5.46 | 102 | 64700 |  |
| $1928$ | May 23-26 | Que-5-28 | Seven Falls | 47 | 71 | 4.60 | 96 | 92300 | Q-10 |
| $1929$ | June 24-25 | Que-6-29 | Drummondville | 46 | 72 | 3.60 | 24 | 12900 |  |
| $1929$ | Aug 23-25 | Que-8-29 | St Jules | 48 | 66 | 5.05 | 84 | 96500 | Q-11 |
| $1931$ | May 23-25 | Que-5-31 | Lac Des Cygnes | 48 | 71 | 4.10 | 60 | $21700$ |  |
| 1931 | June 7-9 | Que-6-31 | Lac Des Cygnes | 48 | 71 | 4.70 | 66 | 14600 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA <br> (1" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1932 | July 7-11 | Que-7-32 | Nicolet | 46 | 73 | 5.90 | 114 | 42900 |  |
| 1932 | Aug 16-20 | Que-8-32 | Oskelaneo | 48 | 75 | 5.01 | 114 | 73300 | Q-12 |
| 1932 | Aug 16-19 | Que-8(2)-32 | Oskelaneo | 48 | 75 | 5.01 | 84 | 47500 |  |
| 1932 | Aug 24-28 | Que-8(3)-32 | Rapide Blanc | 47 | 73 | 5.32 | 108 | 11500 |  |
| 1932 | Sept 14-18 | Que-9-32 | Ripogenus Dam USA | 47 | 69 | 8.35 | 102 | 42900 | Q-13 |
| 1932 | Sept 16-18 | Que-9(2)-32 | La Malbaie | 48 | 70 | 4.85 | 72 | 19200 |  |
| 1932 | Oct 4-8 | Que-10-32 | Cedars | 45 | 74 | 4.83 | 108 | 276000 | Q-14 |
| 1932 | Oct 5-7 | Que-10(2)-32 | St Jerome | 46 | 74 | 4.64 | 72 | 45600 |  |
| 1933 | June 30-July 1 | Que-6-33 | Quebec | 47 | 71 | 4.01 | 24 | 14100 |  |
| 1933 | Aug 24-26 | Que-8-33 | St. Tite | 47 | 73 | 4.91 | 66 | 34200 |  |
| 1934 | Apr 11-13 | Que-4-34 | Bell Falls | 46 | 75 | 4.04 | 54 | 11900 |  |
| 1935 | July 15-19 | Que-7-35 | Quebec | 47 | 71 | 3.08 | 96 | 9700 | Q-15 |
| 1935 | Aug 21-22 | Que-8-35 | Cap Rouge | 47 | 71 | 5.05 | 18 | 6300 |  |
| 1935 | Sept 18-20 | Que-9-35 | Mauriceville | 47 | 71 | 6.72 | 42 | 4600 |  |
| 1936 | July 28-31 | Que-7-36 | La Tuque | 47 | 73 | 2.67 | 72 | 73200 | Q-16 |
| 1937 | June 21-23 | Que-6-37 | Harrington Hbr | 51 | 59 | 3.63 | 54 | 32900 | Q-17 |
| 1937 | Aug 10-13 | Que-8-37 | Quebec City | 47 | 71 | 5.89 | 90 | 18370 | Q-18 |
| 1937 | Aug 10-13 | Que-8(2)-37 | Quebec City | 47 | 71 | 5.77 | 84 | 48700 |  |
| 1937 | Sept 11-15 | Que-9-37 | Ste Anne de la Pocatiere | 47 | 70 | 4.29 | 120 | 65400 |  |
| 1937 | Oct 18-24 | Que-10-37 | Farmington, USA | 45 | 70 | 6.58 | 168 | 110900 | Q-19 |
| 1938 | Aug 30-31 | Que-8-38 | Valcartier | 47 | 71 | 4.37 | 18 | 7200 |  |
| 1939 | June 28-July 1 | Que-6-39 | Mt Laurier | 47 | 75 | 6.00 | 66 | 38500 |  |
| 1939 | July 27-31 | Que-7-39 | Mt Laurier | 47 | 75 | 6.59 | 114 | 43200 |  |
| 1940 | June 25-29 | Que-6-40 | Clarke City | 50 | 67 | 3.02 | 120 | 48300 | Q-20 |
| 1940 | Aug 23-25 | Que-8-40 | Lake Onatchiway | 49 | 71 | 2.24 | 60 | 26000 | Q-21 |
| 1940 | Aug 30-Sept 3 | Que-8(2)-40 | Hervey Junction | 47 | 72 | 6.80 | 108 | $48600$ | Q-22 |
| 1940 | Aug 31-Sept 3 | Que-8(3)-40 | Hervey Junction | 47 | 72 | 6.80 | 90 | 37900 |  |
| 1941 | Aug 1-3 |  | Clarke City | 50 | 67 | 3.53 | 96 | 65430 |  |
| 1942 | June 13-16 | Que-6-42 | Windsor | 46 | 72 | 7.56 | 108 | 89600 | Q-25 |
| 1942 | June 13-16 |  | Windsor | 46 | 72 | 7.25 | 72 | $76700$ |  |
| 1942 | Sept 18-20 | Que-9-42 | Passe Dangereuse Dam | 50 | 71 | 4.28 | 54 | $79600$ | Q-26 |
| 1943 | June 14-16 |  | St Lin | 46 | 74 | 5.00 | 42 | 15700 |  |
| 1943 | Oct 16-21 |  | Pennfield Ridge | 45 | 66 | 5.86 |  |  |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (1" Isohyet) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  | NOTES |  |  |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (1" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1953 | July 3 |  | Grandes Bergeronnes | 48 | 70 | 2.05 |  |  |  |
| 1953 | Sept 5-8 | Que-9-53 | Moisie | 50 | 66 | 4.27 | 102 | 82300 | Q-51 |
| 1954 | June 26-28 | Que-6-54 | La Galette | 48 | 71 | 7.45 | 54 | 94000 |  |
| 1954 | Aug 3-5 |  | Bic | 48 | 69 | 3.48 | 84 | 9200 |  |
| 1954 | Aug 10-12 | Que-8-54 | Thetford Mines | 46 | 71 | 4.88 | 48 | 22000 |  |
| 1954 | Aug 31-Sept 1 |  | Thetford Mines | 46 | 71 | 4.17 | 54 | 14900 |  |
| 1955 | July 15-17 |  | Quebec | 47 | 71 | 3.30 | 36 | 3500 |  |
| 1955 | July 21-23 |  | Isle Maligne | 49 | 72 | 3.80 |  |  |  |
| 1955 | July 22-23 |  | Chute a Murdock | 49 | 71 | 3.70 | 54 | 700 |  |
| 1955 | Aug 5-7 | Que-8-55 | Nicolet | 46 | 73 | 6.35 | 72 | 35800 |  |
| 1955 | Aug 22-23 |  | St Hyacinthe | 46 | 73 | 3.40 | 18 | 2900 |  |
| 1955 | Sept 18-21 | Que-9-55 | Causapscal | 48 | 67 | 4.67 | 66 | 36300 | Q-55 |
| 1956 | July 13-14 |  | Rapide des Sept | 48 | 78 | 3.30 | 12 | 1700 |  |
| 1956 | Aug 8-10 |  | Valcartier | 47 | 71 | 3.60 | 66 | 4200 |  |
| 1956 | Aug 22-24 | Que-8-56 | Lac des Loups | 47 | 76 | 5.75 | 72 | 40700 |  |
| 1957 | June 26-29 |  | Depot Jobin | 47 | 72 | 5.54 | 96 | 24600 |  |
| 1957 | July 28-29 |  | Bre Tourilli | 47 | 72 | 3.80 | 42 | 4500 |  |
| 1957 | Aug 3-4 | Que-8-57 | St Pierre Baptiste | 46 | 72 | 9.50 | 18 | 5900 |  |
| 1957 | Sept 2.5 | Que-9-57 | Moose Bay | 47 | 79 | 7.22 | 96 | 110800 |  |
| 1957 | Sept 20-22 |  | St Fereol | 47 | 70 | 4.80 | 90 | 12000 |  |
| 1958 | July 5-6 |  | St Jean De Brebeuf | 46 | 71 | 4.60 | 24 | 4000 |  |
| 1958 | Aug 20-21 |  | La Tuque | 47 | 73 | 3.05 | 36 | 8200 |  |
| 1958 | Oct 7-11 | Que-10-58 | Kenogami | 48 | 71 | 4.11 | 96 | 33900 |  |
| 1959 | June 13-16 | Que-6-59 | Seven Islands | 50 | 66 | 4.73 | 66 |  |  |
| 1959 | July 27-28 |  | East Angus | 45 | 72 | 4.12 | 30 | 2100 |  |
| 1959 | Aug 15-17 |  | St Lin | 46 | 74 | 4.22 | 72 | 29000 |  |
| 1959 | Sept 2-3 | Notre | Notre Dam du Laus | 46 | 76 | 5.20 | 42 | 8100 |  |
| 1960 | June 17-18 |  | Thetford Mines | 46 | 71 | 3.48 | 24 | 1300 |  |
| 1960 | June 23-25 | Que-6-60 | Montreal River | 47 | 79 | 4.85 | 54 | 12500 |  |
| 1960 | July 26-27 | Que-7-60 | Grand Lac Victoria | 48 | 77 | 3.77 | 42 | 36700 |  |
| 1960 | Sept 12-13 | Que-9-60 | Pentecote | 50 | 67 | 4.91 | 48 | 43400 |  |
| 1960 | Oct 23-25 |  | La Galette | 48 | 71 | 3.66 | 72 | 18400 |  |
| 1961 | July 14-18 |  | Mont Laurier | 47 | 75 | 6.26 | 114 | 14900 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA (1" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1963 | Sept 12 | Que-9-63 | St Guillaume | 46 | 73 | 4.01 | 24 | 16800 |  |
| 1963 | Nov 6-8 | Que-11-63 | Petit Saguenay | 48 | 70 | 5.11 | 66 | 9400 |  |
| 1964 | June 9-10 |  | St Fereol | 47 | 71 | 3.60 | 36 | 10200 |  |
| 1964 | July 28-29 | Que-7-64 | St Fereol | 47 | 71 | 4.89 | 48 | 11700 |  |
| 1964 | Sept 10-11 |  | Mondonac | 47 | 74 | 3.17 | 18 | 108300 |  |
| 1966 | Sept 21-23 | Que-9-66 | Mont Apica | 48 | 71 | 4.68 | 60 | 56100 |  |
| 1966 | Nov 1-3 |  | Manic 2 | 49 | 68 | 5.76 |  |  |  |
| 1967 | Aug 9-10 |  | Lac des Commissaires | 48 | 72 | 6.30 |  |  |  |
| $1967$ | Aug 28 | Que-8-67 | Notre Dame du Laus | 46 | 76 | $4 . \therefore 2$ | $24$ | $5500$ |  |
| $1967$ | Sept 22-24 | Que-9-67 | Mount Logan | 49 | 67 | 6.93 | 66 | 85900 |  |
| 1967 | Oct 15-18 |  | St Anne du Lac | 47 | 75 | 6.89 |  |  |  |
| 1969 | July 24-25 |  | Belleterre | 47 | 79 | 5.53 |  |  |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  |  |  |  | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | DATE | CODE |  |  |  |  |  |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1958 | Jan. 22-25 |  | Brassua Dam USA | 46 | $70$ | 1.02 |  |  |  |
| 1958 | Apr. 28-30 | NB-4-58 | Saint John A | 45 | 66 | 4.50 | 54 | 17600 | M-45 |
| 1958 | Nov. 28-29 | NB-11-58 | Musquash | 45 | 66 | 315 | 24 | 12800 | M-51 |
| 1959 | June 17-18 | NB-6-59 | St. Andrews | 45 | 67 | 3.14 | 36 | 24700 | M-54 |
| 1959 | Nov 23-26 |  | Ellsworth USA | 45 | 68 | 4.87 | 48 | 22600 |  |
| 1959 | Nov 27-29 |  | Saint John A | 45 | 66 | 3.04 |  | 39000 |  |
| 1959 | Dec 12-13 | NB-12-59 | Saint John A | 45 | 66 | 4.94 | 42 | 26700 | M-60 |
| 1960 | May 11-15 |  | St. Andrews | 45 | 67 | 5.39 |  |  |  |
| 1961 | May 25-28 | NB-5-61 | Bar Harbour USA | 44 | 68 | 8.75 | 72 | 140000 | M-68 |
| 1961 | Oct 3-5 | NB-10-61 | Alma | 46 | 65 | 3.91 | 60 | 30000 | M-69 |
| 1961 | Oct. 24-25 |  | Alma | 46 | 65 | 1.18 |  |  |  |
| 1962 | Mar 31-Apr 2 | NB-3-62 | Alma | 46 | 65 | 9.90 | 42 | 46800 | M-70 |
| 1962 | Nov 21-23 |  | Alma | 46 | 65 | 5.08 | 42 | 24200 |  |
| 1963 | Oct 29-31 | NB-10-63 | Saint John A | 45 | 66 | 4.55 | 54 | 38500 | M-88 |
| 1964 | June 10 |  | Bathurst | 48 | 66 | 2.33 |  |  |  |
| 1964 | July 6-7 |  | Riley Brook | 47 | 67 | 2.48 |  |  |  |
| 1964 | Sept 23 |  | McDonalds Corner | 46 | 66 | 3.06 |  |  |  |
| 1964 | Dec 25-29 | NB-12-64 | Saint John A | 45 | 66 | 4.29 | 96 | 22000 |  |
| 1965 | Aug 18-20 | NB-8-65 | McAdam | 46 | 67 | 4.62 | 36 | 2800 |  |
| 1966 | Sept. 14-15 |  | Saint John | 45 | 66 | 3.48 |  |  |  |
| 1966 | Nov. 1-3 |  | Bingham Wyman Dam | 45 | 70 | 6.41 |  |  |  |
| 1967 | Sept. 22-24 |  | Milltown | 45 | 67 | 5.28 |  |  |  |
| 1968 | Oct 20-21 | NB-10-68 | Saxkville | 46 | 64 | 5.04 | 42 | 60700 | Hurricane Gladys |
| 1969 | July 11-14 | NB-7-69 | Saint John | 45 | 66 | 7.80 | 84 | 60000 |  |
| 1969 | Sept 6-10 | NB-9-69 | Grand Falls | 47 | 68 | 6.76 | 96 | 142800 |  |
| 1969 | Dec 22 |  | Rosevale | 46 | 65 | 4.35 |  | 142800 |  |
| 1970 | Feb 2-4 | NB-2-70 | Rosevale | 46 | 65 | 5.99 | 54 | 58900 |  |
| 1973 | Apr 27.29 | NB-4-73 | Woodland | 45 | 67 | 6.11 | 60 | 60000 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1916 | April 5-6 |  | Halifax | 45 | 64 | 4.04 |  |  |  |
| 1917 | Oct 20-23 | NS-10-17 | Bridgetown | 45 | 65 | 6.20 | 72 | 82700 |  |
| 1918 | Jan 3-4 | NS-1-18 | Stillwater | 45 | 62 | 3.86 | 30 | 13900 | M-71 |
| 1919 | June 11-12 |  | Sable Island | 44 | 60 | 6.11 | 42 | 21300 |  |
| 1919 | Nov 5-7 |  | Yarmouth | 44 | 66 | 4.10 | 60 | 30400 |  |
| 1921 | April 24-25 |  | Annapolis Royal | 45 | 66 | 4.00 | 42 | 1700 |  |
| 1921 | May 14-17 |  | Halifax | 45 | 64 | 3.51 | 90 | 14800 |  |
| 1922 | July 2-7 |  | Liverpool | 44 | 65 | 5.62 | 126 | 58900 |  |
| 1922 | Oct 7-11 |  | Annapolis Royal | 45 | 66 | 6.19 | 114 | 38500 |  |
| 1923 | Oct 1-2 | NS-10-23 | Antigonish | 46 | 62 | 4.95 | 24 | 38600 | M-84 |
| 1924 | Aug 11-15 | NS-8-24 | Stillwater | 45 | 62 | 6.52 | 108 | 98100 |  |
| 1924 | Aug 25-28 |  | St. George | 45 | 67 | 5.43 | 78 | 32500 |  |
| 1925 | Mar 30-April 3 |  | Stillwater | 45 | 62 | 3.98 | 102 | 12200 |  |
| 1926 | Oct 24-26 |  | St. George | 45 | 67 | 5.40 | 48 | 46100 |  |
| 1927 | Aug 23-26 |  | Weymouth | 44 | 66 | 5.72 | 90 |  |  |
| 1927 | Aug 23-25 | NS-8-27 | Weymouth | 44 | 66 | 5.72 | 36 | 30000 | M-3 |
| 1927 | Oct 18-20 |  | Stillwater | 45 | 62 | 5.47 | 54 | 59800 |  |
| 1927 | Nov 5-6 | NS-11-27 | Collegeville | 45 | 62 | 4.53 | 36 | 33200 | M-2 |
| 1928 | Feb 8-9 |  | Liverpool | 44 | 65 | 3.06 | 36 | 26000 |  |
| 1928 | Oct 23-25 |  | Antigonish | 46 | 62 | 3.44 | 72 |  |  |
| $1928$ | Dec 8-10 |  | St. Margarets Bay | 45 | 64 | 4.16 | 60 | 84600 |  |
| 1929 | Sept 13-20 |  | St. Margarets Bay | 45 | 64 | 8.21 | 168 |  |  |
| 1929 | Sept 17-19 | NS-9-29 | Trafalgar | 45 | 63 | 5.85 | 72 | 58400 | M-4 |
| 1930 | Nov 29-Dec 2 |  | Springfield | 45 | 65 | 3.58 | 60 | 13300 |  |
| 1931 | July 10-13 |  | Springfield | 45 | 65 | 4.20 | 72 | 13300 |  |
| $1932$ | April 16-18 |  | Halifax | 45 | 64 | 4.87 | 66 | 10500 |  |
| $1932$ | Sept 8-11 |  | Sydney | 46 | 60 | 6.68 | 72 | $69600$ |  |
| $1933$ | Aug 24-29 |  | Mahone Bay | 44 | 64 | 7.76 | 60 | 20800 |  |
| $1933$ | Sept 8-11 | NS-9-33 | Stillwater | 45 | 62 | 6.51 | 48 | 56600 |  |
| 1933 | Sept 17-22 |  | St. George | 45 | 67 | 5.54 | 24 | 16700 |  |
| 1933 | Oct 5-8 | NS-10-33 | Halifax | 45 | 64 | 8.46 | 84 | 128200 |  |
| $1934$ | May 11-13 |  | Guysboro | 45 | 61 | 4.47 |  |  |  |
| $1934$ | Nov 4-7 | NS-11-34 | Mt. Uniacke | 45 | 64 | 6.50 | 60 | 52300 |  |
| 1934 | Nov 29-Dec 2 |  | Annapolis Royal | 45 | 66 | 4.84 | 48 | 19200 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1935 | Jan 8-11 | NS-1-35 | Guysboro | 45 | 61 | 6.45 | 66 | 47800 | M-10 |
| 1935 | July 24 |  | Antigonish | 46 | 62 | 4.00 | 12 | 13000 |  |
| 1935 | Aug 21-26 |  | Baddeck | 46 | 61 | 6.03 |  |  |  |
| 1935 | Aug 22-25 | NS-8-35 | Baddeck | 46 | 61 | 6.03 | 90 | 94700 |  |
| 1936 | Sept 18-19 | NS-9-36 | Liverpool | 44 | 64 | 7.25 | 30 | 63400 | M-12 Hurricane |
| 1937 | Nov 20-21 | NS-11-37 | Trafalgar | 45 | 63 | 4.41 | 30 | 12800 | M-14 |
| 1937 | Dec 4-5 |  | Guysboro | 45 | 61 | 4.53 | 42 | 30500 |  |
| 1938 | June 26-30 |  | Liverpool | 44 | 64 | 4.50 | 96 | 92500 |  |
| 1938 | Sept 30-Oct 1 |  | Liverpool | 44 | 64 | 4.31 | 24 | 44000 |  |
| 1939 | June 23-26 |  | Liverpool | 44 | 64 | 4.33 | 66 | 6000 |  |
| 1939 | Oct 30-31 |  | St. Margarets Bay | 44 | 64 | 3.18 | 36 | 3700 |  |
| 1940 | Mar 9-10 |  | Sydney | 46 | 60 | 4.13 | 30 | 27000 |  |
| 1940 | June 19-22 | NS-6-40 | Channel | 48 | 59 | 6.90 | 90 | 69400 |  |
| 1941 | July 25-28 |  | Stellarton | 45 | 62 | 4.19 | 72 | 16500 |  |
| 1942 | Sept 20-24 | NS-9-42 | Stellarton | 46 | 63 | 13.99 | 84 | 79400 | M-17 |
| 1942 | Oct 24-27 | NS-10-42 | Lake Rossignol | 44 | 65 | 6.21 | 72 | 58800 |  |
| 1943 | May 3-6 |  | Stillwater | 45 | 62 | 4.82 | 54 | 16000 |  |
| 1943 | July $7-8$ | NS-7-43 | Lake Rossignol | 44 | 65 | 5.08 | 24 | 34300 | M-21 |
| 1943 | Aug 3-5 | NS-8-43 | Annapolis Royal | 45 | 66 | 5.03 | 54 | 22600 | M-18 |
| 1944 | Nov 4-8 |  | Summerside | 46 | 64 | 4.87 | 72 | 45300 |  |
| $1945$ | June 26-29 |  | Mahone Bay | 44 | 64 | 4.92 | 66 | 14200 |  |
| 1946 | Feb 27-28 |  | Meteghan River | 44 | 66 | 5.81 | 48 |  |  |
| 1946 | Sept 14-15 | NS-9-46 | New Glasgow | 46 | 63 | 5.50 | 36 | 14000 | M-22 |
| 1946 | Dec 21-22 |  | Dartmouth | 44 | 63 | 4.42 | 30 | 43500 |  |
| 1947 | April 29-May 2 | NS-4-47 | Spruce Hill Lake | 45 | 64 | 6.56 | 72 | 40700 | M-23 |
| $1947$ | Sept 12-16 |  | Ecum Secum | 45 | 62 | 2.75 |  |  |  |
| 1947 | Sept 22-26 |  | Sable Island | 44 | 60 | 2.64 |  |  |  |
| 1948 | $\text { Jan } 13.15$ |  | Whitehead | 45 | 61 | 4.18 | 54 | $60200$ |  |
| 1948 | Feb 14-15 | NS-2-48 | Whitehead | 45 | 61 | 5.20 | 30 | 38800 | MN-27 |
| $1948$ | May 29-June 2 |  | Ecum Secum | 46 | 62 | 5.88 | 108 | 101700 |  |
| $1948$ | Aug 12-14 | NS-8-48 | Liverpool (2) | 44 | 65 | 5.11 | 60 | 34400 | M-27 |
| $1949$ | Jan 6-7 |  | Meteghan River | 44 | 66 | 5.32 |  |  |  |
| $1949$ | Aug 18-19 | NS-8-49 | Salmon Hole | 45 | 64 | 6.83 | 48 | 90700 |  |
| $\begin{aligned} & 1950 \\ & 1950 \end{aligned}$ | Aug 20-21 | NS-8-50 | Bloody Creek | 45 | 65 | 6.96 | $42$ | $48100$ | MN-31 |
| 1950 | Nov 27-30 | NS-11-50 | Avon | 45 | 64 | 6.39 | 84 | 30600 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1950 | Dec 9-13 |  | Avon | 45 | 64 | 5.27 | 96 | 23000 |  |
| 1951 | Aug 24-25 |  | Baddeck | 46 | 61 | 4.80 | 30 | 8900 |  |
| 1952 | Jan 22-24 |  | Mt. Uniacke | 45 | 64 | 2.93 | 36 | 23600 |  |
| 1952 | May 26-28 |  | Ingonish Beach | 47 | 60 | 5.45 | 60 | 27800 |  |
| 1952 | Aug 17-18 |  | Kemptville | 44 | 66 | 4.36 | 24 | 15200 |  |
| 1953 | Feb 7-9 | NS-2-53 | Digby | 45 | 66 | 6.02 | 42 | 56000 |  |
| 1953 | Dec 1-3 |  | Ingonish Beach | 47 | 60 | 5.16 | 48 | 36500 |  |
| 1954 | June 23-24 |  | Digby | 45 | 66 | 4.81 | 36 | 16000 |  |
| 1954 | July 19-24 |  | Darmouth A | 45 | 63 | 5.55 |  |  |  |
| 1954 | Oct 20-23 |  | Cape Sable | 43 | 66 | 3.25 |  |  |  |
| 1955 | Aug 16-20 |  | Roseway | 44 | 65 | 4.74 | 90 | 33600 |  |
| 1956 | Jan 4-9 | NS-1-56 | Mount Uniacke | 45 | 64 | 11.82 | 144 | 79300 | M-33 |
| 1956 | Jan 10-15 | NS-1(2)-56 | Ingonish Beach | 47 | 60 | 12.24 | 144 | 35500 | $\begin{aligned} & \text { M-34B See } \\ & \text { NB-1-56 } \end{aligned}$ |
| 1956 | Aug 8-9 |  | Liverpool NSPC | 44 | 65 | 4.99 | 30 | 10000 |  |
| 1957 | March 8-9 |  | Lily Dale | 44 | 64 | 3.34 | 30 | 4500 |  |
| 1957 | April 5-7 |  | Meteghan River | 44 | 66 | 4.18 |  |  |  |
| 1957 | Nov 1-4 | NS-11-57 | Ecum Secum | 45 | 62 | 5.44 | 66 | 80800 |  |
| 1958 | Jan 15-17 | NS-1-58 | Liverpool NSPC | 44 | 65 | 9.24 | 60 | 22000 | M-44B See Also NB-1-58 |
| 1958 | Feb 8-9 |  | Spruce Hill Lake | 45 | 64 | 4.66 | 24 | 8300 |  |
| 1958 | Aug 25-27 | NS-8-58 | Digby | 45 | 66 | 5.60 | 60 | 61100 | M-47 |
| 1958 | Sept 27-29 |  | Barrie Brook | 46 | 61 | 3.50 | 48 | 53900 |  |
| 1958 | Nov 6-8 |  | St. Andrews | 45 | 67 | 4.13 | 42 | 23500 |  |
| 1958 | Nov 9-11 | NS-11-58 | Chain Lake | 45 | 64 | 3.55 | 48 | 32600 | M-50 |
| 1958 | Nov 26-29 |  | St. John | 45 | 66 | 4.76 | 72 | 70700 |  |
| 1958 | Dec 4-6 |  | Ingonish Beach | 47 | 60 | 3.40 |  |  |  |
| 1959 | June 13-15 |  | Ingonish Beach | 47 | 60 | 4.85 | 66 | 19700 |  |
| 1959 | June 19-20 | NS-6-59 | Rawdon | 45 | 64 | 3.65 | 36 | 20100 | M-55 |
| 1959 | Oct 1-2 | NS-10-59 | Yarmouth | 44 | 66 | 6.79 | 18 | 22700 | M-56 |
| 1959 | Oct 23-28 |  | Beechwood | 47 | 68 | 5.08 | 120 | 95500 |  |
| 1959 | Oct 25-28 | NS-10(2)-59 | Salmon Hole | 45 | 64 | 7.41 | 90 | 48400 |  |
| 1959 | Nov 14-18 |  | Digby | 45 | 66 | 6.40 | 66 | 66800 |  |
| 1960 | April 3-5 |  | Digby | 45 | 66 | 4.20 | 48 | 10600 |  |
| 1961 | May 19-20 |  | Ingonish Beach | 47 | 60 | 4.61 | 36 | 12800 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1961 | Aug 25-28 |  | Ecum Secum | 45 | 62 | 4.73 | 42 | 20400 |  |
| 1961 | Oct 20-21 | NS-10-61 | Western Head | 44 | 65 | 5.44 | 36 | 64700 |  |
| 1961 | Oct 24-27 |  | Bedford | 44 | 63 | 5.66 | 48 | 13300 |  |
| 1962 | April 7-9 |  | St. Margarets Bay | 45 | 64 | 3.98 | 36 | 39100 |  |
| 1962 | July 3-8 |  | Ingonish Beach | 46 | 60 | 5.62 | 114 | 65500 |  |
| 1962 | Aug 7-11 |  | Annapolis Royal | 45 | 66 | 5.65 | 96 | 51200 |  |
| 1962 | Sept 27-30 | NS-9-62 | Western Head | 44 | 65 | 6.57 | 84 | 79800 |  |
| 1963 | Aug 24-25 | NS-8-63 | Ingonish Beach | 46 | 60 | 7.36 | 48 | 41400 | MN-53 |
| 1963 | Nov 7-10 |  | Liverpool | 44 | 65 | 5.45 | 66 | 42100 |  |
| 1964 | Jan 25-26 |  | Canso | 45 | 61 | 3.62 |  |  |  |
| 1964 | June 11-12 | NS-6-64 | Stellarton | 45 | 62 | 5.71 | 54 | 4500 |  |
| 1964 | July 3-7 | NS-7-64 | Canso | 45 | 61 | 5.15 | 96 | 42800 |  |
| 1964 | July 22 |  | St. Margarets Bay | 45 | 64 | 4.65 |  |  |  |
| 1964 | July 29 |  | Halifax A | 45 | 63 | 3.16 |  |  |  |
| 1964 | Aug 2-3 |  | Baccaro | 43 | 65 | 4.31 |  |  |  |
| 1964 | Aug 23-24 | NS-8-64 | Canso | 45 | 61 | 4.36 | 36 | 14300 |  |
| 1964 | Sept 14-15 | NS-9-64 | Canso | 45 | 61 | 4.55 | 24 | 19200 | Hurricane Ethel |
| 1964 | Nov 29-Dec 1 | NS-11-64 | Kentville | 45 | 65 | 4.84 | 60 | 23300 |  |
| 1965 | Feb 25-26 | NS-2-65 | Liverpool | 44 | 65 | 3.56 | 36 | $11800$ |  |
| 1965 | Aug 19-20 | NS-8-65 | Dickie Brook | 45 | 61 | 4.35 | 30 | 18700 |  |
| 1966 | Oct 20 |  | Baddeck | 46 | 61 | 3.60 |  |  |  |
| 1966 | May 28 |  | Westport | 44 | 66 | 3.47 |  |  |  |
| 1967 | May 25-28 | NS-5-67 | Sydney A | 46 | 60 | 5.96 | 60 | 40100 |  |
| 1967 | July 17-18 |  | Springfield | 45 | 65 | 6.30 |  |  |  |
| 1967 | Oct 9-11 | NS-10-67 | Kemptville | 44 | 66 | 6.59 | 66 | 40800 |  |
| 1967 | Dec 3-5 | NS-12-67 | Kejimkujik | 44 | 65 | 6.16 | 48 | 28000 |  |
| 1967 | Dec 22-23 |  | Baddeck | 46 | 61 | 4.25 |  |  |  |
| 1968 | June 12-14 | NS-6-68 | Meteghan River | 44 | 66 | 6.17 | 48 | 22100 |  |
| $1968$ | Aug 29-31 | NS-8-68 | Collegeville | 45 | 62 | 8.27 | $48$ | $34900$ |  |
| 1971 | Aug 14-17 | NS-8-71 | Halifax Int'l A | 45 | 64 | 11.67 | 60 | 87000 | Hurricane Beth |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA ( $2^{\prime \prime}$ Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1925 | May 1-3 |  | Port Aux Basques | 48 | 59 | 3.26 | 60 | 34300 |  |
| 1925 | June 16-19 |  | Cape Race | 47 | 53 | 3.23 | 96 | 23700 |  |
| 1927 | Jan 1-3 |  | Port Aux Basques | 48 | 59 | 3.48 | 42 | 34400 |  |
| 1933 | Aug 12-13 |  | Cape Race | 47 | 53 | 4.14 | 36 | 10100 |  |
| 1934 | June 29-July 1 |  | Belle Isle | 52 | 55 | 4.93 | 48 | 18000 |  |
| 1934 | July 15-17 |  | Grand Falls | 49 | 56 | 2.85 | 54 | 31000 |  |
| 1934 | Oct. 12-14 |  | Cape Race | 47 | 53 | 3.68 | 60 | 50100 |  |
| 1935 | Aug 2-3 |  | Corner Brook | 49 | 58 | 3.43 | 36 | 10950 |  |
| 1935 | Sept. 28-30 |  | Cape Race | 47 | 53 | 4.35 | 36 | 18400 |  |
| 1935 | Oct 1-2 |  | Grand Bank | 47 | 56 | 2.24 | 30 | 19700 |  |
| 1935 | Oct 14-17 |  | St. John's | 48 | 53 | 3.90 | 66 | 19000 |  |
| 1935 | Nov 28-30 |  | Corner Brook Lake | $49$ | $58$ | $3.18$ | $48$ | 31200 |  |
| $1936$ | June 15-17 |  | Grand Bank | $47$ | $55$ | 3.28 | 48 | 62200 |  |
| 1936 | July 14-16 |  | Natashquan, Quebec | 50 | 62 | 3.40 | 54 | 71300 |  |
| 1936 | Dec 11-14 |  | Ramea | 47 | 57 | 2.57 | 72 | 40700 |  |
| 1937 | May 28-29 |  | Glenwood | 49 | 55 | 2.40 | 36 | 5500 |  |
| $1937$ | June 4-7 |  | Cape Race | $47$ | $53$ | $4.04$ | 78 | $58000$ |  |
| $1937$ | Sept 16-18 |  | Channel | $48$ | $59$ | $4.31$ | $66$ | 23000 |  |
| 1937 | Oct 6-9 |  | Buchans | 49 | 57 | 2.75 | 72 | 28200 |  |
| 1938 | April 18-20 |  | Ramea | 47 | 57 | 3.12 | 42 | 19600 |  |
| $1939$ | July 20-22 |  | Cape Race | 47 | 53 | 2.73 | 42 | 30000 |  |
| $1939$ | Aug 6-9 |  | St. John's | $48$ | $53$ | $4.52$ | $72$ | $34200$ |  |
| $1939$ | Dec 11-13 |  | Grand Bank | 47 | $56$ | 3.15 | 48 | 23500 |  |
| 1940 | April 9-10 |  | Channel | 48 | 59 | 3.18 | 30 | 24500 |  |
| 1940 | Dec 8-10 |  | Burgeo | 48 | 58 | 3.25 | 54 | 20700 |  |
| 1941 | July 12-14 |  | Howley | 49 | 57 | 2.97 | 54 | 45900 |  |
| $1941$ | Aug 2.4 |  | Grand Bank | 47 | 56 | 3.87 | 66 | $35100$ |  |
| $1941$ | Aug 16-18 |  | Cape Norman | $52$ | $56$ | $3.43$ | $60$ | $59100$ |  |
| $1941$ | Sept. 1-4 |  | Belle Isle | $52$ | $55$ | $3.79$ | $90$ | $69300$ |  |
| 1942 | July 19-22 |  | Burgeo | 48 | 58 | $5.16$ | 72 | 61800 |  |
| 1942 | Nov 1-4 |  | Burgeo | 48 | 58 | $3.26$ | $84$ | 24700 |  |
| 1942 | Dec 2-3 |  | Torbay A | 48 | 53 | 3.14 | 24 | 21200 |  |
| 1943 | Sept 23-27 |  | Channel | 48 | 59 | 3.60 | 96 | 67900 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1943 | Oct. 19-24 |  | Belle Isle | 52 | 55 | 4.30 | 114 | 99000 |  |
| 1943 | Nov 16-17 |  | Grand Bank | 47 | 56 | 3.89 | 54 | 38800 |  |
| 1944 | July 4-7 |  | Gape Race | 47 | 53 | 5.77 | 48 | 4310 |  |
| $1944$ | Aug 4-7 |  | Cape Race | 47 | 53 | 4.41 | 78 | 25400 |  |
| 1944 | Sept 3-7 |  | Burgeo | 48 | 58 | 4.43 | 96 | 19400 |  |
| 1944 | Sept 14-15 | NFLD-9-44 | Fogo | 50 | 54 | 4.05 | 48 | 41800 | Hurricane |
| 1944 | Oct 2-4 | NFLD-10-44 | Grand Bank | 47 | 56 | 3.20 | 66 | 55000 |  |
| 1944 | Oct 9-11 |  | Burgeo | $48$ | 58 | 4.32 | 72 | 35500 |  |
| $1944$ | Nov 12-15 |  | Harrington Hbr | 50 | 59 | 3.86 | 84 | 93300 |  |
| 1945 | Jan 15-19 |  | Channel | 48 | 59 | 3.44 | 90 | 22200 |  |
| 1945 | May 5-7 |  | Burgeo | 48 | 58 | 3.12 | 54 | 16600 |  |
| 1945 | Nov 4-6 | NFLD-11-45 | Burgeo | 48 | 58 | 5.86 | 60 | 82200 |  |
| 1946 | Nov 12-15 |  | Torbay A | 48 | 53 | 3.93 | 72 | 31600 |  |
| 1947 | Sept 25-29 |  | Torbay A | $48$ | 53 | 5.12 | 90 | 18300 |  |
| $1948$ | May 18-22 |  | Burgeo | $48$ | 58 | $7.31$ | 102 | $59000$ |  |
| $1948$ | July 5-6 |  | Belle Isle | 52 | $55$ | 2.70 | 24 | 29400 |  |
| 1948 | Sept 1-2 | NFLD-9-48 | Corner Brook | 49 | 58 | 4.65 | 48 | 54700 |  |
| 1951 | Jan 24-27 |  | Burgeo | 48 | 58 | 2.76 | 66 | 32100 |  |
| 1951 | Apr 10-13 |  | Torbay A | 48 | 53 | 6.68 | 72 | 23500 |  |
| $1951$ | Aug 4-7 |  | Gander A | 49 | 55 | 4.73 | 72 | 28200 |  |
| $1951$ | Nov 7-9 | NFLD-11-51 | Burgeo | $48$ | 58 | 4.55 | 42 | $25100$ |  |
| $1952$ | Feb 5-6 | NFLD-2-52 | Burgeo | $48$ | $58$ | $3.43$ | 48 | $43000$ |  |
| 1952 | Nov 4-6 | NFLD-11-52 | Grand Bank | 47 | 56 | 3.57 | 54 | 47900 |  |
| 1952 | Nov 17-18 |  | Cape Race | 47 | 53 | 4.59 | 48 |  |  |
| $1953$ | June 15-19 |  | Burgeo | 48 | 58 | 4.27 | 102 | 17500 |  |
| $1953$ | Oct 6-9 | NFLD-10-53 | St. John's | $48$ | 53 | 4.46 | 72 | 37500 |  |
| $1953$ | Dec 26-27 |  | Colinet | $47$ | $54$ | $4.23$ | $36$ | $4600$ |  |
| 1954 | Mar 10-11 |  | St. John's | $48$ | 58 | 3.66 | 42 | 2200 |  |
| 1954 | May 20-22 | NFLD-5-54 | Burgeo | 48 | 58 | 5.03 | 72 | 44000 |  |
| 1954 | Oct 21-25 |  | Grand Bank | 47 | 56 | 4.64 | 102 | 71500 |  |
| $1954$ | Dec 19-22 |  | Burgeo | 48 | 58 | 4.20 | 66 | 41100 |  |
| $1955$ | $\text { Jan } 4-7$ |  | St John's West | 48 | 53 | $2.50$ | 66 | $30700$ |  |
| $1955$ | Sept 19-22 | NFLD-9-55 | Ingonish Beach | $46$ | 60 | $5.02$ | 84 | $82000$ | Hurricane |
| 1956 | Sept 7-11 |  | Tors Cove | 47 | 53 | 6.04 | 102 | 14400 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION <br> (Hours) | TOTAL AREA (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1956 | Nov 9.11 | NFLD-11-56 | Argentia A | 47 | 54 | 5.61 | 48 | 23300 |  |
| 1957 | Mar 10-12 |  | Bonavista | 49 | 53 | 5.10 | 60 | 16500 |  |
| 1957 | July 15-18 | NFLD-7-57 | Badger | 49 | 56 | 3.53 | 66 | 16000 |  |
| 1957 | Sept 8.10 | NFLD-9-57 | Terra Nova | 48 | 54 | 3.21 | 48 | 16900 |  |
| 1959 | Nov 7.11 |  | Torbay A | 48 | 53 | 3.82 | 102 | 13800 |  |
| 1959 | Nov 14 |  | Petty Hbr | 47 | 53 | 6.35 | 78 | 39000 |  |
| 1959 | Nov 28-30 |  | Daniels Hbr | 50 | 58 | 3.41 | 48 | 17900 |  |
| 1960 | Feb 20-22 | NFLD-2-60 | Clunys | 47 | 53 | 3.50 | 54 | 17600 |  |
| 1960 | Sept 12-14 |  | Burgeo | 48 | 58 | 4.51 | 72 | 16300 |  |
| 1960 | Oct 17-18 |  | St. John's | 48 | 53 | 3.61 | 18 | 8100 |  |
| 1961 | Mar 25-28 |  | Cape Broyle | 47 | 53 | 2.94 | 54 | 45700 |  |
| 1961 | May $30-31$ |  | St. Andrews | 48 | 59 | 2.63 | 12 | 9400 |  |
| $1961$ | Aug 12-13 (A) |  | Daniels Hbr | 50 | 58 | 2.99 | 54 | 13000 |  |
| 1961 | Aug 12-13 (B) |  | Cape Race | 47 | 53 | 2.39 | 24 | 12400 |  |
| 1961 | Sept 25.27 |  | Snooks Arm | 50 | 56 | 3.6 ? | 36 | 23300 |  |
| 1961 | Oct 3-5 |  | Port Aux Basques | 48 | 59 | 3.53 | 42 | 51900 |  |
| 1962 | Feb 9-13 |  | Westbrook | 47 | 55 | 6.12 | 90 | 18200 |  |
| 1962 | Mar 1-4 |  | Gander A | 49 | 55 | 4.92 | 78 | $15200$ |  |
| 1962 | April 1-2 | NFLD-4-62 | Burgeo | 48 | 58 | 3.66 | 42 | 18600 |  |
| 1962 | Oct 21-22 | NFLD-10-62 | Pierres Brook | 47 | 53 | 3.66 | 30 | 15900 | Hurricane Ella |
| 1962 | Nov 11-13 |  | St. Anthony |  | 56 | 3.72 |  |  |  |
| $1962$ | Nov 15-17 |  | St. John's | 48 | 53 | 3.74 |  |  |  |
| $1962$ | Nov 19-20 |  | Colinet | 47 | 54 | 3.21 | $36$ | $23600$ |  |
| 1962 | Dec 9-11 |  | Ingonish Beach | 47 | 60 | 5.51 | 36 | 90900 |  |
| 1962 | Dec 12-15 |  | Gander A | 49 | 55 | 2.81 |  |  |  |
| 1962-63 | Dec 31-Jan 4 |  | St. John's West | 48 | 53 | 3.92 | 96 | 51600 |  |
| 1963 | Jan 8-9 |  | St. John's | 48 | 53 | 3.00 |  |  |  |
| 1963 | Jan. 13-14 |  | Burgeo | 48 | 58 | 2.83 | 42 | 34700 |  |
| 1963 | Jan $27-28$ |  | Tors Cove | 47 | 53 | 2.14 |  |  |  |
| 1963 | Feb 19-21 |  | Cape Broyle | 47 | 53 | 2.13 |  |  |  |
| 1963 | April 9-12 |  | St. John's West | 48 | 53 | 3.21 | 72 | 63900 |  |
| 1963 | May 15-17 |  | Grand Bank | 47 | 56 | 3.15 | 54 | 21900 |  |
| 1963 | Sept 9-11 |  | Terra Nova | 48 | 54 | 3.93 | 48 | 25700 |  |
| 1963 | Sept 28-Oct 01 |  | Burgeo | 48 | 58 | 3.53 | 72 | 33600 |  |
| 1963 | Nov. 3-4 |  | St. Andrews | 48 | 59 | 2.27 | 36 | 27400 |  |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | CODE | STATION |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1967 | May 27-30 |  | St. John's | 48 | 53 | 3.81 | 72 | 11200 |  |
| 1967 | Nov 12-14 |  | Bay D'espoir | 48 | 56 | 3.47 | 36 | 13800 |  |
| 1967 | Dec 5-6 | NFLD-12-67 | St. Albans | 48 | 56 | 4.71 | 36 | 24100 |  |
| 1968 | Jan 25-27 | NFLD-1-68 | Bay D'espoir | 48 | 56 | 3.93 | 48 | 14900 |  |
| 1969 | Sept 24-26 | NFLD-9-69 | New Chelsea | 48 | 53 | 5.17 | 42 | 22400 |  |

## LABRADOR

LOCATION WHERE HEAVIEST RAINFALL OCCURRED

|  | DATE | CODE | STATION | LAT | LONG | DEPTH <br> (Inches) | DURATION (Hours) | TOTAL AREA <br> (2" Isohyet) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1949 | May 28-29 |  | Belle Isle | 52 | 55 | 3.27 | 18 | 25000 |  |
| 1949 | July 14-18 |  | Hebron | 58 | 63 | 5.27 | 96 | 90900 |  |
| 1950 | June 16-18 |  | Ashuanipi | 53 | 66 | 3.25 | 48 | 79800 | See Que-6-50 |
| 1950 | July 18-20 | LAB-7-50 | Ashuanipi | 53 | 66 | 3.96 | 48 | 197400 |  |
| 1952 | Aug. 24-25 |  | Hopedale | 55 | 60 | 3.80 | 24 | 38300 |  |
| 1953 | Aug. 15-17 | LAB-8-53 | Goose Bay A | 53 | 60 | 5.70 | 48 | 178400 |  |
| 1953 | Sept. 8-9 |  | Hebron | 58 | 63 | 4.18 | 24 | 49100 |  |
| 1958 | Aug. 8-11 | LAB-8-58 | Menihek Rapids | 54 | 67 | 3.20 | 72 | 212600 |  |
| 1960 | Sept. 1-4 | L.AB-9-60 | Cape Harrison | 55 | 58 | 7.49 | 72 | 56100 |  |
| 1961 | June 25-26 |  | Hopedale | 55 | 60 | 3.65 | 18 | 52700 |  |
| 1963 | June 29-30 |  | Goose Bay A | 53 | 60 | 2.97 | 30 | 69200 |  |
| 1964 | May 24-26 | LAB-5-64 | Wabush Lake A | 53 | 67 | 3.41 | 42 | 185400 |  |
| 1964 | Aug. 20-21 | LAB-8-64 | Cartwright | 54 | 57 | 3.37 | 48 | 116300 |  |
| 1966 | Oct. 2-3 |  | Cartwright | 54 | 57 | 2.82 | 42 | 115100 |  |

