Growing Degree Days
in New York State

B. E. Dethier and M. T. Vittum

Contents

Growing Degree Days for New York State

B. E. Dethier * and M. T. Vittum †

Growing plants are extremely complicated organisms on which all animal life depends. Through photosynthesis — an intricate biochemical process that is not yet fully understood — plants use the sun's energy to convert carbon dioxide from the air and water from the soil into simple sugars and oxygen. As the plants grow, oxygen is returned to the atmosphere and the sugars are transformed into more complex carbohydrates, proteins, and other compounds. Then animals consume the plants, using the sugars and carbohydrates plus oxygen from the air, in growth and respiration. In this process the raw products are converted into carbon dioxide and water. Without plants, animals would die from lack of oxygen and, without animals, plants would die from a lack of carbon dioxide.

Geographical distribution of economic plants is dependent, among other things, on solar energy. Some species can not grow and complete their life cycles unless sufficient solar energy is available. In other words, the growing season in many areas is often too short for certain species.

To help agriculturists locate potential areas for the production of economic crops, a record of the amount of solar energy received in these areas would be most desirable. Unfortunately, measurements of solar radiation or energy are expensive to obtain, and presently are taken at only 5 locations in New York State (Aurora, Canton, Geneva, Ithaca, and New York City's Central Park). On the other hand, temperature data are available from more than 300 locations in this state. Thus, a system has been designed to estimate solar energy using temperature accumulations called "growing degree days". These growing-day calculations have been carried out for 57 locations in New York State and are based on long-term weather records that go back as far as 40 years. Standard deviations of these estimates have also been calculated.

---
* Associate professor of agricultural climatology, Division of Meteorology, Agronomy Department, New York State College of Agriculture, Cornell University, Ithaca, New York.
† Professor, Department of Vegetable Crops, New York State Agricultural Experiment Station, Cornell University, Geneva, New York.

Growing Degree Days

Growing degree days, sometimes called "heat units", "effective heat units", or "growth units", are an arithmetic accumulation of daily mean temperatures above a certain threshold temperature. They are a simple means of relating plant growth, development, and maturation to environmental air temperature. Different species of plants have different base or threshold temperatures below which they theoretically do not grow. At temperatures above this base, plant growth is approximately proportional to the amount of heat or temperature accumulated. The base temperatures used in this bulletin, 40° and 50°F, correspond closely to the generally accepted values of base temperatures used for several economically important plants:

Spring wheat	37° to 40°F	Sweet corn, snap beans	50°F
Canning peas	40°F	Lima beans, tomatoes	50°F
Oats	43°F	Field corn	55°F
Potatoes	45°F		

The growing degree day value for any day is easily obtained by subtracting the appropriate base or threshold temperature for the specific crop from the mean temperature. Thus, on a day with a maximum of 65° and a minimum of 55°F, the mean temperature would be 60°F. The growing degree days for peas, with a 40°F base or threshold, would be 60 (the mean) minus 40 (the base), or 20. The growing degree days for snap beans or sweet corn would be 60 (the mean) minus 50 (the base), or 10.

The growing degree days, to any base, can be computed each day from daily temperatures, and can be accumulated over the course of the growing season. Negative values are ignored in summation of growing degree days. Thus, zero is the value assigned to any day when the mean temperature is below the base, or threshold, value.

The amount of plant growth is approximately proportional to the amount of heat or temperature accumulated above the base. For each species of plant, and for different varieties within a species, maturity is reached when the requisite number of growing degree days have accumulated. Pea varieties, for example, require a range from about 1200 to 1800 growing degree days. This method of calculating or estimating time of maturity has been widely used by the processing industry, since planting dates of peas and other crops can be scheduled to maintain an orderly supply at harvest time. The heat unit system is helpful in selecting crop varieties appropriate to different farming areas. It is also used in scheduling pesticide application in fruit orchards. Since insects emerge and develop in response to temperature, heat sums can be used to predict epidemic outbreaks of insects.

The list of references on page 22 may be consulted for more detailed information and instructions on the theory and use of growing degree days and on the various refinements that have been suggested for the basic system outlined above. It is a useful system but has 2 main flaws. It over-

simplifies the complex temperature response of plants, and it does not take into account the many other environmental factors that also affect plant growth. It does, however, serve a very practical need, and knowledge of the agricultural climate of an area is incomplete without an estimate of the normal number of growing degree days. This bulletin is accordingly presented as a source of basic information to be used or adapted, according to individual preferences and requirements, by home gardeners, nurserymen, growers, and processors, as well as research, teaching, and extension specialists.

Materials and Methods

Daily weather data, stored on magnetic tape, for 57 New York stations were analyzed to obtain the mean weekly GDD (growing degree day) accumulation and the standard deviation of this mean, for both 40°F and 50°F bases. The data are presented according to weeks of the climatological year, which is outlined in table 1. The climatological year, as defined by ESSA (the Environmental Science Service Administration — formerly the Weather Bureau) of the United States Department of Commerce starts with March 1 and ends with February 27. In this bulletin, data for week 53 (February 28 and 29) are omitted. Data for the 52 complete weeks from March 1 through February 27 are given in the tables. Step-wise multiple regression was used to test the effects of mean annual, mean January, and mean July temperatures, in addition to latitude, elevation, date of last spring freeze, date of first fall freeze, and duration of freeze-free season on growing degree day accumulations, for the first 20, the first 30, and the entire 52 weeks of the climatological year. The majority of the stations had 40 years of data (table 2).

Explanation of Tables and Maps

Station-locator map

Figure 1 shows the geographical distribution of the stations used in this bulletin. The number assigned to each station in the Weather Bureau network is plotted next to the corresponding station circle. The first digit of these station numbers increases from "0" or "1" to "9" according to the alphabetical positions of the initial letter of the station's name. In New York State, for example, Albany is numbered 0047 and Watertown is 9000. Between these, Fredonia is 3033, Morrisville 5512, Setauket 7633, etc.

Cumulative growing degree days

Table 2 presents, for each of the 57 locations, the cumulative growing degree days for both 40° and 50°F bases, for the 10-, 20-, and 30-week accumulations as well as the total for the 52-week year. Almost all the
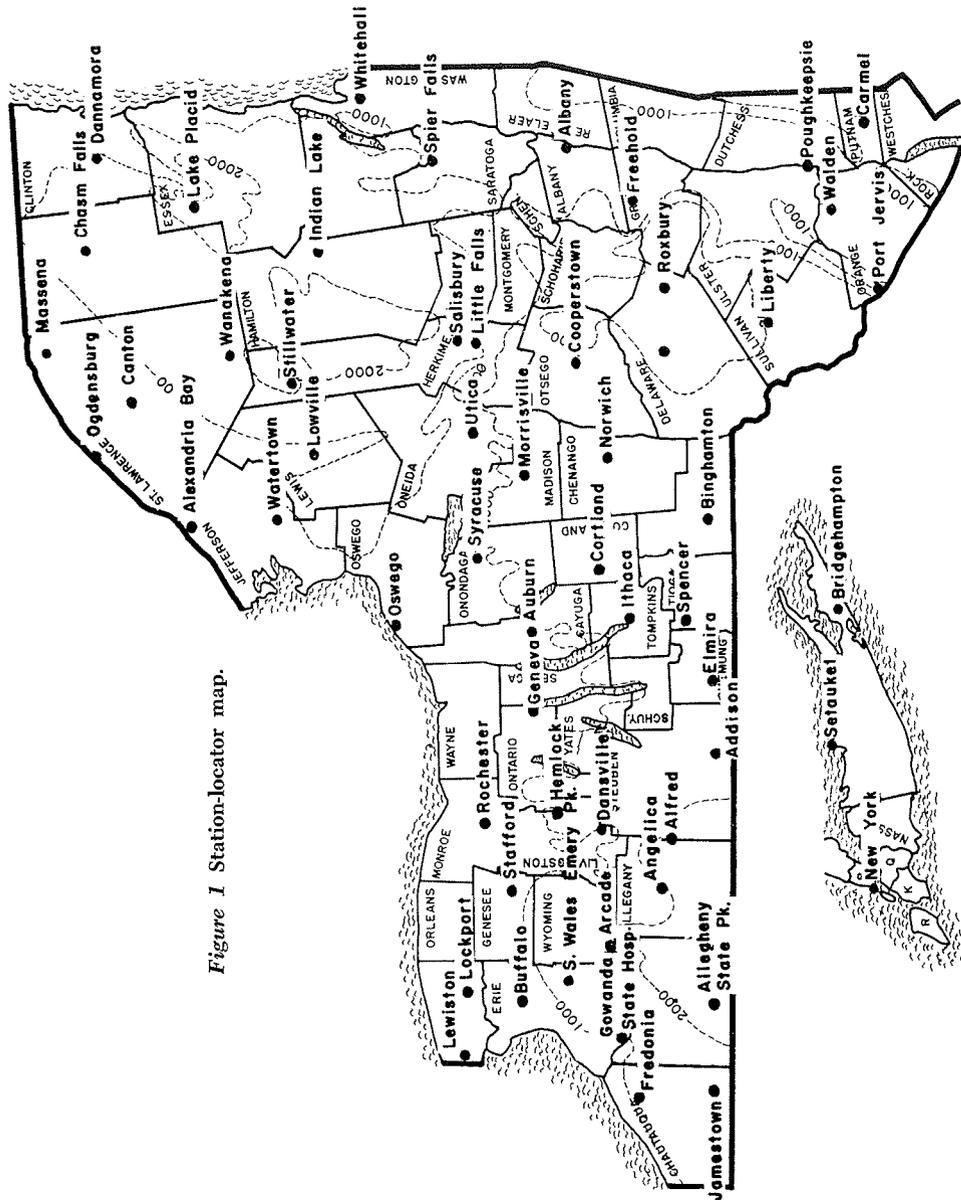
Figure 1 Station-locator map.

locations are stations in the cooperative climatological network of the U.S. Weather Bureau, although some were regular Weather Bureau stations located at commercial airports. In table 2, the locations are identified by name, station number, county, elevation, latitude, and longitude. In some cases, where the station is outside the town for which it is named, the distance and direction in miles from the post office are indicated. For instance, Carmel 1SW means 1 mile southwest of the Carmel Post Office. The number of years that were examined to obtain the information on the growing degree days is also listed for each station.

Figures 2–7 are "contour" maps which outline areas of equal growing degree day accumulations for 20-, 30-, and 52-week periods for both 40° and 50°F. Here the reader can obtain a visual indication of the geographical areas in New York State that have similar growing degree day conditions.

Weekly growing degree days, base 40°F

Table 3 lists the mean weekly accumulation of growing degree days above a base temperature of 40°F for each of the 57 stations. In addition to the weekly total accumulation, the standard deviation ("s") of this mean is given in the adjoining column. The standard deviation indicates the amount of variation that can be expected from one year to another. One can expect that 68 percent of the time, or about 2 years out of 3, the growing degree accumulation for any given week will be the mean given in table 3 plus or minus the standard deviation adjacent to this mean. Thus, for week 20 at Ithaca, a mean growing degree accumulation of 214, plus or minus 23 would be expected. This means that two-thirds of the time, residents of Ithaca could expect growing degree days for this week to be between 191 and 237.

About 95 percent of the time, or 19 years out of 20, the growing degree day accumulation will be the mean plus or minus twice the standard deviation. Thus, residents of Ithaca could expect that only once in 20 years would the growing degree days for week 20 fall outside of the range 168 to 260.

Mean growing degree days and the mean plus or minus 1 standard deviation for Geneva, are plotted in figure 8 to show how one can use the information in table 3. Two-thirds of the time growing degree day accumulation for any specific week at Geneva could be expected to fall within the dotted area.

Weekly growing degree days, base 50°F

Table 4 lists the mean weekly accumulation of growing degree days above a base temperature of 50°F for each of the 57 stations. It is similar to table 3, except the base temperature is 50°F instead of 40°F. A base or threshold temperature of 50° is normally used for warm-season crops such as snap beans, sweet corn, and tomatoes.

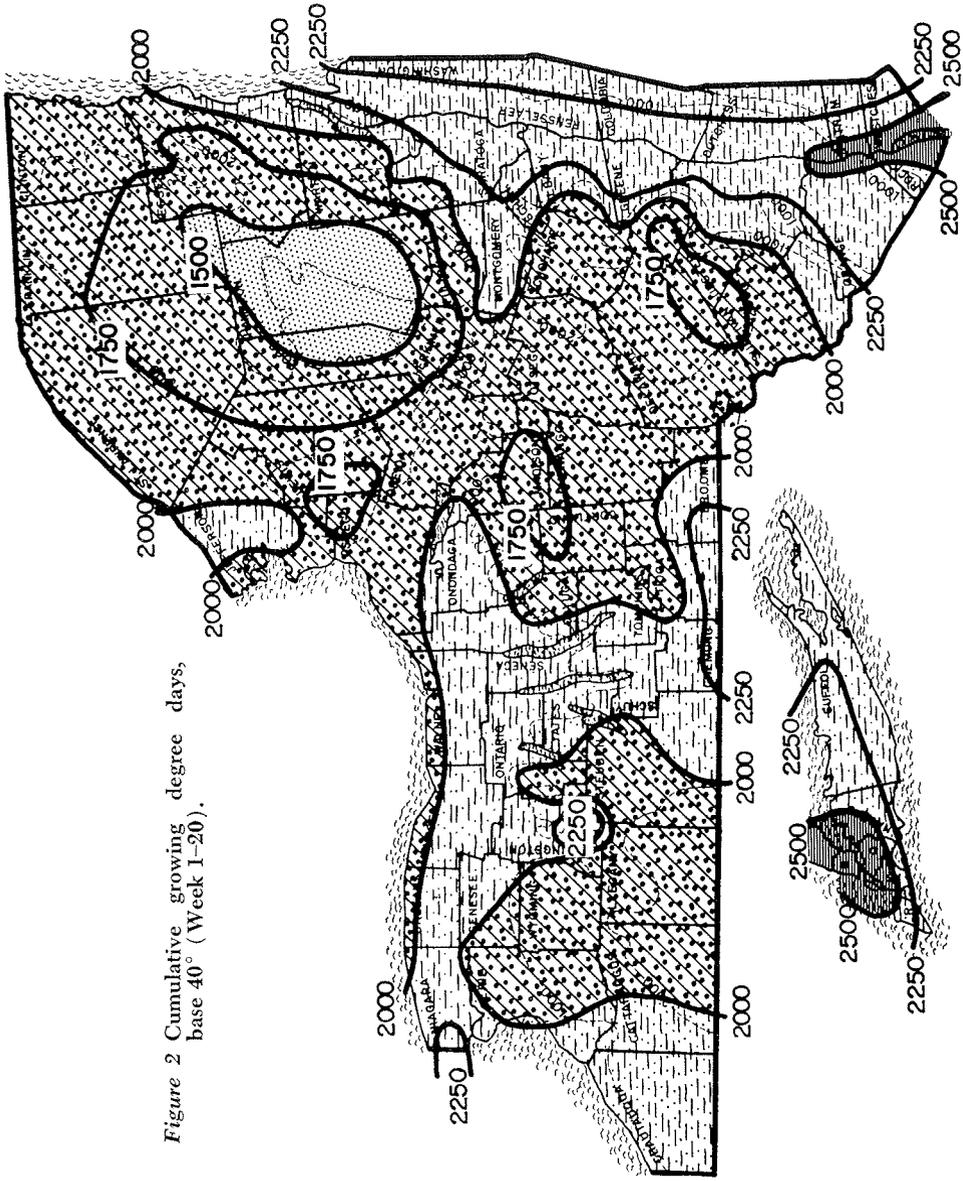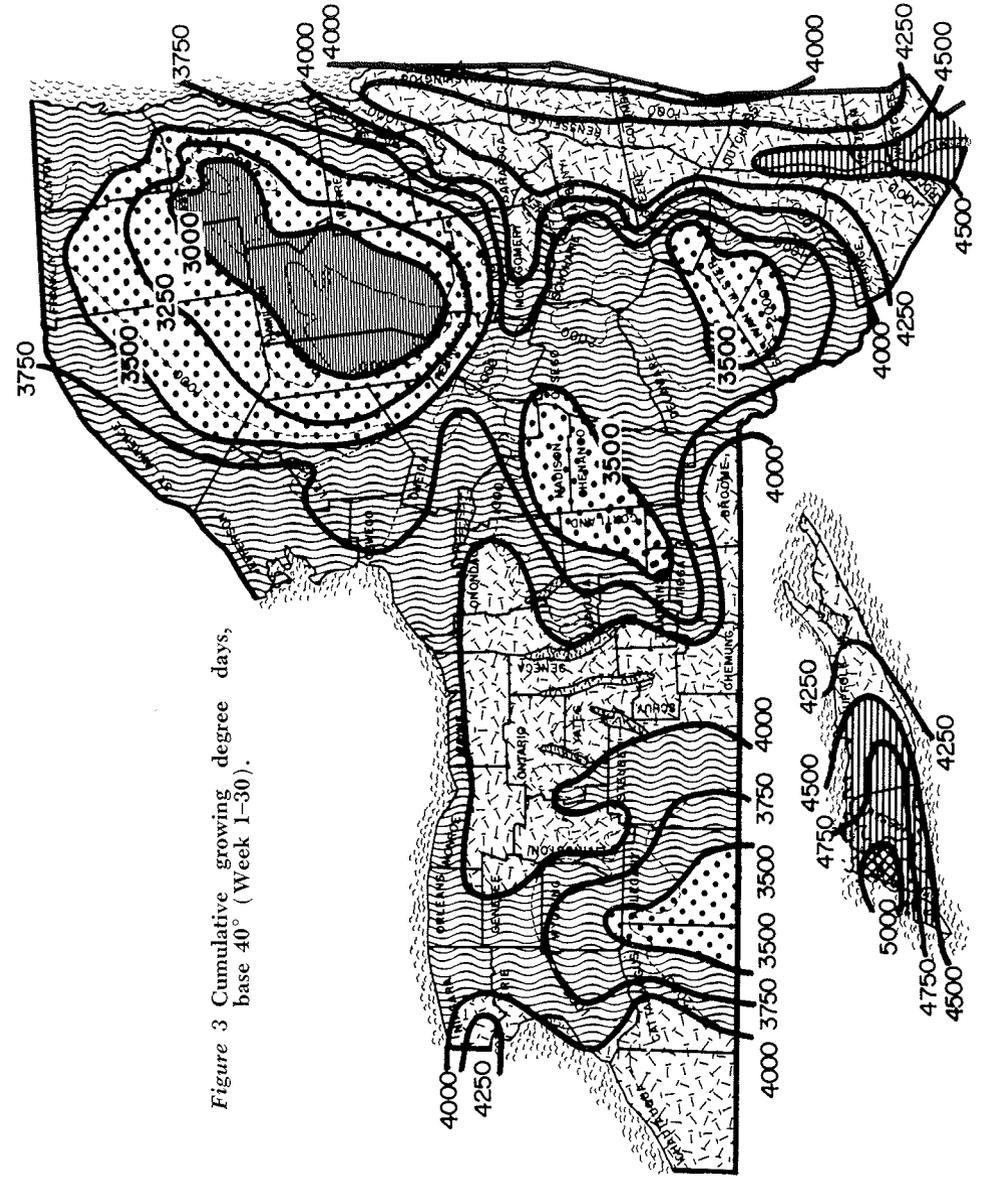*Figure 2* Cumulative growing degree days, base 40° (Week 1–20).

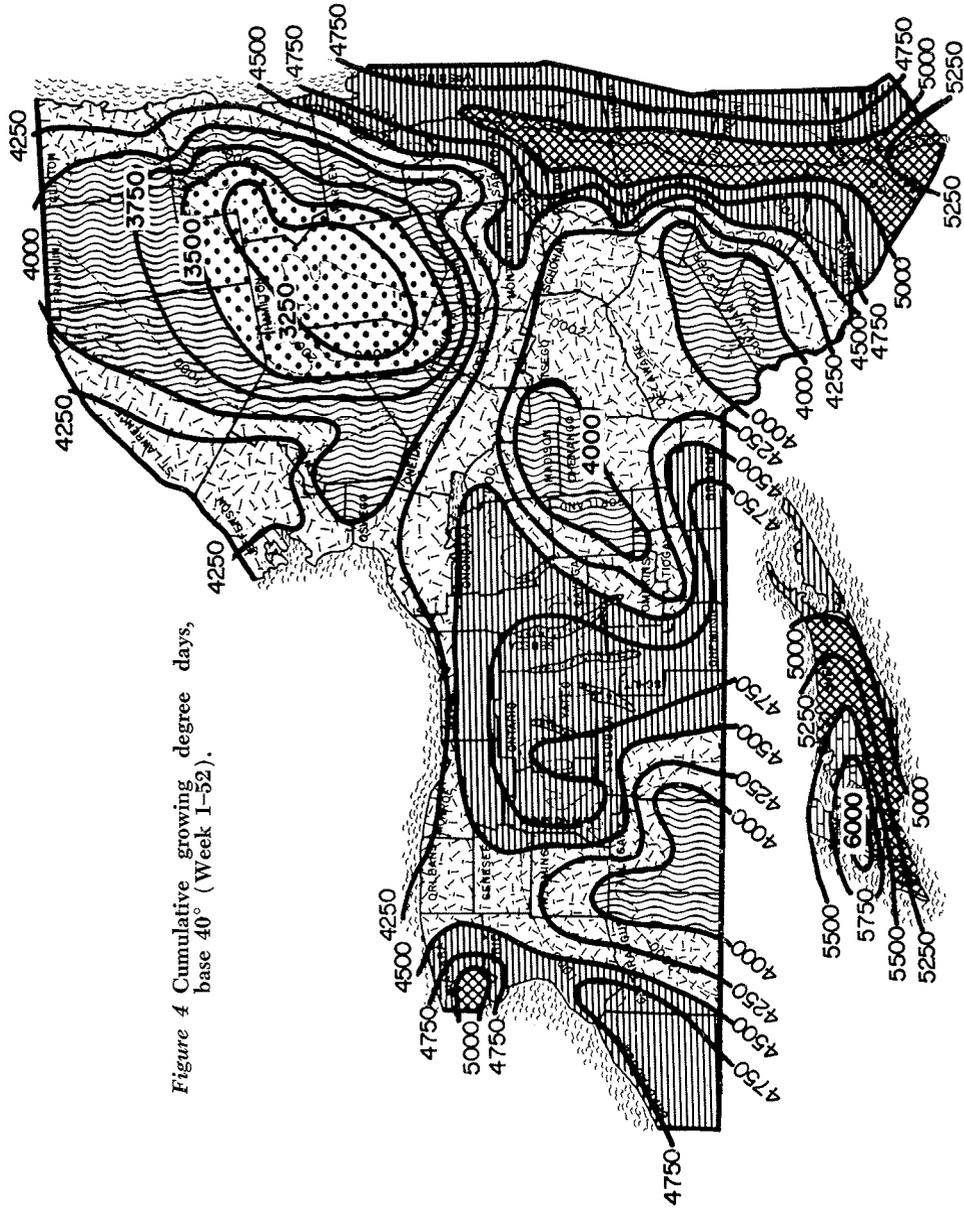*Figure 3* Cumulative growing degree days, base 40° (Week 1–30).

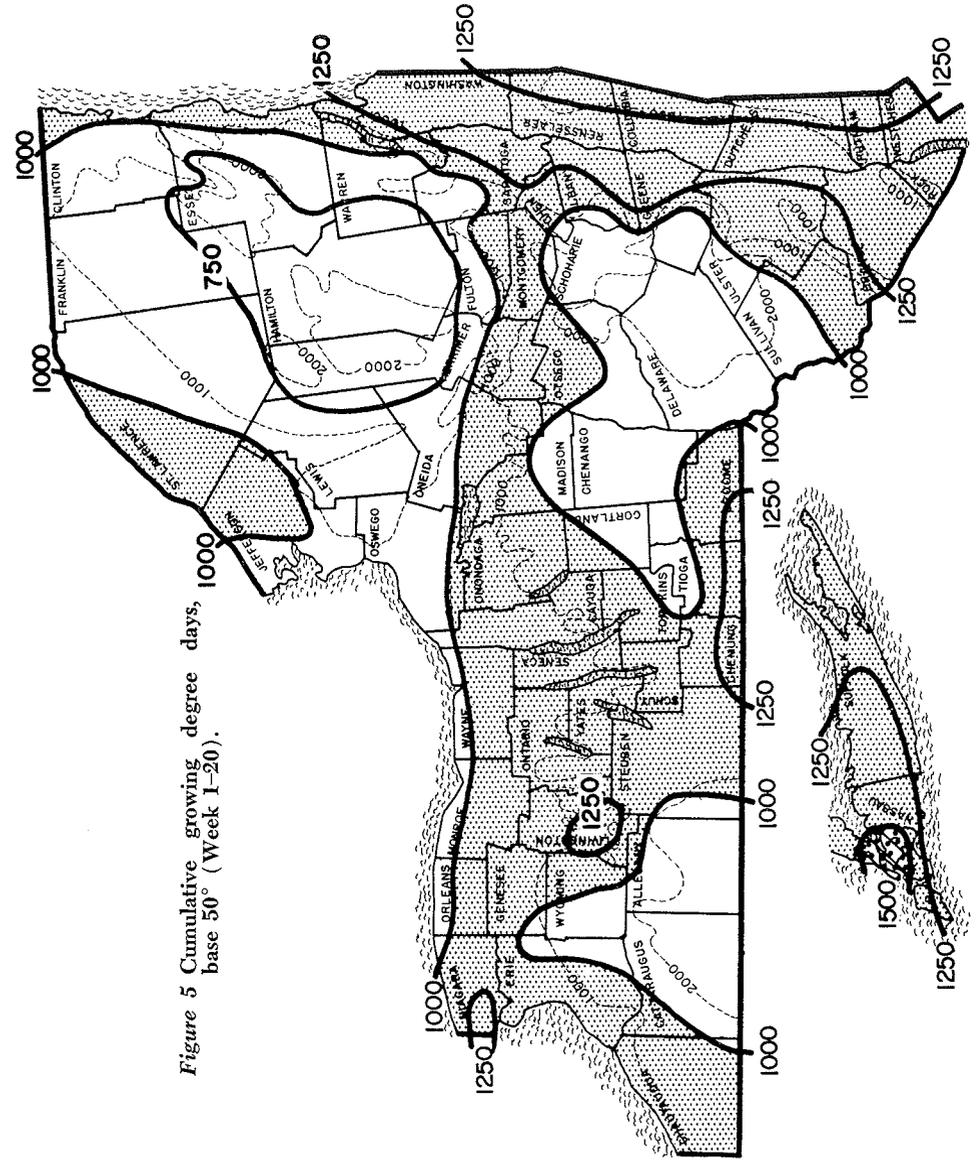*Figure 4* Cumulative growing degree days, base 40° (Week 1–52).

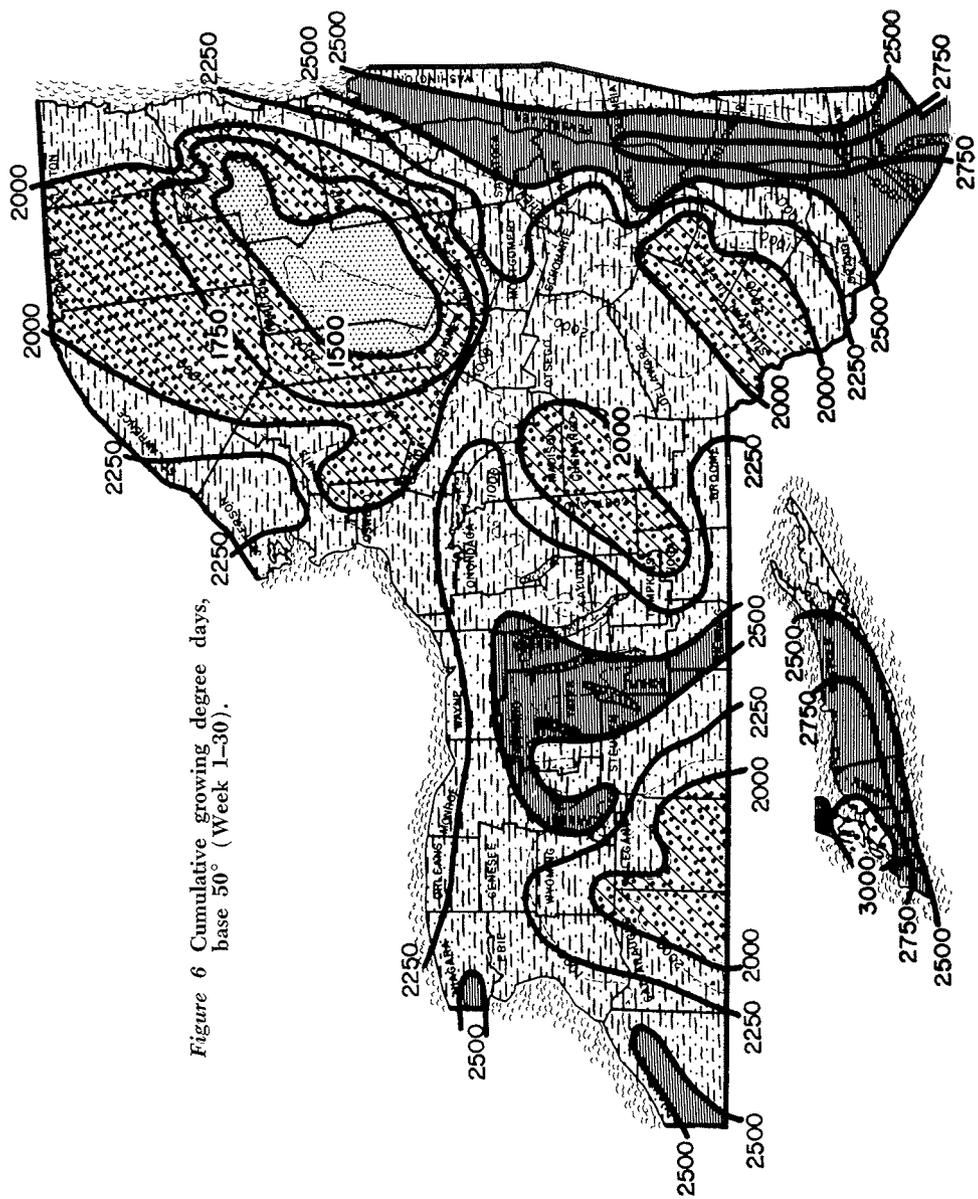*Figure 5* Cumulative growing degree days, base 50° (Week 1–20).

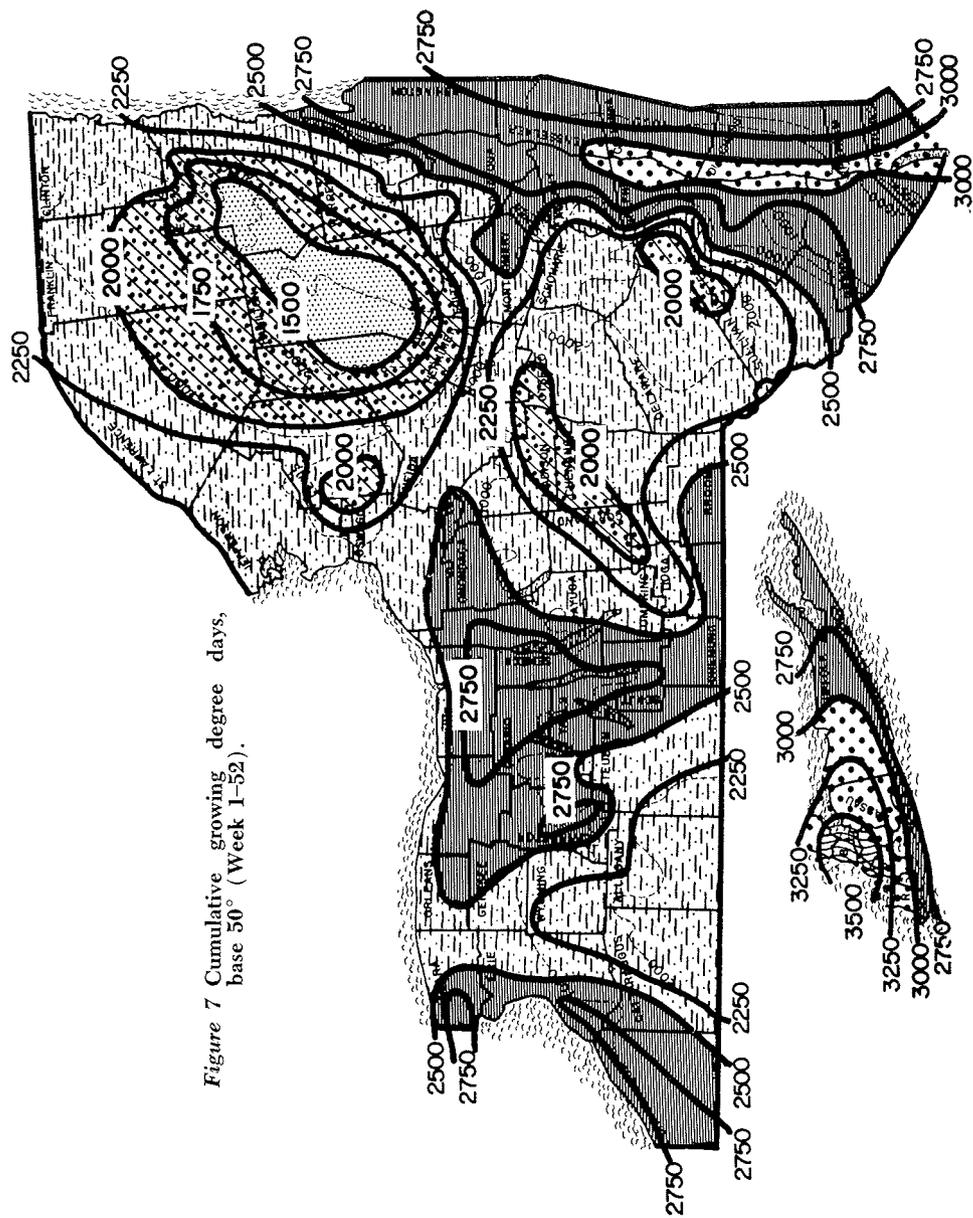*Figure 6* Cumulative growing degree days, base 50° (Week 1–30).

Figure 7 Cumulative growing degree days, base 50° (Week 1–52).

Figure 8 Weekly growing degree days that can be expected in 2 out of 3 years — base 40° (Geneva, New York).

Estimating Growing Degree Days

Growing degree day information for locations other than the 57 stations listed here, for 20-, 30-, or 52-week periods for both 40° and 50°F base temperatures may be roughly estimated from the "contour maps" in figures 2–7, respectively. This procedure involves some error, however, because the maps were constructed from data in table 2, which were applied to the rest of the state with the help of topographic and mean-temperature maps. Thus step-wise multiple regression calculations were performed to obtain a more accurate estimate of growing degree day accumulations (3,25). If mean annual, mean January, and mean July temperature data are available for the location in question, or if these values can be estimated from figures 12–14, a more accurate estimate of growing degree day accumulations can be obtained from using the nomograms presented in figures 9–11.

An even more exact estimate can be obtained by using the following equations from which the nomograms were constructed:

Growing degree days, base 40°F

$$Y_{20} = -4158 \quad +149X_1 \quad -33X_2 \qquad R^2 = 95$$
$$Y_{30} = -6241 \quad +109X_1 \quad +71X_3 \qquad R^2 = 96$$
$$Y_{52} = -8294 \quad +165X_1 \quad +71X_3 \qquad R^2 = 97$$

Growing degree days, base 50°F

$$Y_{20} = -3883 \quad +123X_1 \quad -33X_2 \qquad R^2 = 88$$
$$Y_{30} = -6924 \quad + 69X_1 \quad +84X_3 \qquad R^2 = 97$$
$$Y_{52} = -8089 \quad + 94X_1 \quad +87X_3 \qquad R^2 = 97$$

where

$Y_{20, \, 30,}$ and $_{52}$ = GDD accumulations for the first 20-, 30-, and 52-week periods of the climatological year.

X_1 = Mean annual temperature

X_2 = Mean January temperature

X_3 = Mean July temperature

and,

R^2 = Multiple correlation coefficient.

These equations, if used properly, should give an estimate of growing degree days with an error of less than 5 percent.

Figure 9 Nomogram for determining cumulative growing degree days (Week 1–52). Example: for 40° base, draw a vertical line from the mean annual temperature (56° in this example) to the appropriate mean July temperature (69°) and project horizontally to right margin, obtaining a value of 5900. For 50° base, use same procedure, but read left margin.

Figure 10 Nomogram for determining cumulative growing degree days (Week 1–30).

Figure 11 Nomogram for determining cumulative growing degree days (Week 1-20).

Figure 12 Mean annual temperature, °F.

Figure 13 Mean January temperature, °F.

Figure 14 Mean July temperature, °F.

References

1. Arnold, C. Y.
   1959.   The determination and significance of the base temperature in a linear heat unit system.   Amer. Soc. Hort. Sci.   Proc. 74:430–445.

2. Bomalski, H. H.
   1948.   Growing degree days. How to apply this unit to measure maturity of crops.   Food Packer 29:51–59, 57–61.
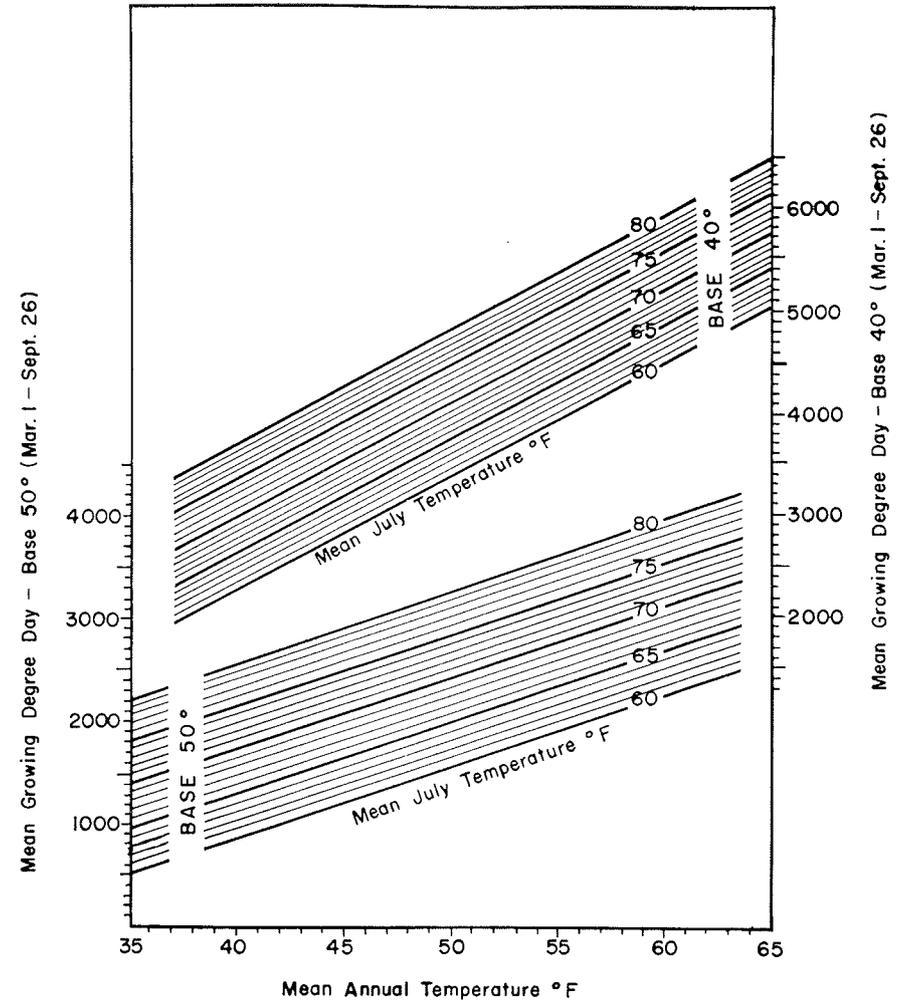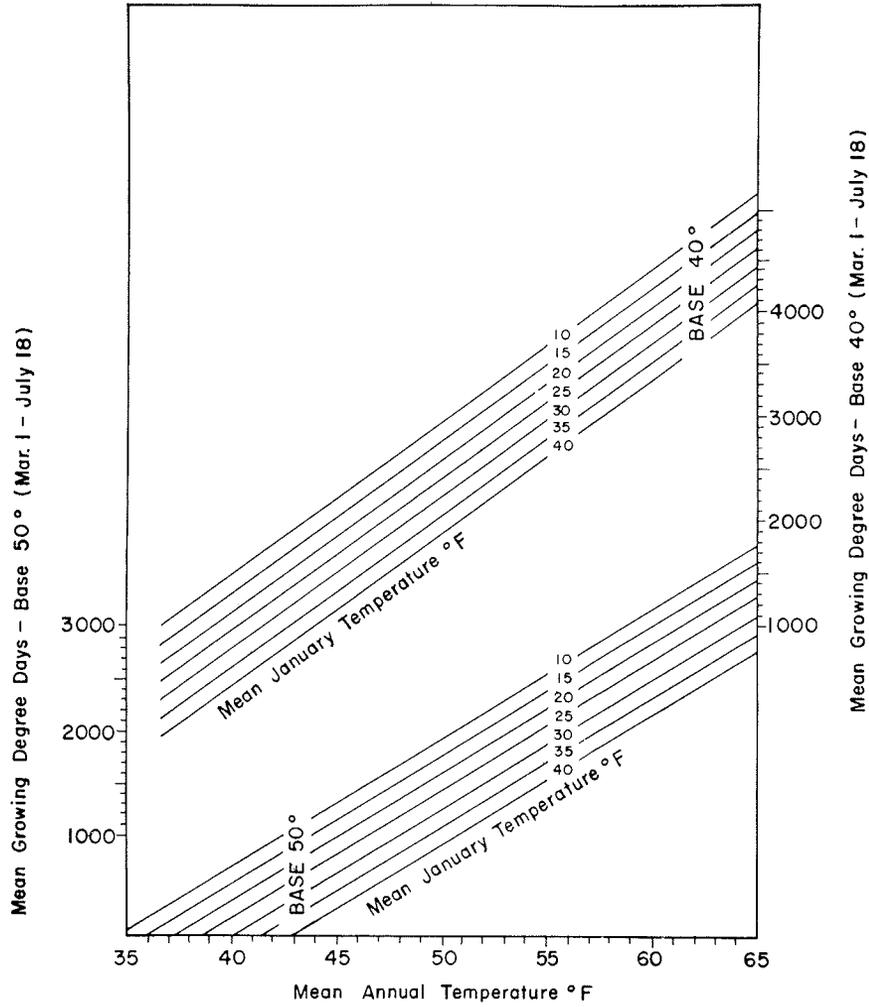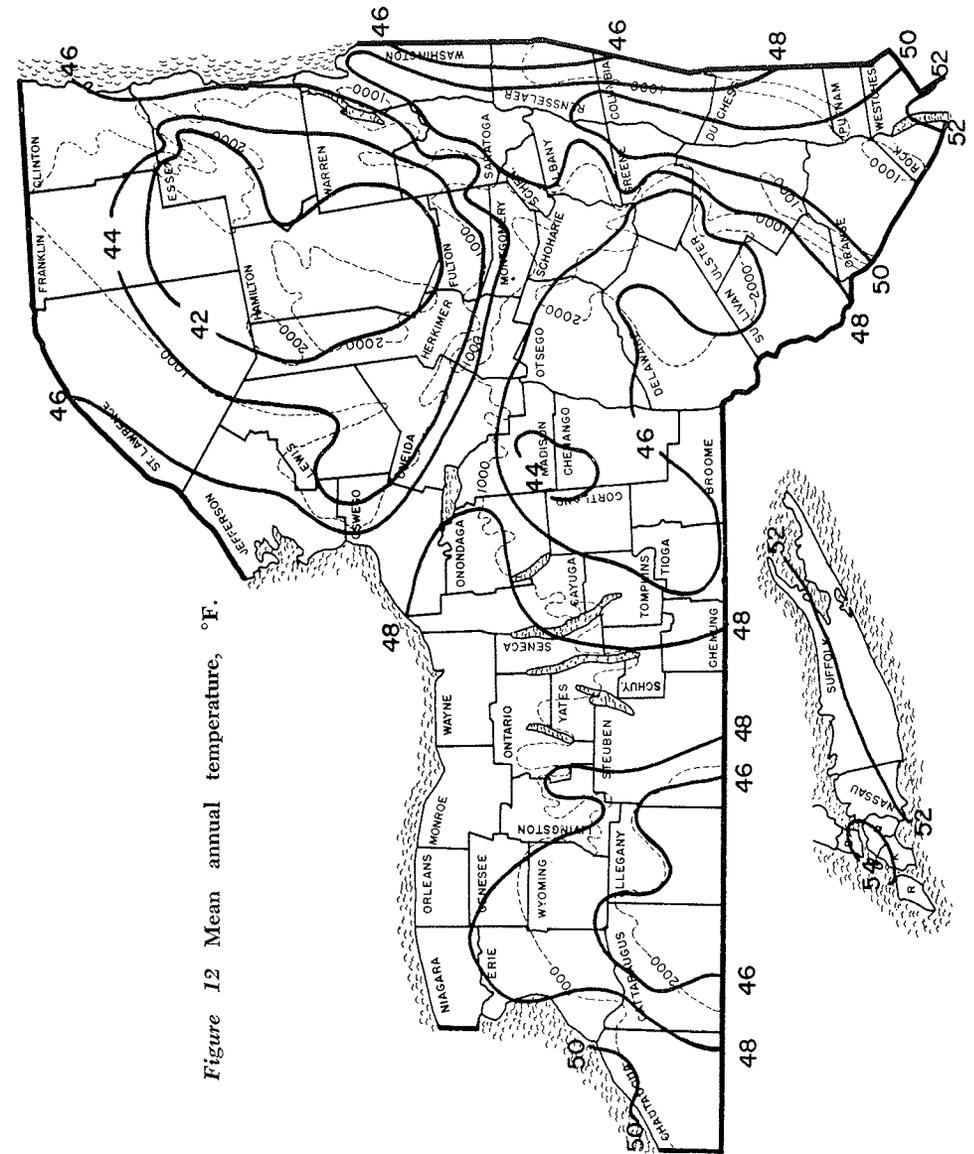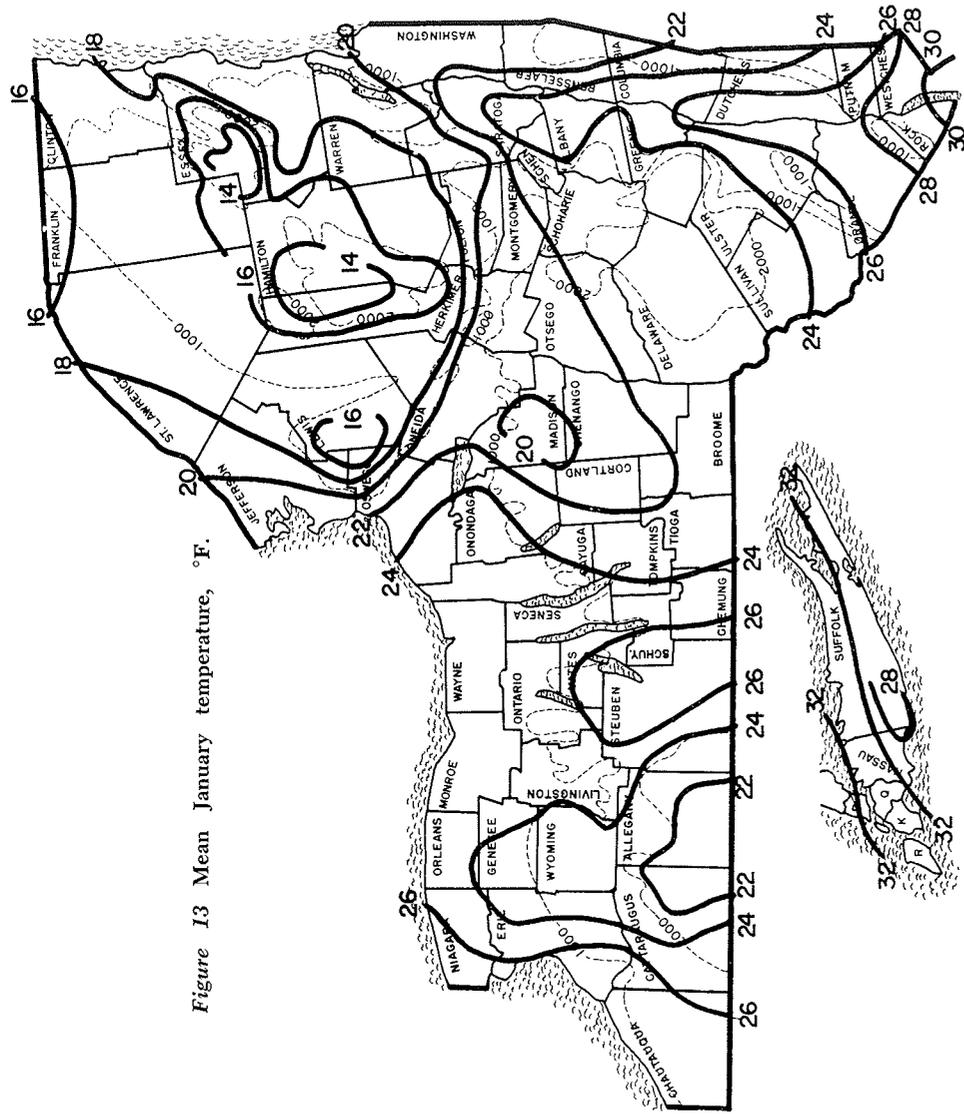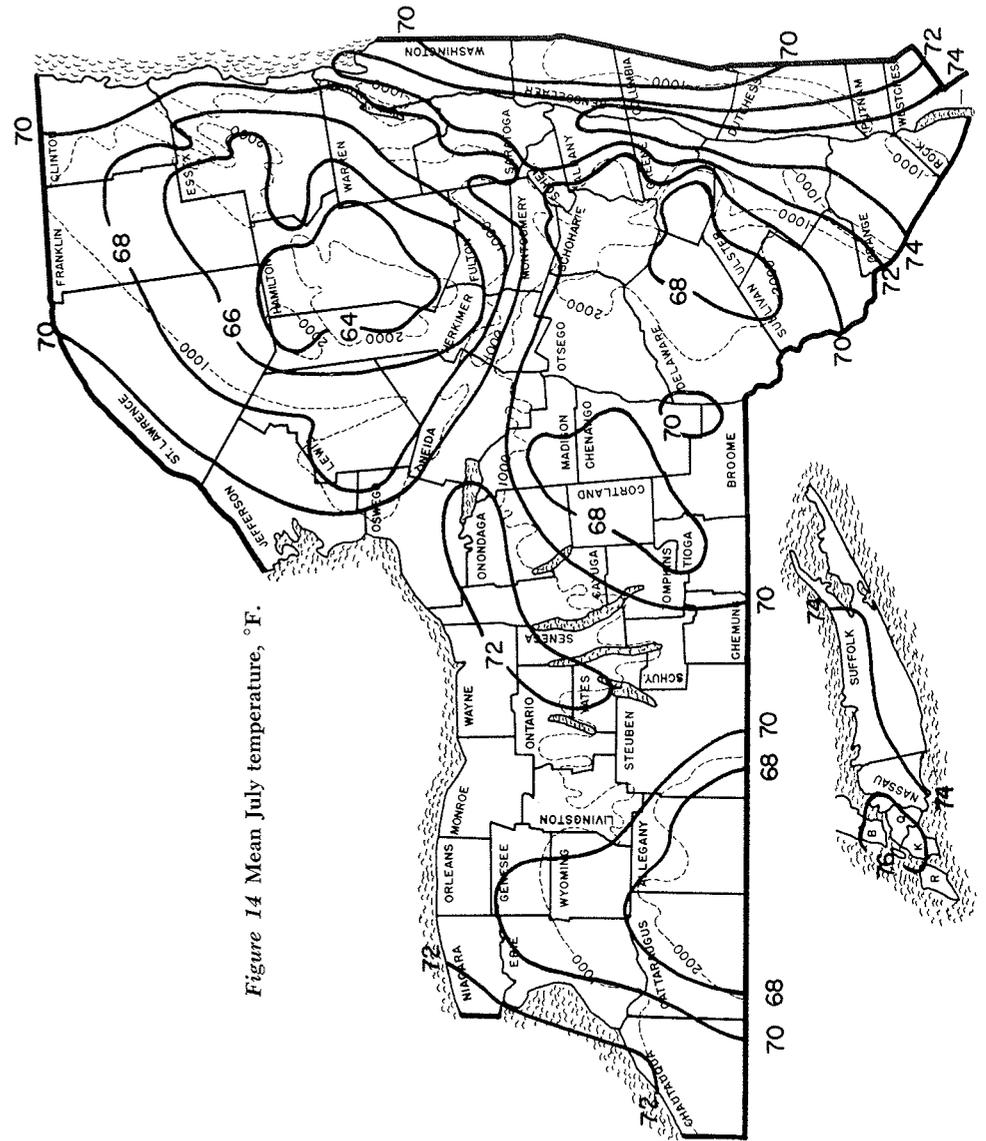
3. Dethier, B. E., and Vittum, M. T.
   1963.   Growing degree days.   N.Y.S. Agr. Exp. Sta.   Bul. 801.

4. Gilmore, E. D., Jr., and Roger, J. S.
   1958.   Heat units for measuring maturity in corn.   Agron. J. 50:611–615.

5. Guyer, R. B., and Kramer, Amihud.
   1952.   Studies of factors affecting the quality of green and wax beans.   Univ. Md.   Bul. A68.

6. Holmes, R. M., and Robertson, G. W.
   1959.   Heat units and crop growth.   Canada Dept. Agr.   Publ. 1042:1–31.   Ottawa, Ontario.

7. Hoover, M. W.
   1955.   Some effects of temperature on the growth of southern peas.   Amer. Soc. Hort. Sci.   Proc. 66:308–314.

8. Jones, W. W.
   1961.   Heat and maturity of oranges.   Cal. Agriculture 15(11):13.

9. Katz, Y. H.
   1952.   The relationship between heat and unit accumulation and the planting and harvesting of canning peas.   Agron. J. 44:74–78.

10. Kitchin, J. T.
    1956.   Occurrence and time of reproductive structure development and their relation to the yield of Rutgers tomatoes.   Rutgers Univ. Ph.D. thesis.

11. Lana, E. P., and Haber, E. S.
    1952.   Seasonal variability as indicated by cumulative degree hours with sweet corn.   Amer. Soc. Hort. Sci.   Proc. 59:389–392.

12. Lehenbauer, P. A.
    1914.   Growth of maize seedlings in relationship to temperature.   Physiol. Res. 1:247–287.

13. Livingstone, B. E.
    1916.   Physiological temperatures indices for the study of plant growth in relation to climatic conditions.   Physiol. Res. 1:399–420.

14. Livingstone, B. E., and Livingstone, G. J.
    1913.   Temperature coefficients in plant geography and climatology.   Bot. Gaz. 56:349–375.

15. Madriaga, F. J., and Knott, J. E.
    1951.   Temperature summations in relation to lettuce growth.   Amer. Soc. Hort. Sci.   Proc. 58:147–152.

16. Magoon, C. A., and Culpepper, C. W.
    1932.   Response of sweet corn to varying temperatures from time of planting to canning maturity.   U.S. Dept. Agr. Tech. Bul. 312.

17. Nuttonson, M. W.
    1948.   Some preliminary observations of phenological data as a tool in the study of photoperiodic and thermal requirements of various plant materials. Vernalization and photoperiodism 129–143.   (A. W. Murneek and R. O. Whyte, eds.)   Chronica Bot. Waltham, Mass.

18. 1955.   Wheat-climate relations and the use of phenology in ascertaining the thermal and photo-thermal requirements of wheat.   Amer. Inst. Crop Ecol.   Wash., D.C.

19. 1956.   A comparative study of lower and upper limits of temperature in measuring the variability of day-degree summations of wheat, barley, and rye.   Amer. Inst. Crop Ecol.   Wash., D.C.

20. Reath, A. N., and Wittwer, S. H.
    1952.   The effects of temperature and photoperiod on the development of pea varieties.   Amer. Soc. Hort. Sci.   Proc. 60:301–310.

21. Sayre, C. B.
    1953.   Forecasting maturity of peas.   Farm Res. 19(4):12.

22. Seaton, H. L.
    1955.   Scheduling plantings and predicting harvest maturities for processing vegetables.   Food Technol. 9:202–209.

23. Sheldrake, Raymond, Jr.
    1952.   Determination of the critical temperatures of snap beans, beets, and sweet corn.   Cornell Univ. Ph.D. thesis.

24. Stier, H. S.
    1939.   A physiological study of growth and fruiting in the tomato *Lycopersicon esculentum* with reference to the effect of climatic and edaphic conditions.   Univ. Md. Ph.D. thesis.

25. Vittum, M. T., Dethier, B. E., and Lesser, R. C.
    1965.   Estimating growing degree days.   Amer. Soc. Hort. Sci.   Proc. 87: 449–452.

26. Wang, J. Y.
    1958.   More accurate predictions of corn maturity date.   Food Packer 39:17, 36–37.

27. 1960.   A critique of the heat unit approach to plant response studies.   Ecology 41:785–790.

28. Wang, J. Y., and Barger, C. L.
    1962. Bibliography of agricultural meteorology. Heat unit system — growth units, pp. 143–146. Univ. Wisc.

29. Wang, J. Y., and Bryson, R. A.
    1956. A study of phytometeorological effects on the growth and development of peas. Dept. Meteorol., Univ. Wisc. 165 pp.

Appendix

Table 1. **Climatological year**

Climatological week number	Calendar date	Climatological week number	Calendar date
01	Mar. 1 – Mar. 7	27	Aug. 30 – Sept. 5
02	Mar. 8 – Mar. 14	28	Sept. 6 – Sept. 12
03	Mar. 15 – Mar. 21	29	Sept. 13 – Sept. 19
04	Mar. 22 – Mar. 28	30	Sept. 20 – Sept. 26
05	Mar. 29 – Apr. 4	31	Sept. 27 – Oct. 3
06	Apr. 5 – Apr. 11	32	Oct. 4 – Oct. 10
07	Apr. 12 – Apr. 18	33	Oct. 11 – Oct. 17
08	Apr. 19 – Apr. 25	34	Oct. 18 – Oct. 24
09	Apr. 26 – May 2	35	Oct. 25 – Oct. 31
10	May 3 – May 9	36	Nov. 1 – Nov. 7
11	May 10 – May 16	37	Nov. 8 – Nov. 14
12	May 17 – May 23	38	Nov. 15 – Nov. 21
13	May 24 – May 30	39	Nov. 22 – Nov. 28
14	May 31 – June 6	40	Nov. 29 – Dec. 5
15	June 7 – June 13	41	Dec. 6 – Dec. 12
16	June 14 – June 20	42	Dec. 13 – Dec. 19
17	June 21 – June 27	43	Dec. 20 – Dec. 26
18	June 28 – July 4	44	Dec. 27 – Jan. 2
19	July 5 – July 11	45	Jan. 3 – Jan. 9
20	July 12 – July 18	46	Jan. 10 – Jan. 16
21	July 19 – July 25	47	Jan. 17 – Jan. 23
22	July 26 – Aug. 1	48	Jan. 24 – Jan. 30
23	Aug. 2 – Aug. 8	49	Jan. 31 – Feb. 6
24	Aug. 9 – Aug. 15	50	Feb. 7 – Feb. 13
25	Aug. 16 – Aug. 22	51	Feb. 14 – Feb. 20
26	Aug. 23 – Aug. 29	52	Feb. 21 – Feb. 27
		53	Feb. 28 – Feb. 29

Table 2. **List of stations with average accumulative growing degree days at end of 10, 20, 30, and 52 weeks**

Station No.	Name	County	Elevation (feet)	Latitude (deg min)	Longitude (deg min)	No. years analyzed*	Average cumulative GDD base 40°F, at end of: week 10	week 20	week 30	week 52	Average cumulative GDD base 50°F, at end of: week 10	week 20	week 30	week 52
0023	Addison	Steuben	1,000	42 06	77 14	15	409	2,104	3,933	4,507	138	1,148	2,284	2,471
0047	Albany	Albany	19	42 39	73 45	42	455	2,357	4,405	5,040	148	1,353	2,702	2,914
0077	Alexandria Bay	Jefferson	260	44 20	75 55	15	318	2,020	3,918	4,493	81	1,094	2,297	2,486
0085	Alfred	Allegany	1,700	42 16	77 47	38	321	1,835	3,509	3,976	102	944	1,931	2,068
0093	Alleghany State Park	Cattaraugus	1,500	42 06	78 45	14	374	1,918	3,590	4,124	120	988	1,970	2,142
0183	Angelica	Allegany	1,420	42 18	78 01	38	339	1,900	3,636	4,123	104	991	2,036	2,180
0220	Arcade	Wyoming	1,480	42 32	78 25	10	322	1,835	3,496	3,972	101	942	1,920	2,066
0321	Auburn Water Works	Cayuga	715	42 54	76 32	38	316	2,024	4,032	4,674	84	1,108	2,419	2,644
0691	Binghamton	Broome	858	42 06	75 55	38	429	2,207	4,154	4,769	146	1,234	2,484	2,689
0889	Bridgehampton	Suffolk	60	40 57	72 18	32	375	2,061	4,084	4,897	72	1,062	2,386	2,652
1012	Buffalo WB, Airport	Erie	705	42 56	78 44	42	320	1,969	3,892	4,508	93	1,064	2,290	2,497
1185	Canton 3 SE	St. Lawrence	400	44 35	75 07	42	281	1,885	3,636	4,069	81	1,006	2,070	2,205
1207	Carmel 1 SW	Putnam	490	41 25	73 42	38	406	2,153	4,102	4,723	120	1,173	2,424	2,628
1387	Chasm Falls	Franklin	1,060	44 45	74 13	15	270	1,830	3,493	3,973	75	963	1,943	2,102
1752	Cooperstown	Otsego	1,240	42 42	74 55	33	322	1,914	3,658	4,139	98	1,011	2,064	2,206
1799	Cortland	Cortland	1,129	42 36	76 11	14	330	1,924	3,662	4,177	105	1,029	2,080	2,247
1966	Dannemora	Clinton	1,340	44 43	73 43	38	267	1,845	3,582	4,000	79	982	2,029	2,160
1974	Dansville	Livingston	685	42 34	77 42	13	440	2,271	4,249	4,956	154	1,299	2,582	2,847
2036	Delhi	Delaware	1,370	42 16	74 55	38	328	1,893	3,628	4,124	99	987	2,031	2,179
2610	Elmira	Chemung	880	42 06	76 49	38	434	2,228	4,171	4,754	152	1,257	2,304	2,690
3033	Fredonia	Chautauqua	760	42 25	79 18	38	420	2,197	4,225	4,946	149	1,241	2,570	2,832
3038	Freehold 2 NW	Greene	450	42 22	74 04	15	471	2,353	4,345	4,964	155	1,342	2,638	2,840
3177	Geneva Exp. Station	Ontario	590	42 53	77 00	38	408	2,197	4,183	4,810	138	1,238	2,529	2,745
3354	Gowanda State Hospital	Erie	865	42 29	78 56	15	439	2,070	4,073	4,769	160	1,210	2,419	2,675
3773	Hemlock	Livingston	920	42 47	77 37	38	348	2,070	3,975	4,562	107	1,144	2,354	2,548
4102	Indian Lake	Hamilton	1,660	43 45	74 17	15	156	1,416	2,809	3,103	32	652	1,378	1,445
4174	Ithaca, Cornell University	Tompkins	950	42 27	76 28	38	373	2,043	3,906	4,471	126	1,117	2,286	2,474
4208	Jamestown Water Works	Chautauqua	1,390	42 07	79 14	38	450	2,200	4,127	4,766	164	1,228	2,460	2,681
4555	Lake Placid Club	Essex	1,880	44 17	73 59	14	177	1,502	2,928	3,256	42	727	1,493	1,580
4715	Lewiston 1 N	Niagara	330	43 11	79 03	15	391	2,341	4,369	5,073	115	1,376	2,705	2,962

Table 2. (continued)

Station Name	No.	County	Elevation (feet)	Latitude (deg min)	Longitude (deg min)	No. years analyzed*	GDD base 40°F wk 10	wk 20	wk 30	wk 52	GDD base 50°F wk 10	wk 20	wk 30	wk 52
Liberty	4731	Sullivan	1,610	41 48	74 45	13	302	1,796	3,469	3,945	84	902	1,884	2,021
Little Falls, City Reservoir	4791	Herkimer	900	43 04	74 52	38	318	1,940	3,778	4,255	102	1,060	2,184	2,332
Lockport 2 NE	4844	Niagara	520	43 11	78 39	38	375	2,066	3,958	4,506	125	1,134	2,333	2,509
Lowville	4912	Lewis	920	43 48	75 29	38	278	1,854	3,580	4,004	83	981	2,018	2,143
Massena, FAA Airport	5134	St. Lawrence	202	44 56	74 50	15	253	1,847	3,529	3,932	66	981	1,980	2,094
Morrisville	5512	Madison	1,300	42 54	75 39	36	269	1,743	3,380	3,791	80	890	1,843	1,957
New York, Central Park WB	5801	New York	132	40 47	73 58	42	624	2,708	5,013	6,019	219	1,605	3,209	3,603
Norwich 1 WNW	6085	Chenango	1,030	42 32	75 32	37	314	1,856	3,570	4,017	97	968	1,993	2,123
Ogdensburg 3 NE	6248	St. Lawrence	285	44 44	75 27	33	298	1,976	3,819	4,293	80	1,070	2,227	2,370
Oswego Teachers College	6314	Oswego	290	43 27	76 32	38	298	1,874	3,765	4,361	84	988	2,185	2,378
Port Jervis	6774	Orange	470	41 23	74 41	36	479	2,337	4,321	4,943	166	1,327	2,615	2,818
Poughkeepsie	6817	Dutchess	103	41 41	73 56	35	521	2,486	4,606	5,313	179	1,448	2,868	3,115
Rochester WB, Airport	7167	Monroe	547	43 07	77 40	38	380	2,141	4,103	4,719	127	1,201	2,466	2,677
Roxbury	7317	Delaware	1,490	42 17	74 34	33	321	1,856	3,555	4,019	99	958	1,967	2,097
Salisbury	7413	Herkimer	1,260	43 09	74 51	38	236	1,670	3,258	3,613	64	832	1,738	1,827
Setauket	7633	Suffolk	40	40 58	73 06	37	508	2,389	4,530	5,461	149	1,332	2,772	3,111
South Wales, Emery Park	8058	Erie	1,090	42 43	78 36	30	339	1,929	3,716	4,233	109	1,031	2,127	2,291
Spencer	8088	Tioga	995	42 13	76 06	15	331	1,904	3,601	4,070	101	996	2,004	2,144
Spier Falls	8104	Saratoga	442	43 14	73 45	15	360	2,137	4,034	4,578	106	1,191	2,393	2,565
Stafford	8152	Genesee	915	42 59	78 05	15	387	2,122	4,020	4,638	128	1,179	2,381	2,598
Stillwater Reservoir	8248	Herkimer	1,695	43 53	75 02	14	176	1,514	3,002	3,337	42	731	1,548	1,637
Syracuse WB, Airport	8383	Onondaga	410	43 07	76 07	42	393	2,165	4,117	4,729	131	1,216	2,472	2,678
Utica FAA AP	8737	Oneida	718	43 09	75 23	14	321	1,973	3,780	4,308	98	1,069	2,183	2,351
Walden 2 NE	8902	Orange	400	41 34	74 10	33	429	2,213	4,142	4,726	133	1,223	2,455	2,627
Wanakena Ranger School	8944	St. Lawrence	1,510	44 09	74 54	38	215	1,604	3,126	3,470	56	784	1,629	1,721
Watertown	9000	Jefferson	497	43 58	75 52	38	335	2,021	3,916	4,453	104	1,109	2,312	2,492
Whitehall	9389	Washington	119	43 33	73 24	21	419	2,306	4,316	4,879	132	1,324	2,638	2,826

* Period of record for all stations end February 28, 1964, with the exception of Walden, which ends February 28, 1959.

Table 3. Growing Degree Days, Base 40°

Clim. week no.	Addison Mean	S.D.	Albany Mean	S.D.	Alexandria Bay Mean	S.D.	Alfred Mean	S.D.	Alleghany State Park Mean	S.D.
1	6	11	3	4	1	3	3	6	7	11
2	6	12	7	10	2	3	5	9	4	8
3	4	6	12	19	1	3	10	17	4	6
4	16	23	24	26	10	15	16	21	18	24
5	27	23	27	24	16	12	19	22	27	27
6	27	22	39	28	19	16	26	27	28	25
7	45	36	53	37	38	26	35	33	41	34
8	84	50	77	37	62	34	54	40	69	41
9	90	37	94	31	76	32	69	39	85	42
10	104	33	120	36	95	35	85	38	92	39
11	115	35	124	26	104	24	92	31	105	31
12	127	39	143	25	125	33	111	34	118	38
13	132	32	157	33	135	32	119	35	115	34
14	163	17	184	34	161	14	144	36	147	17
15	172	27	188	26	169	20	152	30	160	23
16	180	41	199	34	185	40	161	33	163	38
17	198	27	216	28	198	25	176	27	181	30
18	207	20	224	26	209	24	183	28	192	21
19	194	28	231	25	202	27	186	27	174	33
20	209	20	234	21	216	17	190	22	190	22
21	211	25	238	20	220	20	196	24	196	24
22	218	20	240	21	226	19	196	21	199	18
23	198	26	227	26	211	25	186	28	183	23
24	200	26	226	24	210	23	186	28	184	26
25	189	29	216	27	193	29	174	31	170	29
26	189	27	206	27	201	24	165	33	177	28
27	201	30	206	30	200	32	171	33	182	29
28	161	32	182	33	169	30	150	34	148	27
29	140	33	163	30	140	34	135	34	125	30
30	122	46	145	33	129	45	115	41	108	44
31	115	39	123	30	120	27	94	36	116	33
32	107	38	116	31	108	30	91	38	98	42
33	96	32	98	33	96	30	75	34	89	28
34	75	27	77	34	77	28	57	31	69	34
35	46	22	58	31	51	24	38	27	46	25
36	38	33	50	30	37	26	33	27	31	33
37	23	16	32	19	22	11	19	16	18	17
38	33	26	31	27	31	25	25	28	28	27
39	12	13	14	16	11	16	8	13	8	11
40	5	7	7	11	4	6	6	10	4	5
41	5	9	7	10	6	10	3	8	6	9
42	1	2	2	3	1	2	0	2	0	0
43	4	9	3	8	4	10	3	7	3	8
44	1	2	1	4	1	3	2	4	1	3
45	2	6	3	8	1	5	3	6	2	7
46	1	2	2	7	0	1	2	6	2	4
47	1	1	2	3	0	1	1	4	1	2
48	2	6	1	3	1	3	2	6	4	13
49	1	2	0	1	0	1	0	1	1	2
50	1	2	1	3	0	0	1	3	1	2
51	2	7	2	5	0	1	2	5	2	7
52	4	6	3	7	1	3	3	6	4	6
Total	4,511		5,038		4,495		3,978		4,126	

Table 3 (continued)

Clim. week no.	Angelica		Arcade		Auburn		Binghamton		Bridge-hampton	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	4	8	4	9	1	3	5	8	5	6
2	5	9	6	9	4	7	8	11	7	9
3	12	18	4	4	9	16	15	22	11	15
4	15	17	10	13	14	18	24	28	20	18
5	22	24	19	25	17	20	28	26	27	19
6	28	26	24	23	24	25	35	29	32	18
7	38	34	34	28	35	31	48	39	46	26
8	56	37	72	51	54	31	70	40	62	25
9	72	38	77	49	69	32	89	39	72	22
10	87	38	74	32	88	34	107	38	93	22
11	95	30	107	29	96	25	116	29	105	19
12	114	35	101	44	119	28	135	30	119	21
13	124	39	116	37	130	31	144	34	136	22
14	147	38	143	18	158	33	169	35	157	23
15	158	31	163	24	170	26	178	28	165	20
16	168	35	158	41	182	33	187	35	176	28
17	179	29	173	30	201	26	203	27	196	23
18	190	29	191	15	213	29	212	27	205	20
19	191	28	169	32	217	28	215	27	213	20
20	195	23	191	14	221	22	220	24	214	20
21	204	27	194	18	228	23	226	24	223	18
22	203	25	196	23	231	21	229	21	230	17
23	192	30	188	24	220	28	215	31	219	25
24	191	29	184	28	220	26	214	28	220	19
25	180	31	166	42	210	30	203	28	213	22
26	173	35	176	31	201	30	194	33	204	26
27	178	33	185	34	204	34	198	33	205	25
28	156	32	142	30	182	35	173	36	184	26
29	140	33	119	38	165	34	158	32	170	24
30	119	41	110	48	147	41	138	37	154	23
31	98	36	103	47	122	33	114	36	135	25
32	94	37	92	39	118	34	109	38	129	27
33	78	33	82	33	104	32	93	34	109	27
34	57	28	65	26	80	33	74	34	97	26
35	40	26	37	24	57	32	55	32	77	27
36	36	28	31	33	47	28	45	31	70	27
37	21	19	13	9	32	21	30	23	46	24
38	26	30	30	27	35	32	34	32	41	25
39	9	14	6	7	13	16	13	17	27	19
40	6	11	3	4	9	13	8	14	17	15
41	3	7	2	5	6	10	7	12	15	15
42	1	2	1	2	1	3	2	4	5	6
43	3	7	3	8	4	8	5	9	6	10
44	1	4	1	1	2	4	3	5	5	8
45	3	7	0	0	3	6	5	9	7	9
46	2	7	0	0	2	7	3	7	4	8
47	2	6	1	2	1	5	3	5	4	6
48	2	7	0	1	1	4	3	8	4	6
49	0	2	0	0	0	0	1	2	2	4
50	1	4	1	2	1	3	2	3	3	4
51	2	4	2	7	1	3	4	8	4	8
52	3	6	2	5	2	6	4	9	5	7
Total	4,124		3,971		4,671		4,773		4,895	

Table 3 (continued)

Clim. week no.	Buffalo		Canton		Carmel		Chasm Falls		Cooperstown	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	3	5	1	3	3	5	1	3	2	5
2	7	11	3	5	5	8	1	3	2	6
3	10	15	5	10	12	19	2	4	7	16
4	16	20	11	18	20	22	10	16	16	21
5	19	20	11	14	26	25	10	10	19	23
6	29	27	21	24	35	23	11	11	20	22
7	35	33	31	29	47	34	29	23	37	35
8	52	37	48	31	69	34	57	38	58	38
9	69	39	64	34	83	27	62	32	72	33
10	82	35	86	38	105	34	86	43	88	34
11	94	28	93	29	114	24	99	35	96	31
12	110	32	112	31	133	27	112	36	117	30
13	128	37	130	32	141	30	121	38	129	32
14	152	35	153	34	163	30	153	21	153	34
15	167	24	159	26	173	24	151	23	161	28
16	179	32	174	35	182	33	174	42	168	33
17	193	28	186	27	199	27	183	22	183	28
18	202	29	194	31	209	23	191	27	192	27
19	210	26	200	29	214	27	180	30	193	30
20	215	22	203	22	217	20	196	21	199	20
21	218	20	209	22	226	23	196	21	205	24
22	218	22	208	24	228	22	203	22	209	22
23	216	24	199	26	215	29	182	27	191	27
24	212	25	197	30	214	23	183	28	194	27
25	201	28	185	31	203	29	168	34	188	32
26	194	31	178	31	194	27	178	28	174	31
27	195	30	177	33	199	30	182	35	178	34
28	174	32	152	36	174	29	144	34	152	37
29	156	32	132	36	158	30	119	36	136	32
30	139	38	115	41	139	30	108	49	118	36
31	119	34	93	35	118	33	107	34	96	32
32	111	35	88	33	113	32	93	35	95	34
33	98	33	73	34	96	31	82	32	75	33
34	72	35	52	29	81	35	67	36	62	30
35	54	33	34	29	58	32	39	22	44	29
36	48	32	31	24	51	30	28	24	36	27
37	30	19	17	14	29	22	11	10	21	20
38	32	32	20	22	29	24	26	26	21	23
39	11	14	8	14	13	16	11	17	10	15
40	9	12	4	7	7	11	4	6	5	9
41	6	11	4	7	6	9	5	9	4	9
42	2	4	0	1	2	3	0	0	0	1
43	4	9	2	7	3	7	3	7	2	6
44	2	5	1	3	2	4	0	1	1	2
45	3	7	2	5	3	6	1	4	2	6
46	3	7	1	4	2	6	0	1	1	6
47	2	4	1	3	1	2	0	2	1	2
48	2	7	0	2	1	3	1	4	1	2
49	1	1	0	0	0	1	0	0	0	1
50	2	7	1	3	1	3	0	1	0	1
51	2	6	0	1	2	6	0	1	2	3
52	3	7	1	3	3	8	1	2	2	3
Total	4,511		4,070		4,721		3,971		4,138	

Table 3 (continued)

Clim. week no.	Cortland Mean	S.D.	Dannemora Mean	S.D.	Dansville Mean	S.D.	Delhi Mean	S.D.	Elmira Mean	S.D.
1	3	6	0	1	6	9	3	6	4	9
2	3	7	2	5	5	10	4	7	6	11
3	3	5	4	10	7	8	11	18	15	22
4	14	23	11	19	24	32	17	22	22	26
5	25	18	10	16	37	27	20	22	29	26
6	20	14	18	23	35	22	25	25	36	29
7	33	32	27	29	49	33	35	32	50	38
8	66	44	46	34	76	41	55	39	71	38
9	79	40	61	35	90	38	70	36	91	39
10	86	36	88	41	112	41	88	36	109	38
11	98	34	92	31	118	29	96	31	116	31
12	116	46	109	32	140	39	118	30	138	34
13	114	40	131	36	140	38	122	36	145	36
14	149	17	150	36	174	17	148	33	169	35
15	163	27	157	26	186	30	159	27	180	26
16	173	41	170	40	195	43	165	35	190	36
17	191	27	183	28	213	33	181	26	205	28
18	203	24	192	35	226	26	188	26	215	30
19	184	32	197	28	208	36	191	29	216	29
20	203	20	198	21	231	25	196	23	221	24
21	207	27	205	21	230	28	205	23	229	27
22	212	24	206	23	234	23	206	19	229	21
23	180	31	193	28	216	31	191	29	216	33
24	190	26	194	30	212	31	192	25	213	27
25	183	33	183	33	206	32	180	30	204	29
26	179	26	178	32	210	27	174	29	192	33
27	191	36	175	37	211	37	176	33	198	33
28	152	37	152	37	180	36	152	34	174	34
29	125	37	134	34	148	35	140	31	154	34
30	111	46	117	39	131	43	120	38	135	36
31	110	37	88	36	139	36	98	34	111	36
32	94	38	90	32	118	38	94	34	105	38
33	86	36	75	40	111	30	77	33	90	34
34	67	37	56	35	90	41	61	31	72	35
35	44	22	35	30	65	26	42	28	50	31
36	35	32	28	26	46	38	36	31	44	30
37	15	16	13	16	27	19	22	19	27	23
38	27	20	18	20	39	34	27	29	32	30
39	8	11	6	13	17	18	10	14	13	16
40	5	6	3	8	12	12	6	11	7	11
41	7	11	2	5	12	14	4	8	6	11
42	1	2	0	0	1	3	1	3	2	4
43	4	10	1	3	4	6	2	6	3	7
44	1	2	0	1	2	4	2	4	2	5
45	2	7	1	4	4	11	3	7	4	8
46	1	2	1	4	3	6	2	6	3	7
47	1	2	0	0	2	3	1	3	2	4
48	2	7	0	2	5	10	1	5	2	6
49	0	0	0	0	1	3	1	2	1	2
50	1	2	0	0	1	2	1	2	2	3
51	1	4	0	1	2	6	2	5	3	7
52	2	5	1	3	6	8	3	7	3	7
Total	4,179		4,001		4,957		4,124		4,756	

Table 3 (continued)

Clim. week no.	Fredonia Mean	S.D.	Freehold Mean	S.D.	Geneva Mean	S.D.	Gowanda Mean	S.D.	Hemlock Mean	S.D.
1	5	11	4	5	3	6	7	11	3	6
2	9	16	5	10	6	11	8	10	5	10
3	17	25	4	5	14	22	8	10	10	16
4	25	27	23	24	22	26	22	25	16	21
5	28	29	36	23	26	26	34	30	20	22
6	37	32	37	24	33	29	33	25	26	26
7	48	42	59	31	46	36	50	36	40	32
8	68	38	94	44	70	37	86	49	58	35
9	84	42	95	31	86	40	93	45	76	37
10	100	39	116	35	103	40	100	38	95	37
11	109	30	129	29	110	29	115	33	104	27
12	128	31	143	34	133	32	129	42	126	31
13	141	33	147	32	143	35	130	36	138	35
14	168	36	186	18	171	35	162	18	162	35
15	181	28	185	24	179	27	178	24	172	26
16	191	34	195	45	189	36	189	46	184	35
17	205	30	225	31	207	27	200	34	200	27
18	215	29	227	19	216	27	215	23	209	28
19	219	26	213	26	219	29	199	28	214	27
20	220	22	234	22	222	21	214	20	215	24
21	227	24	237	26	228	24	217	22	222	23
22	230	24	240	19	231	21	223	22	223	22
23	221	25	215	27	219	30	204	25	212	28
24	220	27	220	27	216	28	203	23	210	28
25	209	26	209	32	208	31	194	31	198	29
26	203	31	208	25	198	31	201	28	190	33
27	205	32	209	33	203	34	206	31	193	33
28	186	29	171	31	179	34	169	33	169	33
29	172	33	151	32	161	36	150	32	154	34
30	154	37	133	42	143	39	136	45	134	38
31	130	34	124	37	118	32	131	39	111	35
32	124	35	113	33	114	36	116	38	108	34
33	109	31	99	31	98	32	107	31	92	32
34	86	35	77	28	77	34	92	37	71	33
35	65	33	54	25	57	32	62	28	52	30
36	54	34	42	30	47	29	43	34	42	28
37	35	22	25	18	29	23	28	18	27	20
38	40	36	32	21	36	32	43	33	34	32
39	16	19	11	14	14	18	16	17	12	16
40	13	18	5	6	8	12	13	16	9	12
41	8	15	8	12	6	11	10	12	6	11
42	3	5	1	2	1	3	2	3	1	2
43	6	11	5	11	4	9	7	13	4	9
44	3	6	3	7	2	6	3	7	2	4
45	5	10	3	10	4	7	3	8	3	7
46	4	9	2	3	3	7	3	5	2	6
47	3	6	2	5	2	5	2	3	2	4
48	3	7	2	5	2	5	4	10	2	6
49	1	2	1	2	0	2	2	3	0	2
50	3	7	1	3	1	3	1	2	1	3
51	4	7	2	6	2	4	2	8	2	5
52	6	11	5	7	4	8	7	9	3	6
Total	4,946		4,967		4,813		4,772		4,564	

Table 3 *(continued)*

Clim. week no.	Indian Lake Mean	S.D.	Ithaca Mean	S.D.	Jamestown Mean	S.D.	Lake Placid Mean	S.D.	Lewiston Mean	S.D.
1	0	2	3	7	6	12	1	3	3	5
2	0	1	6	11	9	15	0	1	4	7
3	0	1	12	19	19	27	0	0	5	6
4	4	9	20	24	26	29	6	11	19	22
5	3	4	24	24	30	27	8	8	26	20
6	6	7	30	26	39	33	8	7	28	21
7	11	13	42	37	50	45	18	19	50	32
8	36	30	62	36	73	42	35	25	71	37
9	38	25	79	40	91	42	41	26	81	40
10	55	32	95	40	106	39	61	41	104	35
11	68	33	101	30	114	32	72	34	116	26
12	86	37	124	32	134	33	95	37	131	39
13	90	32	133	37	142	35	95	39	142	30
14	122	15	157	38	166	37	130	28	167	17
15	125	25	165	27	177	30	129	28	185	26
16	138	43	177	36	185	37	142	46	200	37
17	156	27	192	28	200	32	162	25	255	178
18	163	23	203	28	209	29	170	25	314	352
19	149	31	207	31	210	31	157	33	213	23
20	165	21	210	24	213	25	173	21	228	22
21	171	27	218	27	221	25	176	24	232	22
22	176	19	219	23	223	25	181	22	238	22
23	151	28	206	33	210	26	158	29	220	23
24	156	28	205	28	211	27	160	29	220	22
25	147	34	196	32	200	31	150	32	207	28
26	147	23	184	31	192	32	155	24	218	31
27	154	34	189	34	195	33	156	35	210	31
28	117	32	166	34	175	31	122	36	182	29
29	90	33	149	36	161	34	92	36	157	30
30	83	42	131	40	141	41	78	42	144	43
31	77	32	107	36	117	36	80	33	136	31
32	63	29	101	36	113	40	67	32	124	36
33	54	28	88	36	99	34	63	31	116	31
34	39	25	69	35	78	36	45	27	91	30
35	22	16	49	32	57	31	23	16	66	28
36	17	19	42	29	46	31	18	18	42	27
37	4	7	27	24	28	22	5	8	32	12
38	11	10	34	33	36	35	14	14	42	36
39	3	7	11	16	12	16	5	9	14	17
40	0	1	8	13	9	13	1	2	9	9
41	1	4	5	10	7	11	3	7	9	12
42	0	0	1	3	2	5	0	0	1	3
43	1	3	4	8	5	10	0	2	6	13
44	0	0	2	5	3	6	0	1	1	4
45	0	2	3	7	4	9	1	4	2	7
46	0	0	3	8	3	8	0	1	2	4
47	0	0	2	5	3	8	0	0	2	3
48	0	0	2	5	4	11	1	3	2	7
49	0	0	0	1	1	2	0	0	0	1
50	0	0	1	3	2	6	0	1	0	1
51	0	1	3	6	4	8	0	1	2	8
52	0	1	4	7	6	12	1	2	3	5
Total	3,099		4,471		4,767		3,258		5,072	

Table 3 *(continued)*

Clim. week no.	Liberty Mean	S.D.	Little Falls Mean	S.D.	Lockport Mean	S.D.	Lowville Mean	S.D.	Massena Mean	S.D.
1	1	3	1	2	1	4	1	2	0	1
2	3	6	2	6	1	3	2	5	0	0
3	2	5	6	14	2	6	4	10	0	1
4	6	9	14	22	5	14	10	17	5	9
5	19	16	14	21	6	13	12	17	7	9
6	21	17	23	25	7	13	19	24	12	12
7	31	25	35	34	16	30	29	29	32	24
8	72	42	56	37	18	24	49	34	50	30
9	73	34	74	36	29	29	64	34	60	30
10	76	30	94	39	40	34	88	40	86	42
11	96	32	101	28	41	24	92	29	90	25
12	110	42	120	30	52	26	111	31	114	34
13	112	35	132	35	70	37	127	32	125	36
14	144	18	156	33	87	34	148	31	153	23
15	147	26	164	25	100	27	157	27	155	22
16	157	40	173	35	113	36	170	36	176	41
17	176	24	189	28	129	29	183	27	190	21
18	189	21	197	26	133	25	192	29	196	28
19	172	26	204	29	144	28	196	30	188	30
20	191	20	207	22	141	25	197	22	207	21
21	198	23	214	23	151	23	204	24	207	21
22	204	19	215	22	152	24	206	23	208	25
23	179	27	201	31	138	29	193	30	191	25
24	181	21	200	27	140	27	193	28	190	28
25	179	32	193	30	126	33	183	31	171	34
26	170	22	184	28	118	40	175	30	181	31
27	183	33	184	31	121	34	174	34	178	36
28	146	34	161	33	99	31	150	38	144	31
29	124	30	143	34	87	31	134	35	112	38
30	110	35	124	35	67	34	115	40	100	46
31	103	34	100	31	46	33	91	36	92	31
32	86	34	97	30	43	29	88	33	82	29
33	81	31	81	34	32	27	72	33	71	29
34	65	33	62	33	19	18	55	32	52	29
35	44	29	40	28	11	16	37	29	29	19
36	35	30	32	26	11	14	28	24	25	19
37	12	12	19	17	4	8	15	15	12	9
38	28	20	22	22	7	10	20	23	20	20
39	6	9	8	14	1	2	8	14	7	11
40	5	7	4	8	0	1	2	5	2	4
41	6	9	3	6	1	2	2	6	4	8
42	0	1	0	1	0	0	0	0	0	1
43	1	4	2	5	0	1	1	4	3	8
44	0	1	1	3	0	1	1	2	0	1
45	0	0	2	5	0	1	1	3	1	4
46	0	0	1	5	0	0	1	4	0	0
47	0	1	0	2	0	0	0	0	1	3
48	0	1	0	1	0	0	0	2	1	3
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	1	0	0	0	1	0	0
51	2	7	1	2	0	1	0	1	0	0
52	2	4	1	3	0	3	1	2	1	2
Total	3,948		4,257		4,505		4,001		3,931	

Table 3 (continued)

Clim. week no.	Morrisville Mean	S.D.	New York Mean	S.D.	Norwich Mean	S.D.	Ogdensburg Mean	S.D.	Oswego Mean	S.D.
1	1	3	12	12	2	4	1	3	2	4
2	2	4	17	17	3	6	1	3	5	10
3	6	12	25	29	9	15	3	8	8	14
4	11	16	44	32	15	20	10	18	15	21
5	15	18	48	29	19	21	13	19	16	17
6	21	23	61	29	25	25	23	24	23	24
7	30	31	73	38	36	33	33	26	33	30
8	45	33	97	34	53	36	55	32	50	29
9	62	37	110	26	69	36	67	33	65	34
10	75	38	137	35	84	36	92	36	81	34
11	82	29	146	24	91	30	100	27	89	26
12	105	33	163	26	113	32	118	30	107	27
13	113	36	173	33	120	35	137	29	124	31
14	138	36	201	34	144	31	155	31	143	33
15	147	26	206	26	156	26	164	26	155	24
16	161	33	216	33	164	36	180	35	170	35
17	172	26	235	27	179	28	196	20	185	28
18	182	29	242	23	190	26	206	30	196	35
19	185	32	251	21	191	31	211	28	202	42
20	188	21	251	20	194	23	211	22	206	40
21	195	26	259	22	204	26	217	21	210	41
22	199	22	261	22	206	22	217	20	215	36
23	184	32	250	25	190	32	207	26	210	26
24	181	27	248	24	190	26	213	30	210	26
25	173	31	236	24	182	34	197	39	200	26
26	162	29	230	28	170	31	191	28	191	29
27	167	32	234	28	174	33	178	34	192	33
28	142	35	213	27	150	35	156	42	172	33
29	131	33	195	28	134	34	145	42	155	33
30	104	37	178	30	113	38	122	39	136	36
31	84	32	159	30	91	34	97	32	114	30
32	81	33	150	34	86	33	99	34	109	31
33	68	33	136	30	72	33	82	31	94	31
34	52	30	113	35	55	33	63	31	75	31
35	33	28	92	34	38	28	39	26	54	31
36	30	26	80	33	34	27	35	24	45	28
37	16	16	60	27	19	18	19	18	29	20
38	23	26	56	33	25	26	18	17	32	29
39	7	13	31	22	9	15	8	16	13	17
40	4	9	23	19	5	12	2	5	8	11
41	3	7	19	19	3	8	4	8	6	10
42	0	1	8	11	1	2	0	1	1	3
43	1	4	8	14	2	5	2	8	3	8
44	1	2	7	10	1	3	0	1	1	4
45	2	4	11	16	2	5	1	3	3	7
46	1	6	8	13	1	1	1	3	2	7
47	1	3	8	11	1	1	0	1	1	4
48	1	3	7	10	1	2	0	1	1	5
49	0	0	3	4	0	1	0	0	0	1
50	0	2	5	7	0	1	0	1	1	2
51	1	2	9	14	2	4	0	1	1	4
52	1	2	13	18	1	4	1	2	3	6
Total	3,789		6,018		4,019		4,290		4,362	

Table 3 (continued)

Clim. week no.	Port Jervis Mean	S.D.	Poughkeepsie Mean	S.D.	Rochester Mean	S.D.	Roxbury Mean	S.D.	Salisbury Mean	S.D.
1	3	6	5	7	3	5	3	6	0	1
2	8	11	7	10	7	13	4	8	1	3
3	16	24	15	24	12	19	11	19	4	9
4	25	29	31	29	19	23	17	23	10	17
5	31	27	38	30	23	23	19	21	9	16
6	42	28	47	27	30	28	19	18	15	20
7	52	38	59	40	44	36	35	35	24	28
8	79	39	89	42	63	36	56	38	42	32
9	101	40	103	33	80	41	67	37	57	34
10	121	39	127	40	99	41	90	39	75	37
11	127	31	132	28	108	27	94	32	79	29
12	148	31	153	29	127	31	114	30	99	29
13	152	36	163	32	142	35	120	38	110	33
14	174	33	186	29	164	36	144	34	136	35
15	185	26	194	24	175	26	155	27	144	29
16	195	33	206	31	189	36	165	33	153	35
17	211	28	222	27	204	26	178	30	168	26
18	217	27	233	23	214	28	185	26	176	27
19	224	26	237	24	218	30	186	33	182	31
20	225	22	239	19	221	22	194	26	186	20
21	233	21	243	22	227	24	204	22	190	24
22	235	22	249	18	228	23	202	23	193	23
23	220	30	235	26	218	29	189	28	178	32
24	220	28	233	24	216	27	188	28	179	28
25	206	27	223	22	204	30	179	31	170	31
26	194	32	209	29	197	33	169	29	160	30
27	199	34	212	31	197	34	171	32	161	32
28	176	31	191	30	175	33	146	33	135	36
29	163	34	173	28	160	35	135	31	120	34
30	139	36	150	33	140	40	115	38	102	39
31	117	35	127	26	116	34	92	33	81	31
32	110	37	123	31	112	35	88	32	76	30
33	95	35	108	35	97	34	72	32	60	32
34	81	34	91	33	75	34	55	30	46	27
35	58	32	67	33	55	32	40	27	29	25
36	48	34	59	33	46	30	36	30	24	22
37	31	23	36	25	28	21	20	18	12	13
38	30	26	36	31	34	33	24	24	15	18
39	13	15	17	21	13	17	10	15	6	11
40	7	12	7	11	10	13	6	10	2	6
41	6	10	7	11	6	10	3	6	1	2
42	1	2	2	3	2	4	1	2	0	0
43	3	7	4	9	4	9	3	7	1	3
44	1	3	3	6	2	5	2	4	0	2
45	3	7	4	9	4	8	3	8	1	4
46	3	7	2	7	3	8	2	8	1	5
47	2	5	1	3	2	4	1	3	0	1
48	3	6	2	4	2	5	2	6	0	0
49	1	2	1	2	0	2	0	2	0	0
50	1	2	1	1	2	4	1	2	0	0
51	4	9	3	6	2	6	2	5	0	1
52	4	8	5	12	3	8	2	4	0	1
Total	4,943		5,310		4,722		4,019		3,613	

Table 3 (continued)

Clim. week no.	Setauket Mean	S.D.	South Wales Emery Park Mean	S.D.	Spencer Mean	S.D.	Spier Falls Mean	S.D.	Stafford Mean	S.D.
1	7	8	3	6	3	6	1	3	5	8
2	11	13	3	6	3	6	2	4	6	10
3	17	23	13	21	3	4	1	3	5	7
4	31	26	17	21	13	20	13	22	17	24
5	38	25	24	26	20	17	18	12	26	24
6	47	24	25	21	19	18	25	19	25	20
7	60	34	41	36	37	28	41	26	48	35
8	81	30	60	38	70	42	75	44	75	45
9	93	26	72	29	77	35	83	32	82	42
10	122	32	82	41	87	34	102	37	98	37
11	129	22	87	35	100	27	116	30	111	30
12	144	24	108	35	115	35	134	33	127	40
13	155	29	124	38	118	37	139	33	132	35
14	176	26	152	36	149	15	173	15	163	19
15	187	22	159	28	158	29	177	22	176	28
16	196	30	173	37	167	41	187	41	190	42
17	213	25	187	28	188	25	210	26	203	29
18	222	23	198	29	195	19	216	21	214	26
19	229	20	200	31	183	26	204	28	203	26
20	231	21	203	20	201	21	221	20	216	22
21	240	21	209	25	202	26	225	25	221	25
22	242	19	214	24	207	22	229	20	226	22
23	229	21	196	26	185	28	206	25	206	25
24	232	20	202	29	190	26	209	25	206	28
25	222	23	190	35	175	30	197	32	191	34
26	214	25	175	37	176	28	198	22	201	31
27	217	26	182	35	184	32	203	33	202	37
28	198	24	158	37	145	32	164	33	169	29
29	182	25	138	36	125	30	140	31	143	34
30	164	26	123	36	107	45	127	42	131	46
31	151	29	100	36	105	39	117	30	125	37
32	141	28	96	37	90	40	106	28	114	36
33	124	27	79	35	80	29	93	29	100	29
34	108	30	68	37	59	27	75	28	80	32
35	89	31	47	30	38	23	48	24	52	23
36	78	30	43	30	26	26	38	34	37	32
37	56	27	20	20	17	13	17	13	22	11
38	53	28	24	25	23	21	25	18	37	34
39	31	23	9	12	8	11	9	14	12	15
40	20	17	7	10	2	5	3	4	9	10
41	16	17	5	9	5	7	4	9	9	11
42	7	9	1	1	1	2	0	1	1	2
43	6	9	3	7	3	7	3	8	6	12
44	7	10	2	4	1	2	1	3	2	4
45	9	13	3	7	2	8	2	6	2	7
46	6	11	1	3	1	2	1	1	2	5
47	5	8	1	3	1	2	1	1	1	3
48	5	8	2	6	3	8	1	2	3	8
49	2	3	0	1	0	0	0	0	0	1
50	4	5	1	1	0	1	0	1	0	1
51	6	10	2	5	3	9	0	0	1	3
52	8	12	3	6	2	4	1	2	4	7
Total	5,461		4,235		4,072		4,581		4,637	

Table 3 (continued)

Clim. week no.	Stillwater Reservoir Mean	S.D.	Syracuse Mean	S.D.	Utica Mean	S.D.	Walden Mean	S.D.	Wanakena Mean	S.D.
1	0	1	3	5	1	2	3	5	1	3
2	0	1	7	12	2	4	7	10	2	4
3	1	2	12	18	1	2	14	25	3	5
4	3	6	20	23	9	13	23	24	7	12
5	7	7	23	22	19	17	28	23	8	13
6	7	9	34	31	20	20	37	29	13	19
7	14	17	44	36	37	31	49	35	21	24
8	42	36	66	37	71	43	72	35	37	32
9	46	33	83	38	73	39	87	32	51	34
10	57	33	102	39	88	39	110	40	73	37
11	78	31	108	28	101	28	116	27	78	30
12	93	41	128	30	122	38	131	28	98	32
13	101	35	143	36	132	35	143	36	112	33
14	130	18	171	39	161	20	167	33	131	31
15	136	25	176	28	169	29	176	29	139	27
16	141	41	188	36	173	39	187	38	152	38
17	159	22	207	37	192	23	207	31	163	27
18	167	21	211	29	203	21	213	23	168	28
19	160	32	218	28	190	27	223	24	174	29
20	173	20	221	23	210	22	222	23	175	22
21	180	25	226	23	209	24	228	25	182	24
22	182	20	227	24	218	19	230	23	185	22
23	167	26	217	29	198	27	216	32	170	27
24	165	27	216	27	195	21	217	24	172	29
25	155	32	205	31	188	31	202	28	161	32
26	158	23	196	32	188	25	190	29	154	31
27	165	35	199	32	195	36	193	30	155	35
28	129	33	174	35	161	32	166	29	131	37
29	99	35	155	35	133	36	156	30	116	34
30	89	44	137	38	122	46	132	29	97	38
31	84	36	116	34	114	36	108	34	75	36
32	68	31	110	36	95	31	102	34	74	31
33	58	29	95	33	88	29	84	34	57	34
34	46	31	72	35	72	32	76	29	44	29
35	27	20	53	32	44	22	54	28	29	25
36	22	22	47	30	35	28	47	28	22	21
37	5	7	30	21	18	11	29	22	11	13
38	15	14	34	32	30	25	33	30	17	20
39	5	9	13	17	11	15	13	17	6	11
40	2	2	8	12	5	6	8	12	3	7
41	3	7	7	11	7	10	6	9	2	5
42	0	0	2	3	0	1	2	4	0	0
43	1	4	4	9	3	8	3	6	1	3
44	0	0	2	6	0	1	2	4	0	1
45	0	0	4	9	0	0	4	7	1	3
46	0	1	3	8	0	1	2	8	1	3
47	0	0	2	5	1	2	2	4	0	1
48	0	0	2	5	1	2	1	3	0	2
49	0	0	0	1	0	0	1	2	0	0
50	0	0	2	7	0	1	1	2	0	1
51	0	0	2	6	1	3	3	6	0	1
52	0	1	4	8	2	4	4	7	1	2
Total	3,340		4,729		4,308		4,730		3,473	

Table 3 (concluded)

Clim. week no.	Watertown Mean	Watertown S.D.	Whitehall Mean	Whitehall S.D.	Clim. week no.	Watertown Mean	Watertown S.D.	Whitehall Mean	Whitehall S.D.
1	1	4	1	3	27	191	32	206	31
2	4	9	3	6	28	167	35	183	35
3	7	14	8	15	29	150	37	153	33
4	15	22	21	28	30	131	43	137	41
5	19	22	27	30	31	105	34	120	34
6	26	26	35	26	32	104	32	110	26
7	38	32	50	33	33	86	34	94	32
8	57	34	82	37	34	66	34	73	33
9	71	36	82	27	35	47	31	54	31
10	94	38	112	38	36	40	28	45	27
11	99	30	124	32	37	24	19	24	19
12	120	32	142	32	38	30	29	21	19
13	136	34	157	35	39	12	17	9	15
14	157	34	177	31	40	5	9	2	4
15	168	27	182	23	41	5	8	4	8
16	181	36	199	41	42	1	2	0	1
17	195	27	223	24	43	2	7	2	5
18	205	30	230	20	44	1	4	1	3
19	212	29	220	23	45	2	6	1	5
20	214	22	232	22	46	2	6	0	0
21	220	22	234	21	47	1	2	0	1
22	222	21	237	18	48	1	4	0	1
23	212	29	217	26	49	0	1	0	0
24	210	28	225	30	50	1	2	0	0
25	199	30	212	30	51	1	2	0	1
26	191	30	206	29	52	2	5	1	3
					Total	4,450		4,877	

Table 4. Growing degree days, base 50°

Clim. week no.	Addison Mean	Addison S.D.	Albany Mean	Albany S.D.	Alexandria Bay Mean	Alexandria Bay S.D.	Alfred Mean	Alfred S.D.	Alleghany State Park Mean	Alleghany State Park S.D.
1	1	2	0	0	0	0	0	0	1	3
2	1	2	1	3	0	0	0	1	0	0
3	0	0	2	6	0	0	1	4	0	0
4	2	6	5	10	0	1	3	7	3	8
5	5	10	5	11	1	3	4	8	6	11
6	4	7	8	15	1	2	7	12	5	8
7	11	18	14	20	7	10	10	14	11	14
8	36	32	27	24	15	19	19	22	25	22
9	34	28	34	26	23	20	25	26	31	30
10	44	27	53	33	34	27	33	26	38	27
11	52	31	56	24	39	22	35	22	45	23
12	61	37	73	25	58	31	48	28	54	34
13	66	28	88	32	66	30	55	29	51	28
14	93	17	114	33	91	14	75	32	78	16
15	102	27	118	26	99	20	83	30	90	23
16	110	41	129	34	115	40	92	33	93	37
17	128	27	146	28	128	25	106	27	111	30
18	137	20	154	26	139	24	113	28	122	21
19	124	28	161	25	132	27	116	27	104	33
20	139	20	164	21	146	17	120	22	120	22
21	141	25	168	20	150	20	126	24	126	24
22	148	20	170	21	156	19	126	21	129	18
23	128	26	157	26	141	25	116	28	113	23
24	130	26	156	24	140	23	116	28	114	26
25	119	29	146	27	123	29	104	31	100	29
26	119	27	136	27	131	24	95	32	107	28
27	131	30	136	30	130	32	101	33	112	29
28	91	31	112	33	99	30	81	33	78	27
29	71	30	93	30	71	31	67	31	57	26
30	57	40	76	32	62	41	54	33	46	37
31	51	35	56	28	54	25	36	29	51	30
32	46	31	51	26	45	23	37	26	41	30
33	38	27	38	27	38	23	25	23	34	22
34	22	15	25	21	25	17	15	14	18	19
35	9	11	15	18	10	12	8	12	10	12
36	9	16	12	15	7	8	8	11	7	14
37	2	3	5	6	2	3	2	4	2	3
38	6	9	6	10	6	7	5	8	6	8
39	2	3	2	6	2	4	1	4	1	2
40	0	1	1	4	0	0	0	1	0	0
41	0	0	0	1	0	2	0	1	1	1
42	0	0	0	0	0	0	0	0	1	0
43	0	2	0	2	1	2	0	1	0	2
44	0	0	0	0	0	0	0	0	0	0
45	0	1	0	2	0	1	0	1	0	2
46	0	0	0	2	0	0	0	1	0	0
47	0	0	0	0	0	0	0	0	0	0
48	0	2	0	0	0	0	0	2	1	4
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0
51	0	1	0	1	0	0	0	0	0	1
52	0	1	0	1	0	0	0	0	0	0
Total	2,470		2,913		2,487		2,068		2,142	

Table 4 (continued)

Clim. week no.	Angelica		Arcade		Auburn		Binghamton		Bridge-hampton	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	0	0	0	0	0	0	0	1	0	0
2	0	1	0	0	0	0	1	2	0	0
3	1	4	0	0	1	2	2	6	0	2
4	2	6	1	3	2	5	6	10	2	3
5	5	9	5	10	3	6	6	10	3	8
6	6	12	4	7	5	11	8	15	3	5
7	11	15	7	8	8	12	15	20	8	12
8	18	23	28	31	13	15	26	25	12	13
9	26	26	29	35	21	21	36	29	17	14
10	34	27	27	19	32	26	46	31	28	18
11	37	23	46	23	35	20	51	26	38	17
12	51	29	44	36	53	25	67	29	50	20
13	60	33	53	32	63	28	76	32	66	22
14	79	35	74	17	89	31	99	33	87	23
15	88	31	93	24	100	26	108	28	95	20
16	98	35	88	41	113	33	117	35	106	28
17	109	29	103	30	131	26	133	27	126	23
18	120	29	121	15	143	29	142	27	135	20
19	121	28	99	32	147	28	145	27	143	20
20	125	23	121	14	151	22	150	24	144	20
21	134	27	124	18	158	23	156	24	153	18
22	133	25	126	23	161	21	159	21	160	17
23	122	30	118	24	150	28	145	31	149	25
24	121	29	114	28	150	26	144	28	150	19
25	110	31	96	42	140	30	133	28	143	22
26	103	34	106	31	131	30	124	33	134	26
27	108	33	115	34	134	34	128	33	135	25
28	86	31	73	30	112	35	103	36	114	26
29	71	31	54	32	96	33	88	32	100	24
30	56	35	51	39	79	38	70	35	84	23
31	38	30	40	41	56	30	50	33	65	24
32	38	27	37	26	55	28	49	31	61	26
33	25	22	30	25	43	26	36	26	44	22
34	14	12	16	14	28	21	23	20	34	18
35	8	10	7	9	15	10	14	18	22	18
36	9	11	7	14	11	13	12	15	18	16
37	3	6	1	1	5	7	6	7	9	9
38	6	11	7	10	8	12	9	12	7	7
39	2	5	0	0	2	6	2	6	4	7
40	1	2	0	0	1	3	1	5	2	4
41	0	1	0	0	1	2	1	3	1	1
42	0	0	0	0	0	0	0	0	0	0
43	0	1	0	1	0	1	0	2	0	1
44	0	1	0	0	0	0	0	0	0	1
45	0	1	0	0	0	0	1	2	0	1
46	0	1	0	0	0	1	0	1	0	1
47	0	0	0	0	0	0	0	0	0	0
48	0	1	0	0	0	0	0	0	0	2
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0
51	0	0	0	1	0	0	0	2	0	0
52	0	1	0	0	0	0	0	0	0	0
Total	2,179		2,065		2,646		2,688		2,652	

Table 4 (continued)

Clim. week no.	Buffalo		Canton		Carmel		Chasm Falls		Cooperstown	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	0	1	0	0	0	0	0	0	0	0
2	1	3	0	1	0	0	0	0	0	1
3	1	3	0	1	2	5	0	0	1	3
4	3	8	2	6	3	6	1	2	3	7
5	4	6	2	4	5	11	0	2	3	9
6	6	12	4	10	7	10	0	1	4	7
7	9	13	7	12	12	17	5	8	9	16
8	16	21	13	16	22	20	16	18	19	22
9	24	26	21	22	28	20	18	20	25	22
10	29	24	32	28	42	29	35	32	34	26
11	35	22	34	24	48	22	40	29	37	24
12	46	27	48	26	65	26	49	31	53	25
13	61	33	62	30	72	29	56	33	63	27
14	83	33	84	32	93	30	85	21	84	32
15	97	24	89	26	103	24	82	23	91	27
16	109	32	104	35	112	33	105	41	98	33
17	123	28	116	27	129	27	113	22	113	28
18	132	29	124	31	139	23	121	27	122	27
19	140	26	130	29	144	27	110	30	123	30
20	145	22	133	22	147	20	126	21	129	20
21	148	20	139	22	156	23	126	21	135	24
22	148	22	138	24	158	22	133	22	139	22
23	146	24	129	26	145	29	112	27	121	27
24	142	25	127	30	144	23	113	28	124	27
25	131	28	115	31	133	29	98	34	118	32
26	124	31	108	31	124	27	108	28	104	31
27	125	30	107	33	129	30	112	35	108	34
28	104	31	82	35	104	29	76	32	83	36
29	86	31	65	32	88	29	54	29	67	29
30	72	36	54	33	71	28	48	40	54	30
31	53	31	36	27	51	30	45	29	36	25
32	48	27	35	22	49	27	37	23	37	25
33	38	26	25	23	35	25	31	24	26	24
34	24	21	15	14	26	22	23	21	18	16
35	14	18	8	15	15	19	8	11	10	16
36	13	18	7	10	13	15	6	9	7	11
37	5	6	2	5	5	6	1	2	3	6
38	8	12	4	7	5	7	6	9	3	6
39	1	5	1	4	2	5	2	4	2	5
40	1	2	0	2	1	3	0	1	1	2
41	1	2	0	1	0	1	0	1	0	1
42	0	1	0	0	0	0	0	0	0	0
43	0	1	0	1	0	1	0	1	0	1
44	0	0	0	0	0	0	0	0	0	0
45	0	1	0	1	0	1	0	1	0	0
46	0	1	0	0	0	1	0	0	0	1
47	0	0	0	0	0	0	0	0	0	0
48	0	2	0	0	0	0	0	1	0	0
49	0	0	0	0	0	0	0	0	0	0
50	0	1	0	0	0	0	0	0	0	0
51	0	1	0	0	0	1	0	0	0	0
52	0	1	0	0	0	0	0	0	0	0
Total	2,496		2,202		2,627		2,100		2,207	

Table 4 (continued)

Clim. week no.	Cortland Mean	S.D.	Dannemora Mean	S.D.	Dansville Mean	S.D.	Delhi Mean	S.D.	Elmira Mean	S.D.
1	0	1	0	0	0	1	0	1	0	2
2	0	0	0	0	0	1	0	1	1	2
3	0	1	0	0	0	1	1	3	3	7
4	3	7	2	5	6	14	3	7	5	10
5	5	8	2	5	10	12	3	7	7	12
6	2	3	4	11	8	8	6	13	9	16
7	7	16	6	12	14	15	9	14	16	21
8	25	26	13	18	30	27	18	22	26	25
9	29	30	20	21	34	31	25	22	37	30
10	34	26	33	30	52	34	34	26	48	32
11	40	29	33	25	56	25	38	24	52	27
12	54	40	46	27	74	36	52	26	70	31
13	52	32	65	32	72	34	57	30	77	33
14	80	16	82	33	104	17	80	30	100	33
15	93	27	87	26	116	30	90	26	110	26
16	103	41	100	39	125	43	96	35	120	36
17	121	27	113	28	143	33	111	26	135	28
18	133	24	122	35	156	26	118	26	145	30
19	114	32	127	28	138	36	121	29	146	29
20	133	20	128	21	161	25	126	23	151	24
21	137	27	135	21	160	28	135	23	159	27
22	142	24	136	23	164	23	136	19	159	21
23	119	31	123	28	146	31	121	29	146	33
24	120	26	124	30	142	31	122	24	143	27
25	113	33	113	33	136	32	110	30	134	29
26	109	26	108	32	140	27	104	29	122	33
27	121	36	105	37	141	37	106	33	128	33
28	82	37	83	36	110	36	83	34	104	34
29	59	30	67	32	79	32	72	28	85	33
30	49	39	54	34	64	40	56	33	68	33
31	47	32	33	27	71	34	38	27	47	32
32	38	28	35	22	56	32	37	25	46	29
33	34	28	27	27	50	24	26	23	32	26
34	21	19	17	20	36	29	17	15	23	20
35	10	11	8	13	19	15	9	14	12	15
36	8	13	5	9	14	19	9	13	11	14
37	1	2	2	4	4	5	3	5	5	8
38	4	5	3	6	9	12	6	9	7	12
39	1	3	1	4	2	3	2	4	2	6
40	0	1	0	0	0	0	1	3	1	2
41	1	2	0	1	2	3	0	1	1	2
42	0	0	0	0	0	0	0	0	0	0
43	0	1	0	0	0	1	0	1	0	1
44	0	0	0	0	0	0	0	0	0	0
45	0	1	0	0	1	3	0	1	0	1
46	0	0	0	0	0	0	0	1	0	1
47	0	0	0	0	0	0	0	0	0	0
48	1	2	0	0	1	5	0	1	0	2
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	1	0	0	0	2
52	0	1	0	0	0	1	0	0	0	0
Total	2,245		2,162		2,846		2,181		2,693	

Table 4 (continued)

Clim. week no.	Fredonia Mean	S.D.	Freehold Mean	S.D.	Geneva Mean	S.D.	Gowanda Mean	S.D.	Hemlock Mean	S.D.
1	0	2	0	0	0	0	1	1	0	0
2	2	6	1	2	1	3	1	3	0	1
3	4	10	0	1	3	7	1	2	1	3
4	7	13	4	8	5	10	5	8	3	6
5	8	12	6	7	6	11	10	14	4	7
6	11	16	5	8	8	15	8	9	6	12
7	16	22	15	14	14	19	16	18	10	13
8	24	24	39	32	25	24	37	32	18	19
9	34	30	35	25	33	30	37	36	27	27
10	42	30	50	32	44	32	44	30	38	28
11	47	24	61	27	46	25	54	28	42	22
12	62	28	75	33	66	29	65	37	60	27
13	73	31	78	30	75	33	65	31	70	32
14	99	35	116	18	101	33	92	18	93	33
15	111	28	115	24	109	27	108	24	102	26
16	121	34	125	45	119	36	119	46	114	35
17	135	30	155	31	137	27	130	34	130	27
18	145	29	157	19	146	27	145	23	139	28
19	149	26	143	26	149	29	129	28	144	27
20	150	22	164	22	152	21	144	20	145	24
21	157	24	167	26	158	24	147	22	152	23
22	160	24	170	19	161	21	153	22	153	22
23	151	25	145	27	149	30	134	25	142	28
24	150	27	150	27	146	28	133	23	140	28
25	139	26	139	32	138	31	124	31	128	29
26	133	31	138	25	128	31	131	28	120	33
27	135	32	139	33	133	34	136	31	123	33
28	116	29	101	31	109	34	100	33	99	33
29	102	32	82	31	92	35	82	29	85	32
30	86	35	66	38	76	36	69	41	68	34
31	62	32	57	34	52	29	65	35	47	30
32	59	30	49	29	52	28	55	31	48	27
33	47	26	37	27	39	25	48	25	35	24
34	31	23	23	15	27	21	36	26	23	19
35	19	20	13	14	16	18	18	16	13	16
36	16	18	10	14	12	14	12	18	10	12
37	7	9	4	5	5	8	4	5	4	7
38	12	15	4	6	8	13	12	13	9	12
39	3	7	1	2	2	7	2	4	2	5
40	1	4	0	2	1	2	1	1	1	3
41	1	3	1	2	1	2	2	3	1	2
42	0	0	0	0	0	0	0	0	0	0
43	1	2	0	2	0	1	1	3	0	1
44	0	0	1	2	0	1	0	0	0	0
45	1	2	1	3	0	1	1	2	0	1
46	0	2	0	0	0	2	0	0	0	1
47	0	1	0	1	0	0	0	0	0	0
48	0	1	0	1	0	2	1	4	0	1
49	0	0	0	0	0	0	0	0	0	0
50	0	2	0	0	0	0	0	0	0	0
51	0	1	0	1	0	1	0	1	0	1
52	1	2	0	1	0	1	1	2	0	0
Total	2,830		2,842		2,744		2,679		2,549	

Table 4 (continued)

Clim. week no.	Indian Lake Mean	S.D.	Ithaca Mean	S.D.	Jamestown Mean	S.D.	Lake Placid Mean	S.D.	Lewiston Mean	S.D.
1	0	0	0	1	1	2	0	0	0	0
2	0	0	1	2	2	5	0	0	0	0
3	0	0	2	5	4	9	0	0	0	0
4	0	0	5	9	7	12	0	1	4	6
5	0	0	6	10	7	11	0	0	5	6
6	0	0	8	14	12	17	0	0	3	7
7	0	2	13	19	18	25	3	6	11	13
8	7	10	21	22	28	28	7	8	21	21
9	8	11	32	29	39	31	10	13	28	27
10	17	16	39	30	47	30	22	25	42	29
11	20	22	41	25	51	25	24	23	51	24
12	30	26	59	28	67	31	39	28	65	35
13	32	24	67	32	75	31	39	28	73	29
14	54	12	88	35	97	35	63	25	97	17
15	58	22	96	27	107	30	62	26	115	26
16	71	39	107	36	115	37	76	40	130	37
17	86	27	122	28	130	32	92	25	185	178
18	93	23	133	28	139	29	100	25	244	352
19	79	31	137	31	140	30	87	33	143	23
20	95	21	140	24	143	23	103	21	158	22
21	101	27	148	27	151	25	106	24	162	22
22	106	19	149	23	153	25	111	22	168	22
23	82	27	136	33	140	26	88	29	150	23
24	87	27	135	28	141	27	90	29	150	22
25	77	34	126	32	130	31	80	32	137	28
26	77	23	114	31	122	32	85	24	148	31
27	85	34	119	34	125	33	87	34	140	31
28	52	29	96	34	105	30	58	33	112	29
29	30	23	80	33	91	33	34	25	88	29
30	31	28	66	35	74	38	28	28	75	41
31	23	21	44	30	53	32	26	23	68	30
32	18	15	44	27	51	32	22	18	58	31
33	14	17	34	27	40	26	21	19	53	27
34	7	8	22	19	27	20	11	11	32	23
35	2	5	13	17	15	18	3	6	17	16
36	2	3	11	14	13	15	3	5	10	11
37	0	0	5	8	5	8	0	1	4	4
38	0	0	9	14	10	14	1	3	11	14
39	0	0	2	6	2	5	0	1	1	2
40	0	0	1	3	1	2	0	0	0	1
41	0	0	0	2	1	2	0	0	1	1
42	0	0	0	0	0	0	0	0	0	0
43	0	0	0	1	0	1	0	0	1	2
44	0	0	0	0	0	0	0	0	0	0
45	0	0	0	1	0	1	0	0	0	2
46	0	0	0	3	0	2	0	0	0	0
47	0	0	0	0	0	1	0	0	0	0
48	0	0	0	2	1	3	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	2	0	0	0	0
51	0	0	0	1	0	1	0	0	0	0
52	0	0	0	1	1	3	0	0	0	0
Total	1,444		2,471		2,681		1,581		2,961	

Table 4 (continued)

Clim. week no.	Liberty Mean	S.D.	Little Falls Mean	S.D.	Lockport Mean	S.D.	Lowville Mean	S.D.	Massena Mean	S.D.
1	0	0	0	0	4	11	0	0	0	0
2	0	0	0	1	6	11	0	0	0	0
3	0	0	0	2	13	22	0	0	0	0
4	0	0	3	9	20	30	2	5	0	0
5	2	4	3	8	23	29	2	5	1	2
6	2	4	5	11	30	28	4	12	1	2
7	6	10	9	15	46	49	7	12	5	8
8	25	24	17	21	58	41	13	18	10	13
9	26	21	27	23	78	40	20	21	16	15
10	23	20	37	30	97	44	34	29	33	29
11	36	26	39	23	102	29	33	23	32	20
12	47	35	54	26	116	31	47	26	50	29
13	48	30	65	30	137	39	61	29	58	32
14	75	17	87	30	156	37	80	29	84	23
15	78	25	94	25	170	27	88	27	85	22
16	88	39	103	35	183	36	101	36	107	41
17	106	24	119	28	199	29	113	27	120	21
18	119	21	127	26	203	25	122	29	126	28
19	102	26	134	29	214	28	126	30	118	30
20	121	20	137	22	211	25	127	22	137	21
21	128	23	144	23	221	23	134	24	137	21
22	134	19	145	22	222	24	136	23	138	25
23	109	27	131	31	208	29	123	30	121	25
24	111	21	130	27	210	27	123	28	120	28
25	109	32	123	30	196	34	113	31	101	34
26	100	22	114	28	187	40	105	30	111	31
27	113	33	114	31	191	35	104	34	108	36
28	77	33	91	33	169	31	81	37	74	31
29	57	27	75	32	156	33	66	32	48	31
30	46	29	58	31	133	39	52	34	41	36
31	40	29	39	25	108	40	34	29	34	24
32	31	26	38	22	101	40	34	21	28	18
33	28	23	29	24	87	39	24	22	24	19
34	17	19	19	17	64	33	15	17	14	15
35	10	12	8	14	46	30	8	14	4	9
36	7	11	6	10	42	30	5	9	4	5
37	0	1	3	5	26	22	2	5	1	3
38	2	4	4	6	28	29	3	5	3	5
39	1	3	1	4	9	13	1	5	1	2
40	0	0	0	2	7	11	0	1	0	0
41	0	1	0	1	5	11	0	0	0	0
42	0	0	0	0	2	4	0	0	0	0
43	0	0	0	0	3	7	0	0	1	2
44	0	0	0	0	2	4	0	0	0	0
45	0	0	0	1	4	8	0	1	0	1
46	0	0	0	1	2	4	0	0	0	0
47	0	0	0	0	1	3	0	0	0	0
48	0	0	0	0	1	4	0	0	0	0
49	0	0	0	0	1	4	0	0	0	0
50	0	0	0	0	1	2	0	0	0	0
51	0	2	0	0	2	5	0	0	0	0
52	0	0	0	0	4	9	0	0	0	0
Total	2,024		2,332		2,509		2,143		2,095	

Table 4 (continued)

Clim. week no.	Morrisville Mean	S.D.	New York Mean	S.D.	Norwich Mean	S.D.	Ogdensburg Mean	S.D.	Oswego Mean	S.D.
1	0	0	1	2	0	0	0	0	0	1
2	0	0	3	5	0	0	0	0	1	2
3	0	1	5	12	1	2	0	0	1	2
4	2	4	11	15	3	6	2	5	3	8
5	2	6	11	15	4	8	1	5	3	5
6	4	11	15	17	5	12	4	9	6	12
7	8	13	23	24	9	15	5	11	8	12
8	13	16	38	25	18	20	15	16	13	15
9	22	22	45	24	25	23	20	20	21	22
10	28	25	68	34	32	25	33	26	28	25
11	28	21	77	23	35	24	36	23	31	21
12	43	26	93	26	50	26	52	27	43	22
13	51	28	103	32	55	29	68	27	58	26
14	71	31	131	34	76	29	85	30	74	31
15	78	25	136	26	86	25	94	26	85	24
16	92	32	146	33	95	36	110	35	100	35
17	102	26	165	27	109	28	126	20	115	28
18	112	29	172	23	120	26	136	30	127	32
19	115	32	181	21	121	31	141	28	134	34
20	118	21	181	20	124	23	141	22	137	31
21	125	26	189	22	134	26	147	21	142	32
22	129	22	191	22	136	22	147	20	146	28
23	114	32	180	25	120	32	137	26	140	26
24	111	27	178	24	120	26	143	30	140	26
25	103	31	166	24	112	34	128	35	130	26
26	92	29	160	28	100	30	121	28	121	29
27	97	32	164	28	104	33	109	30	122	33
28	73	34	143	27	81	34	88	35	102	33
29	64	29	125	28	67	31	78	35	85	32
30	44	29	109	30	52	32	58	31	68	34
31	28	23	89	30	33	26	37	24	48	28
32	29	22	81	33	32	23	41	24	47	24
33	22	21	68	28	24	23	27	22	35	25
34	13	13	49	28	15	15	18	16	24	19
35	7	12	33	26	8	13	7	11	13	17
36	6	9	27	21	8	11	7	10	11	14
37	2	4	15	15	2	3	2	5	5	7
38	4	7	15	16	5	8	2	5	7	9
39	1	4	5	9	2	6	2	6	2	6
40	0	2	3	5	1	5	0	0	0	2
41	0	1	2	5	0	1	0	1	0	2
42	0	0	0	1	0	0	0	0	0	0
43	0	0	1	2	0	0	0	0	0	2
44	0	0	0	2	0	0	0	0	0	1
45	0	0	2	5	0	0	0	0	0	1
46	0	1	1	5	0	0	0	0	0	1
47	0	0	0	1	0	0	0	0	0	0
48	0	1	0	1	0	0	0	0	0	1
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	1	0	0	0	0	0	0
51	0	0	1	3	0	0	0	0	0	0
52	0	0	1	5	0	0	0	0	0	0
Total	1,953		3,603		2,124		2,368		2,376	

Table 4 (continued)

Clim. week no.	Port Jervis Mean	S.D.	Poughkeepsie Mean	S.D.	Rochester Mean	S.D.	Roxbury Mean	S.D.	Salisbury Mean	S.D.
1	0	0	0	0	0	0	0	1	0	0
2	1	2	1	2	1	4	0	1	0	0
3	3	9	2	8	2	5	1	4	0	0
4	6	11	6	11	5	10	4	8	1	4
5	7	12	9	15	6	9	3	7	1	4
6	9	15	10	13	8	15	3	5	3	8
7	14	20	18	25	13	17	10	16	4	10
8	29	26	34	30	21	22	19	23	11	15
9	42	32	41	28	30	31	24	22	18	20
10	56	34	59	37	41	32	35	28	25	25
11	58	29	63	27	45	23	36	25	25	21
12	79	30	83	28	60	28	48	26	37	22
13	83	35	93	31	73	32	55	31	46	26
14	104	32	116	29	95	34	76	31	69	32
15	115	26	124	24	105	26	86	27	74	28
16	125	33	136	31	119	36	95	33	84	34
17	141	28	152	27	134	26	108	30	98	25
18	147	27	163	23	144	28	115	26	106	27
19	154	26	167	24	148	30	116	33	112	31
20	155	22	169	19	151	22	124	26	116	20
21	163	21	173	22	157	24	134	22	120	24
22	165	22	179	18	158	23	132	23	123	23
23	150	30	165	26	148	29	119	28	108	32
24	150	28	163	24	146	27	118	28	109	28
25	136	27	153	22	134	30	109	31	100	31
26	124	31	139	29	127	33	99	29	90	29
27	129	34	142	31	127	34	101	32	91	32
28	106	31	121	30	105	33	77	32	67	35
29	94	30	103	28	91	34	67	30	54	29
30	71	33	81	31	73	37	52	32	44	31
31	51	30	59	24	50	32	33	24	26	23
32	48	28	57	28	50	28	33	23	25	19
33	36	27	46	30	39	28	23	22	17	20
34	26	20	32	23	25	21	13	13	10	10
35	15	19	19	20	15	18	8	13	5	10
36	11	16	16	17	13	16	9	13	4	7
37	5	6	7	9	5	7	3	4	1	3
38	6	8	7	11	9	13	5	8	2	4
39	2	5	3	6	2	7	2	5	1	3
40	1	4	1	2	1	1	0	2	0	1
41	0	2	0	1	1	2	0	1	0	0
42	0	0	0	0	0	0	0	0	0	0
43	0	1	0	2	1	2	0	1	0	0
44	0	0	0	1	0	1	0	1	0	0
45	0	1	1	2	0	1	0	1	0	0
46	0	1	0	1	0	2	0	2	0	1
47	0	0	0	0	0	1	0	0	0	0
48	0	1	0	1	0	1	0	2	0	0
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	1	0	0	0	0
51	1	2	0	1	0	1	0	1	0	0
52	0	2	1	3	0	1	0	0	0	0
Total	2,818		3,114		2,678		2,095		1,827	

Table 4 (continued)

Clim. week no.	Setauket		South Wales Emery Park		Spencer		Spier Falls		Stafford	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	0	1	0	2	0	1	0	0	0	1
2	1	3	0	1	0	1	0	0	0	1
3	2	6	2	5	0	0	0	0	0	1
4	5	10	4	7	2	6	2	6	4	8
5	7	12	6	10	4	7	1	2	6	11
6	9	11	5	7	2	4	3	5	4	7
7	15	19	13	17	8	12	7	10	14	15
8	26	20	20	23	26	26	27	26	28	28
9	31	21	27	20	26	25	26	24	30	31
10	54	31	33	28	33	23	41	29	41	29
11	59	21	33	23	40	24	50	27	48	25
12	74	23	46	26	51	31	67	32	62	36
13	85	29	60	29	53	31	71	30	65	32
14	106	26	84	32	79	15	103	14	93	19
15	117	22	90	28	88	29	107	22	106	28
16	126	30	103	37	97	41	117	41	120	42
17	143	25	117	28	118	25	140	26	133	29
18	152	23	128	29	125	19	146	21	144	26
19	159	20	130	31	113	26	134	28	133	26
20	161	21	133	20	131	21	151	20	146	22
21	170	21	139	25	132	26	155	25	151	25
22	172	19	144	24	137	22	159	20	156	22
23	159	21	126	26	115	28	136	25	136	25
24	162	20	132	29	120	26	139	25	136	28
25	152	23	120	35	105	30	127	32	121	34
26	144	25	105	37	106	28	128	22	131	31
27	147	26	113	35	114	32	133	33	132	37
28	128	24	89	36	76	31	94	33	99	29
29	112	25	70	32	57	26	71	29	74	32
30	94	26	58	31	45	38	60	38	65	42
31	81	29	40	29	43	33	50	27	59	34
32	71	27	40	28	36	29	42	24	52	29
33	56	25	28	24	28	22	35	25	42	24
34	43	23	22	21	15	12	21	17	27	20
35	28	23	12	17	7	10	10	12	12	13
36	23	19	11	14	5	10	8	16	10	16
37	12	13	3	8	1	2	2	3	2	2
38	12	12	5	8	3	5	2	3	10	12
39	5	8	1	2	1	3	1	3	2	4
40	2	5	1	1	0	0	0	0	0	1
41	1	4	1	2	0	0	0	1	1	1
42	0	0	0	0	0	0	0	0	0	0
43	0	1	0	1	0	1	0	1	1	2
44	0	1	0	0	0	0	0	0	0	0
45	1	2	0	1	1	2	0	1	0	1
46	1	2	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0
48	0	0	0	2	0	2	0	0	0	1
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0
51	0	1	0	1	0	0	0	0	0	0
52	0	2	0	1	0	0	0	0	0	0
Total	3,108		2,294		2,143		2,566		2,596	

Table 4 (continued)

Clim. week no.	Stillwater Reservoir		Syracuse		Utica		Walden		Wankena	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	0	0	0	0	0	0	0	0	0	0
2	0	0	1	3	0	0	0	1	0	0
3	0	0	2	5	0	0	2	8	0	0
4	0	0	4	8	1	2	4	7	0	1
5	0	0	5	8	3	6	5	10	1	2
6	0	0	9	18	2	4	8	16	2	7
7	1	3	13	18	9	14	13	18	3	8
8	11	16	23	23	24	25	23	21	9	14
9	12	16	32	29	24	27	31	24	15	19
10	19	20	42	32	35	28	47	33	26	24
11	26	22	45	25	42	24	49	25	25	22
12	37	30	62	27	57	34	62	26	38	24
13	42	26	75	33	65	31	74	34	49	27
14	62	16	102	38	91	19	97	33	64	28
15	68	24	106	28	99	29	106	29	70	26
16	73	37	118	36	103	39	117	38	83	37
17	89	22	137	37	122	23	137	31	93	26
18	97	21	141	29	133	21	143	23	98	28
19	90	32	149	27	120	27	153	24	104	29
20	103	20	151	23	140	22	152	23	105	22
21	110	25	156	23	139	24	158	25	112	24
22	112	20	157	24	148	19	160	23	115	22
23	97	26	147	29	128	27	146	32	100	27
24	95	27	146	27	125	21	147	24	102	29
25	85	32	135	31	118	31	132	28	91	32
26	88	23	126	32	118	25	120	29	85	30
27	95	35	129	32	125	36	123	30	85	34
28	62	31	104	35	91	32	96	29	64	35
29	38	25	86	34	65	32	86	30	52	28
30	34	31	71	35	56	42	64	27	40	29
31	29	25	51	30	50	31	44	29	25	24
32	22	17	49	29	37	23	41	26	25	19
33	16	19	37	27	34	22	29	25	17	19
34	11	11	24	21	22	20	22	18	11	12
35	5	8	14	17	9	11	12	16	5	10
36	4	7	12	15	7	10	10	13	4	7
37	0	0	5	8	1	2	4	6	1	5
38	1	3	8	13	5	6	7	11	2	4
39	1	2	2	6	2	4	2	5	1	3
40	0	0	1	3	0	1	1	3	0	2
41	0	0	1	2	1	2	0	1	0	0
42	0	0	0	0	0	0	0	0	0	0
43	0	0	1	2	0	1	0	1	0	0
44	0	0	0	1	0	0	0	1	0	0
45	0	0	1	2	0	0	0	1	0	1
46	0	0	0	2	0	0	0	2	0	0
47	0	0	0	1	0	0	0	0	0	0
48	0	0	0	1	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0
50	0	0	0	1	0	0	0	0	0	0
51	0	0	0	1	0	0	0	1	0	0
52	0	0	0	1	0	0	0	1	0	0
Total	1,635		2,680		2,351		2,627		1,722	

Table 4 (concluded)

Clim. week no.	Watertown		Whitehall		Clim. week no.	Watertown		Whitehall	
	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.
1	0	0	0	0	27	121	32	136	31
2	0	2	0	1	28	98	35	113	35
3	1	2	0	1	29	82	34	83	31
4	3	8	4	8	30	67	37	70	37
5	3	7	6	14	31	43	28	54	30
6	6	13	7	10	32	46	23	47	21
7	10	15	12	17	33	33	25	36	26
8	18	20	29	25	34	21	20	23	20
9	25	25	25	22	35	13	18	13	19
10	37	30	48	34	36	10	14	8	12
11	38	25	57	30	37	4	7	3	6
12	55	28	73	31	38	7	10	2	4
13	69	31	88	33	39	2	6	1	3
14	88	32	107	31	40	1	2	0	0
15	98	26	112	23	41	0	1	0	0
16	111	36	129	41	42	0	0	0	0
17	125	27	153	24	43	0	1	0	0
18	135	30	160	20	44	0	0	0	0
19	142	29	150	23	45	0	1	0	1
20	144	22	162	22	46	0	1	0	0
21	150	22	164	21	47	0	0	0	0
22	152	21	167	18	48	0	2	0	0
23	142	29	147	26	49	0	0	0	0
24	140	28	155	30	50	0	0	0	0
25	129	30	142	30	51	0	0	0	0
26	121	30	136	29	52	0	0	0	0
					Total	2,490		2,822	