

Event Descriptions.

June 1976

This was a month of heavy rains, with over 8 inches along the high ground from Greenwood Lake northward and from Hibbing to just southwest of Ely. A drier region, ^{5 to 6 inches,} excluded from cotton to Babbitt and along the shore of Lake Superior. The heavy rains were associated with frequent frontal passages from 8 June to 17 June and lingering frontal systems from 25 June to 29 June.

1. Major T, ^{June 7-8,} Afternoon, ^{nighttime} ~~showers~~ ^{showers} on 7-8 June in vicinity of Pacific coal plant passing over ~~on early morning~~ after sunrise on 8 June. Heavier ^{system} totals included Babbitt 1.71, Virginia 1.68, Isabella Rager Station 1.38, Winton 1.26. Only .09 at Grand Marais.
2. Intermediate T, ^{9-10 June,} Afternoon, ^{nighttime} ~~showers~~ ^{showers} 9-10 June attending front passing on evening of 9 June. Heavier totals Winton .80, Hibbing .61, Hoyt Lake .60. Least .13 at Isabella Rager Station.
3. Minor T, ^{10 June,} Some light showers ~~on afternoon~~ late on 10 June reported at Isabella Rager Station .14, Ely USFSC .13, Babbitt .03, Crane Lake .02.
4. Major T, ^{12 June} Thunderstorm activity ahead of warm front on afternoon of 12 June ^{night of} ~~showers~~ 12th June. Heavier ~~system~~ ^{system} totals Isabella Rager Station 1.37, Crane Lake 1.26, Eagle Nest 1.23, Meadowslands 1.20, Hoyt Lake 1.16, Grand Marais 1.10. Least .52 at Virginia.

5. Major T, ^{14-15 June.} Nocturnal thunderstorms night of 14-15 June in northwestern flow. Totals added to by rains, drizzle associated with nearby occlusion on 15 June. Heavy totals
 Meadowslands 2.13, Isabella Ranger Station 2.07, Grand Marais 2.04, Bobbitt 1.54, Cotton 1.33, Winton 1.16, Brimmon 1.01.
 Least .11 at Eagles Nest, only .58 at Hoyt Lakes.

6. Major T, ^{17 June.} Storms broke out in scattered flow on well hours of 17 June, with occasional thunderstorms all day and into the evening of 17 June, continuing to a bit after midnight. Heavy totals ^{Brimmon 2.04, Hibbing City 1.88,} Isabella Ranger Station 1.61, Crane Lake 1.45, Ely USFSC 1.42, Winton 1.38, Eagles Nest 1.36
 Least .56 at Cotton, Finland.

7. Minor S, ^{18 June} A few light showers, ^{with clouds shifts} in afternoon of 18 June. No totals
 near .04.

8. Minor S, ^{19 June.} A few light showers in afternoon of 19 June. Most .20 at Strong River, none most places.

9. Major R, ^{24-25 June} Occlusion passage, ^{followed by cold front passage} heaviest heavy, steady rain from late on 24 June to late afternoon of 25 June. Storm totals
 Whiteface 2.21, Hoyt Lakes 2.09, Virginia 1.90, Crane Lake 1.76, Meadowslands 1.60, Brimmon 1.57, Cotton 1.52, Ely USFSC 1.42, Eagles Nest 1.30, Winton 1.22, Strong River 1.10, Isabella Ranger Station 1.04.
 Least Bobbitt .59.

10. Mira T, ^{26 June.} Nocturnal theodolite on 26 June ^{as evident returned.} Hermit amount
Meadowlands .62, Virginia .45, Crane Lake .42. ~~Least .30~~
~~at Brown's tract~~ None at Isabella Ranger Station, only a
trace at Grand Marais.

11. Mira T, ^{27-28 June} Nocturnal theodolite on 27-28 June. Hermit totals
Crane Lake .35, Wata .34, Elk WFS .28, Eagle Nest .24.
None at Meadowlands, Brimmar, only a trace at Babbitt.

12. Mira S, ^{28 June} A few chivers ~~with~~ after nocturnal storm of 27-28
kept small amounts .10 or less.

13. Major T, ^{29 June.} ~~Afternoon~~ theodolite on 29 June. Hermit totals
Virginia 1.23, Meadowlands .66 ^{Cotton .49,}
^{Whiteface} .41, Isabella ~~WFS~~
Ranger Station .39. Least .06 at Fentland.

June 1947

Maximum totals were generally along the high ~~sp~~ ridge, with minimum along Lake Superior. Heaviest totals were in the area just southeast of Birch Lake at the Kewishin River. Also considerable dry ~~area~~ southwest of Hoyt Lakes.

Precipitation

Area Grants:

1. Minn. S, 3-4 June.

Stowers, 3-4 June ahead, behind
 Meadows, 47, Pacific worn front. Radar indicates cell and system both moved from west.
 Beaver Hills, 45, Water Hen .31, Great Bend Lake, Chisel
 Island Lake .28, Hibbing Airport, 27, Whiteface .25. Lesser amounts, Snowbank
 Lake trace, North Shogwa trace, Olsen Bay .02. Embarrass .03, Eagle Nest .03,
 Tower .03, Good Marsh .03.

2. Intermediate T, 5-6 June.

Thunderstorms with continental cold front passage on afternoon of 5 June, lasting to a bit past midnight. Heavier storm totals were
 Lake .90, Gunflint Lake .85, Kewishin .80, Stoney River .70, Snowbank Lake .59, North Shogwa .57, Olsen Bay .52.
 Lighter amounts Fantomb, .02, Meadows .02, Cotton .08.

3. Intermediate T/R, 7-8 June.

Thunderstorms on 7 June, north of low center brought appreciable rain to ~~the~~ most of Region. Heavier storm totals in bedded thunderstorms, cells detected after northward movement from
 north to south. Heavier totals Brimson .92, Olsen Bay .5, Elk VIFC .50. Lighter amounts, .02 Isabella RS .02, Lake

4. ~~Major~~ Mira S, ^{10 June} Slight showers ^{on 10 June} from overcast skies, in southeasterly flow. Heavier totals Brimson .41, Meadowlands and Island Lake .17. None or a trace at some stations.

5. Mira R/S, ^{13-14 June} Cold low brought light showers on 13-14 June. Heavier amounts Gurflint Lake .32, Water Hen .17, Crane Lake .12, Grand Marais .09, Fairbanks .08, Eagle Nest .08.

6. Major T, ^{15-16 June} Nocturnal thunderstorms ^{June 15-16} ahead of Pacific front brought appreciable amounts of rains over most of region. Cells on radar moved from west to east. Heavier amounts Crane Lake 1.73, Winter 1.44, ^{Hobbs Airport 1.26,} Snowbush Lake 1.13, lighter amounts Water Hen .04, Cotton .09.

7. Major ^{T/S, 18-20 June} Showers, ~~also~~ thunderstorms ahead of advancing warm front ~~June~~ 18-20 June. Heavier totals Brimson 2.57, Olsen Bay 1.89, Crane Lake 1.80, Isabella ELC 1.77, Babbitt 1.62, Isabella RS 1.59, Eagle Nest 1.58, ^{Water Hen 1.53} Water Hen 1.50, Sturgis River 1.35, Snowbush Lake 1.20, Tower 1.16, Gurflint Lake .99. Lesser amounts Grand Marais .26, Island Lake .38, Winter .37, Meadowlands .40.

June 1911, Canada.

8. Majer T/R, 22-23 June.
Thunderstorms, and general rains and warm front
on night of 22-23 June. Radar cells moving from
Fairbanks 1.54, Strong River 1.33, Whiteface 1.14,
Hibbing Airport 1.13, Cotton 1.10, Hay Lake 1.09. Lesser
amounts, Isabella ELC .24, Crane Lake .28, Gurlikt Lake .28, Log Cabin .32.

9. Minor S, 24 June.
A few cells, seen on radar moving from northwest,
and down on 24 June. Most stations recorded nothing,
and only .02 at Fairbanks and Island Lake.

10. Minor T, 26 June.
Some nocturnal Thunderstorms on the hours of
26 June. Cells on radar seen moving from west-northwest,
detected over in far north of Region. But few heavy
amounts. Heavier ~~amounts~~ Snobark Lake .44, Embarras .15, Crane Lake .09.

11. Majer T, 27-28 June.
A few Thunderstorms 27 June,
Nocturnal Thunderstorms 27-28 June. Cells, according
to radar, moved from WSW. Many detected on radar, some
into Ontario. Heavier amounts, Isabella ELC 1.69,
only .02 at Grand Marais, .16 at Snobark Lake and Virginia.
Skibo 1.42, Island Lake 1.00.

12. Intermediate T, 29-30 June.
Nocturnal Thunderstorms on night of 29-30 June.
Heavier amounts Strong River 1.15, Island Lake .72,
Fairbanks .69, Kawishiwi .60, only .09 at Water Hen,
~~at~~ Grand Marais .14, Gurlikt Lake .15.

June 1911 / Corv.

13. Intermediate T, 30 June.
Rain and thunder on 30 June
following passage of cold occlusion. Rodan^{indicated} cells
moved from west-northwest. Heavy totals
Snowdon Lake .84, Isabella ~~to~~ 25.73, Erbanas .65.
Cutter ~~only~~ spotted as .09.

July 1977

Heavy totals ^{South shore} Lake Vermilion, Greenwood Lake areas.
Dry around Snowbank Lake and along Lake Superior shore
north of Beaver Bay. Also, dry trough from Snowbank
Lake, along Kewishivi River through Hayt Lake to Hibbing
Airport.

Procyon G.T.S.

1. Major T, 2-3 Wks
Nocturnal Procyon on ^{night at} 2-3 July at end of Pacific and
front. Radar-detected cells moved from southwest.
Procyon continued in afternoon of 3 July following arrival
of Pacific front around noon 3 July. Heavy totals
Isabella RS 1.22, Barlett 1.06, Embarras 1.00. Ovs .26 at
Embarras
Meadowlands.

2. Major T, 4-5 July.
Daytime Procyon on 4 July into 5 July.
Heavy totals Cone Lake 1.32
Tower 1.37, Eagle Nest 1.14, Kewishivi 1.10.
Ovs .02 at Fairbanks, .20 Island Lake.

3. Minor T, 7 July.
Afternoon and evening showers on 7 July. Heavy
amounts Shiba .14, Whiteface .14, Fairbanks .13. None
or a trace at many places.

4. ~~Intermediate~~ ^{Minor} T/S, 11-13 July. ^{ended of} ~~showers~~ ^{continued}
Scattered shower activity ~~ended of~~ ^{continued}
cold front on 11 July. Cells moved from the SSW. More
showers fell behind front on 11 July ~~into~~ into morning of
12 July, with afternoon Procyon on 13 July. Heavy totals
37 at Isabella RS, Shiba, Grand Marais and Cath. ~~Lesser~~
Isabella RS 1.14, Embarras 1.00, Tower 1.09.

July 1917 con.
 5. Majont, 16 July.
 Intermediate started & cold front on morning ^{and afternoon} 16 July
 Cells as seen on radar moved from west; systems moved
 from west northwest. Cells large on radar, observed
 as far north as Lake Vermilion. Heavier totals
 Brimn 2.08, Skibo 1.73, Water Hen 1.70, Wals 1.60
 Embarras 1.52, Taver 1.43, One's ⁰¹ at Crane Lake,
 .23 at Gunflint Lake, 2800 ft.
 .30 at Winton, .31 at Ely USFS, .34 Babbitt, .35 Stong River.

6. Minn S, 20 July.
 Spirals with cold front passage 20 July.
 Most precipitation .08 at ~~Isabella~~ Isabella RS; .02 at Eagle Nest,
 North Shogwa, Taver.

~~Shogwa~~ ~~on night of~~
~~Shogwa~~ ~~on night of~~
 7. Minn S, 23 July.
 Showers on 23 July. Most .60 at Island Lake, .40 at
 Stong River. None at many stations

8. Minn T, 24 July
 Evening thunderstorms on 24 July after
 cold front passage. Heavier totals Stong River .40,
 Crane Lake .22, Cotton .21, Olson Bay .18. Many stations
 reported no rain.

9. Intermediate T, 27-28 July. Arrived evening
 thunderstorms on Pacific on 27-28 July.
 Heavier totals McKinley .54, Log Cabin .85, Virginia .55, McKinley .54
 Taver .45, Eagle Nest .40. None at some stations.

July 1917

10. Intermediate ^{28 July} ~~2~~ ⁵ Evening showers on 28 July in Pacific
air. Heavier totals Gulfport Lake .58, Finland .44.
None at some stations.

11. Intermediate ^{R/S, 30-31 July} ~~2~~ ⁵ Showers from low overcast, ^{associated with advancing} ^{occlusion} ~~at 20 July~~
Mar showers, following front, the wee hours of 31 July.
Heavier totals Meadows .35, Walls 30, ^{Finland .74,} ^{Water Hen .69,}
Cotton .62, Toner .59. Least .21 at Crane Lake; also
.29 at McKinley, .30 at Kewishum and Hoyt Lakes.

August 1977
no notes to 22 Aug

Very heavy rains ~~from~~ along ~~the~~^{axis} from Vibber's Airport
to Basswood Lake. Dry axis along eastern slope of
high ground ridge. Much of wet excess due to outburst of
enormous, ^{stationary} system of cells passing over wet axis 26 to 28 August.

Precipitation Events

1. Mira S/T, 1-5 August
with ^{very} cold air ^{behind} continental ^{front}. Several small vorticity
maxima brought showers off and on through 3 August,
including thunderstorms on evening of 3 August. Heaviest ^{storm series} totals

Breinson 1.17, McKilly .91, Whitefore .68. During
some period, ^{nearest Snawbank Lake,} only trace at ^{Los Osos and} Babbitt, .02 at Enlaid,
.06 at Ely WJFC and Grod Marais, .10 at Winton and
Kawishiwi.

2. Mira S, 5-8 August
New surge of cold air behind front arriving
at 0300 5 August brought more ^{deep zone} small shower regime from
Mira systems. ~~For~~ Heaviest totals 5-8 August
Garflin Lake .56, Snawbank Lake .48, North Shogwa .37.
Only .07 at Ely WJFC, .08 at McKilly and Meadowlands.

3. Mira S, 10-14 August. A third cold blast of continental air on morning of 10 August, followed by a storm on 12 August, continued a regime of ^{very} light scattered showers to 14 August. Heaviest totals Embarras .17, Taver .15. ~~No~~ No rain reported at ~~some stations~~ Skibo and Log Cabin.

4. Mira TIS, 15-16 August. on 15 August Showers, as wave moved eastward, with the Regime, followed by thunderstorms on ^{afternoon of} 16 August. Heaviest totals Taver .48, Crane Lake .45, Island Lake .42, Skibo .38. Only .06 at McKinley, .09 at Finland.

5. ~~Intermittent~~ Major T, 20 August ^{begin} Nocturnal thunderstorms began 20 August already cold front arriving about noon that date. Heaviest amounts Skibo 2.49, Hopt Lake 1.25, ^{Taver .84, Embarras .73} Finland .91, Water .63, Rabbit .62, ^{Farmville .61} Wills .60. Only .07 at Meadowslands and Crane Lake, ~~at Island Lake~~ .15 at Cotton.

6. ~~Reces~~ Mira T, 22 August. Thunderstorms broke at ~~mid~~ start of day 22 August. Heaviest totals Wren .22, North St. Louis .21. No rain at some stations.

Shogawa

7. Very Major T, 26-28 August.
 scores of thunderstorms in system ^{extending} from Regina to South
 Dakota. New storms ~~seem on road~~ ^{continually} generating from
 26 August to 28 August. Thunderstorm cells moved
 from southwest to northeast while massive system
 remained almost stationary. 100-year ^{hr.} rains at
 many places. Precipitation totals from systems in order
 of totals:

Log Cabin	7.72
Shawbank Lake	5.53
Ely USFS	5.08
Winton	5.01
Tower	4.96
Olsen Bay	4.80
Eagles Nest	4.73
Hart Lakes	4.73
Hibbin Arget	4.62
Dabbitt	4.60
N. Shogwa	4.53
McKinley	4.35
Embarras	4.12

Kau Pkawi	4.10
Grumint Lake	3.84
Grand Marais	2.93
Skibo	2.63
Crane Lake	2.38
Isabella ELC	2.34
Isabella RS	1.76
Mendota	1.59
Whitewater Res.	1.38
Fish Lake	1.39
Cotton	1.13
Brimson	1.06
Fairbanks	1.01
Wales	1.00

8. Major T, 30-31 August.
 extends into 31 August. Heaviest totals 30 August,
 Grand Marais 3.65, Embarras 2.23,
 Isabella RS 2.12, Brimson 1.61. Least 31 August,
 Mendota .59, Grumint Lake .63, Eagle Nest .63, Babbitt .71,
 Embarras .41, Mc Kinley .43, Olsen Bay .44.

September 1917

Very wet regime continued. Two cold occlusions responsible for most of totals. Wet axis along high ground ridge and from western ^{lake} Vermilion to Lac la Croix; minimum axis from Hibbing through Birch Lake to Brule Lake.

Precipitation Guts

1. Intermediate S, ^{15 September.} Shores on ~~afternoon~~ 1 September following cold front passage on afternoon of 31 August. Heavy totals Orono .93, Eagle Nest .67, Tower .53. None at Gurflet Lake, as a trace at Log Cabin.
2. Major T ^{3-4 September} Thunderstorm broke at on evening of 3 September ahead of cold occlusion passing ^{in morning of 4 September.} Heavy totals ^{McIntosh 1.73, Hibbing Annet 1.61, Hoyt Lake 1.58, Skibo 1.45,} Tower 1.50, Virginia 1.30, Embarras 1.22, Wale 1.20, Cotton 1.20, Whiteface 1.07, ~~Hoyt Lake 1.00, Eagle Nest .90~~ Lesser amounts Gurflet Lake .30, ~~Island Lake .70~~ Medawab .74.
3. ~~Intermediate S~~ ^{T 4-7 September.} Shores, one thunderstorm to rear of cold occlusion ^{4-7 September.} Heavy totals over previous Cotton .88, Medawabads .81, Island Lake .80. Lesser totals Whiteface .10, McIntosh .10, Embarras .14.
4. Major T/R ^{9 September.} Shores ahead and which another cold occlusion passing ^{Roder received calls to Ontario border, moving from west of Lake Superior.} only on 9 September. Heavy totals 8-10 September ^{Gurflet Lake 2.45, Ontario 2.66,} Keweenaw 2.00. Lesser amounts ^{Medawabads .19,} Island Lake .20, Wale .30.

SEP 1977 cont

C. Intermediate R, 11-13 September.

11 September to 13 September. Heavier ~~than~~ series totals
 Skibo .61, Hay Lakes .59, Winton .05,
 Virginia .58, Lesser totals Olson Bay .04, Nash Shogwa 10, Forks/Hart .16,
 Ely USFSC .15, Log Cabin .15

G. Major T/S/R, 18-19 September.

Indistinct activity ~~on~~ (18) Intake. Radar indicates cell moving from the west.
~~Heavier totals Grand Marais 1.41, Guntt Lake 1.27, Crane Lake 1.19, Babbitt 1.08, Lesser amounts Skibo .21, Tower .24, McKinley .25, Cotton .27.~~
 Followed by shower and drizzle, in westerly wind, 19 September. ~~Totals~~ Heavier

Very T. Major R, 21-29 September.

Slow-moving, cold straight days of rain to nearly every location in the Region. A real soaker. ~~Heavier~~ Totals:

Wales 4.90
 Bronson 3.99
 Isabella RS 3.88
 Grand Marais 3.70
 Farbanks 3.19
 Skibo 3.05
 Island Lake 2.99
 N. Shogwa 2.98
 Whiteface 2.83

Tower 2.63
 Vermilion College 2.59
 Isabella ELC 2.57
 Ely USFSC 2.56
 Olson Bay 2.54
 Hay Lakes 2.44
 Winton 2.42
 Babbitt 2.24
 Crane Lake 2.20
 Cotton 2.20

Embarrass 2.13
 Virginia 2.05
 Meadowbuds 2.05
 Hibbing City 2.00
 Eagles Nest 1.84
 McKinley 1.77
 Hibbing Airport 1.67
 Log Cabin 1.38
 Guntt Lake 1.24

October 1977

Wet axis along high ground ^{ridge} and from Isabella to Burntside Lake. Dry from Cotton to Birch Lake. ~~Major~~ ^{Bulk} of precipitation from two major storms in first part of month.

Precipitation Events

1. Minor S, 4 October.
Stavers behind cold front crossing on afternoon of 4 October. Heavier totals Taver .31, Island Lake .26, Meadows .26, Whitefore .18, Crane Lake .17. Only .03 at Virginia, .05 at McKinley, .06 at Babbitt.
2. Major R, 7-8 October.
Rain and snow in connection with developing low pressure system to the south. Heavier totals Finland 2.08, Island Lake 1.55, Isabella RS 1.01, Meadows .90. Lesser totals Crane Lake .25, Gunflint Lake .29, Skibo .34, Whitefore .24.
3. Major R, 10-11 October.
Cold low pressure area intensified over Lake Superior, bringing northerly gale and heavy snow to the region, causing much damage and destruction to the forest. Heavier totals Isabella RS 3.09, Isabella ELC 2.67, Ely USFSC 2.41, North Shagwa 2.07, Gunflint Lake 2.05, Olson Bay 1.45. Lesser totals, (Island Lake .41, Babbitt City .6, Meadows .72, Skibo .85.

4. Min S, ^{17-30 October} Rain ^{in place} behind cold front. Heavy totals
 Hibbing Argent .43, ^{meadowlands 30,} Hibbing City .30, A trace or none
 at some stations.

5. Min S, ^{25-27 October} Some light rain ahead of and behind Pacific
 cold front crossing on we have 8 26 October.
 Heavy totals Dabbitt .09, Skibo .07, Cotton .05.
 None or a trace reported most stations.

6. Intermediate F, ^{31 October} Rain ahead of Pacific cold front.
 on 31 October. Heavy totals Grand Marais .82, Ishbel
 .52, Isabella Range Station .51. But only ^{.04 at Virginia,} .12 at Isabella E.C.

November 1977

Wet axis along high ground ridges ~~west of~~ and
from Birch Lake to Buntside Lake. Dry axis from
Cotton through Skiba to Saganaga Lake.

Precipitation Events

28 November

1. Minor R, Drizzle and fog steadily sharp cold front
on 7-8 November. Heavier totals ^{Hart Lake 1.5,} Embarras 1.2, Only
a trace at Hibbing.

2. Major R/S, 9-10 November.

on 9 November

~~to 10 November~~

changed to snow behind the front. Heavier totals

Balchitt 2.98, ^{Olson Bay 1.66} Hart Lake 1.58, ^{Embarras 1.57,} Eagle Nest 1.54,
Only ^{2.20} ~~2.20~~ at Grand Marais, .39 at
^{reported} ~~at~~ Ishell RS.

3. Major R, 15-17 November.

~~precipitation~~

~~Heavy snow, behind cold front~~

Frontal system brought heavy precipitation occurring
ahead and behind it on 15-17 November. Heavier totals

Olson Bay 1.90, Bremsen 1.87, Only .14 at Finland,
.23 at Grand Marais.

Nov 77

4. Major R, 19-20 November.
Wine passage 19

4. ^{Mr.} Wm passage 19-20 Nmenha brought over to
all of Regier. ~~Navid~~ total Firlad 1.65, Isabella 1.55,
Groed Marais 1.48, ~~Burman~~ ^{Isid} 1.24, Hibbs Airport 1.22, ~~Isid~~ ^{Isid} 1.55,
Burman 1.14. Lesser amounts Babbitt .44, Cotton .46.

5. Mison S, ^{22 November} Sprinkling of snow on 22 November as low moved to the south of the Region. Heaviest totals Whiteford .07, Island Lake .06. None or a trace at many stations.

6. Mira R. 27-28 November. A dash of snow 27-28 November as wave moved south of Region. Heavier totals Mendocino .12, Bremen .10, Tiver .07. ~~Some~~ None or a trace at some stations.

December 1947

Wet axis along high ground, dry ~~from~~ along axis from Hibbing airport to Sogananaga Lake and along north shore of Lake Superior.

Precipitation Events

1. Minor S, ^{1-3 December} Snow showers, ^{1-3 December} behind continental cold front. Heavier totals Brainerd .13, Tower .08, Hest Lake .06. None or a trace at some stations.
2. Intermediate R, ^{5-10 December} Six straight days of snow over nearly all of Region as general low cloudiness prevailed. Heavier totals Isabella R5 1.45, Furtad 1.13. Lesser amounts Island Lake ^{Hibbing City} .32, ^{Medawlad} .25.
3. Minor R, ^{11-15 December} Low pressure to the south, ^{11-15 December} ~~was~~ ^{was} light freezing drizzle, snow to region. Heavier totals Gunflint Lake .51, Embarras .38, Hest Lake .22. Only a trace at Meadowlands, .01 at Cotton and Island Lake, .02 at Whiteface.

4. Major R, 16-21 December.
 Approach ^{nd passage} of Pacific cold front brought rain,
 freezing precipitation and snow ~~down~~ 16 to 21 December.
 Heavier totals
 Lesser totals ^{Babbitt .27} Island Lake 1.53 ^{Fernald 1.44}
^{Eagle Nest .40} ^{Hwy + Lakes .47} Embarras .53 ^{Brissau 1.28}

- 23-25 December.
 5. Minor S, Dash of snow 23-25 Decera from occasional
 cloudiness in northwesterly flow. Heaviest totals
 .01 at Embarras, Eagle Nest, Island Lake. None
 reported a trace elsewhere.

- 27-28 December.
 6. Minor S, small, ^{frontless} disturbances brought small amounts
 of snow ~~down~~ 27-28 December .06 at Eagle
 Nest and Meadwinds, .05 at Babbitt, .04 at
 Tower. None ^{reported} a trace at several stations.

May 1971

Three heavy rainstorms conspired to bring especially heavy totals to the ~~area around~~ area ~~around~~ between Burntside and Birch Lakes. Precipitation was only about one third as much along the Lake Superior shore.

1. Minor S, ^{1 May} Light showers ~~for~~ with frosty passage during wee hours of 1 May. Maximum precipitation around .06, none or ~~to~~ a trace at many stations.

2. Intermediate R/S ^{4-5 May} Showers in northeastern flow 5 May. Heavier totals Dabbitt .75, Grand Marais .67, Minninox .65, Kawishwi .60, Wales .60. Lighter amounts Island Lake .22, Cotton .26.

3. Intermediate S, ^{10-11 May} Showers in warm air ^{on 10 May}. Heavier amounts

Dabbitt .39, Minninox .35, Ely WFSO .34.

But only a trace at Hibbing Airport, .05 at Hibbing Airport ~~and~~

Gurflink Lake.

4. Minor S, ^{13 May} Convective showers detected on radar overing 7

~~R. Major. Heavy Thunderstorms~~

10 May moving from near Norshor Junction to near Split Rock Point. Did not pass over any rain gauge stations.

5. Major T, ^{15 May} ^{nocturnal} Heavy thunderstorms, ^{well hours} afternoon of May 15. According to radar, ~~cells~~ precipitation cells moved from south-southwest while systems moved from west in well hours and afternoon alike. Heavier totals Ely USFSC 1.96, Eagle Nest 1.79, Vermilion College 1.59, ¹/₂ Olean Bay 1.45, Hoyt Lake 1.10, Cotton .96. Lighter amounts, ^{Snowbake Lake trace, Gurlitt Lake trace,} Isabella ELC .03 Hibbs Airport .09.

6. Minor T, ^{17 May} Convective showers afternoon of ¹⁷ May. ~~HE~~ Heavier amounts Wales .70, Kuwishini .60, Wenta .45, Brinson .41. None at Virginia, Gurlitt Lake; only a trace at Hibbs Airport.

7. Minor T, ^{18-19 May} Convective showers afternoon of 19 May. Heavier amounts 28 at Crane Lake, Cotton .12. None at some stations.

~~Major~~ ^{Nocturnal} Convective showers ^{cells moving further southwest} appeared on radar ~~later~~ a few minutes before the end of the day on 18 May, lasting through the night. None as part of organized systems.

8. Major T/R/S, ^{20-24 May} Front ^{passing over on 20 May} ~~become~~ stagnant, ~~after~~ initiating ~~is~~ showers off and on at all times of the day from ~~20~~ 20 May to 24 May.

Heavier totals Embarras 2.18, Tower 1.81,
Hoyt Lake 1.73, ^{Ely WFSC 1.51, Kawdhami 1.50} Meadowlands 1.36, Winton 1.26,
Eagle Nest 1.31. Lighter amounts Gungliet Lake .45,
Isabella RS .49, Grand Marais .72, Wals .80.

9. Minut, 27 May.

Shower in warm air mass 27 May. Heavier
amount Eagle Nest .28, Embarras .23, Tower ad
North Shogwa .15. None at many stations.

10. Minut, 29 May. ^{cell moving from north-south-east}
Shower, detected on radar just after sunrise

29 May near Beaver Bay. In warm air mass.

Moved to east of Brimson, died. Other undetected
cell brought showers elsewhere. Heavier totals Brimson .81,
Meadowlands .41, Hibbing Airport .21, Skibo .08,
Many stations none or a trace.

11. ~~Major~~ ^{30-31 May.} Major R, ~~Storm~~ Wave passage brought
very heavy rains over all of region except Grand Marais.

Heavier totals Tower 2.66, Stong River 2.50,

Isabella RS 2.34, ^{Isabella ELC 2.22,} Crane Lake 2.14, Eagle Nest 2.12,
Embarras 2.08, Hoyt Lake 2.07, Skibo 2.06,

Vermilion College 1.95, North Shogwa 1.92, Ely WFSC 1.88,

Wata Hen 1.85, ^{Virginia 1.75, Cotton 1.75} Olson Bay 1.74, Snowbark Lake 1.70, Kawdhami 1.70.

Lesser amounts Grand Marais .73, Fairbanks .77, Finland .83,

Robbitt .92, Hibbing Airport .93, Wals 1.21, Winton 1.37, Gungliet Lake 1.61,