



COUNTY OF ERIE  
MARK POLONCARZ  
COUNTY EXECUTIVE

January 15, 2026

Erie County Legislature  
92 Franklin Street – 4<sup>th</sup> Floor  
Buffalo, NY 14202

**RE: Lake Effect Snow Climatology Report**

Dear Honorable Members:

Please find attached a detailed 30-Year Lake Effect Snow Climatology summary for every jurisdiction within Erie County.

The focus of this research was to identify the number of Lake Effect Storms, patterns for initial annual onset and ending of these events, and what if any impacts El Nino or La Nina might have on lake effect snows.

A lake effect event was defined as one that produced at least four inches of snow anywhere in Erie County. A total of 225 events with 4 inches or more were included in the study. The study used snowfall amounts or totals for analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can enhance the potential impacts of a storm.

The data breakdown was done on four scales: county-wide, county divided into Northern, Central and Southern boundaries, Department of Public Works districts and municipal boundaries.

The Erie County Department of Homeland Security and Emergency Service would like to thank Judith Levan, former Meteorologist in Charge at National Weather Service Buffalo, for her work on this project as well as our partners at the National Weather Service for providing access to data.

It is our hope that this report will provide a better understanding of this unique phenomenon to the municipalities of Erie County.

Sincerely,

A handwritten signature in black ink, appearing to read "DANIEL J. NEAVERTH, JR." The signature is fluid and cursive, with a large, stylized 'D' at the beginning.

Daniel J. Neaverth, Jr.  
Commissioner,  
Homeland Security & Emergency  
Services



ERIE COUNTY, NY

# LAKE EFFECT SNOW CLIMATOLOGY



## Erie County NY Lake Effect Snow Climatology

### Table of Contents

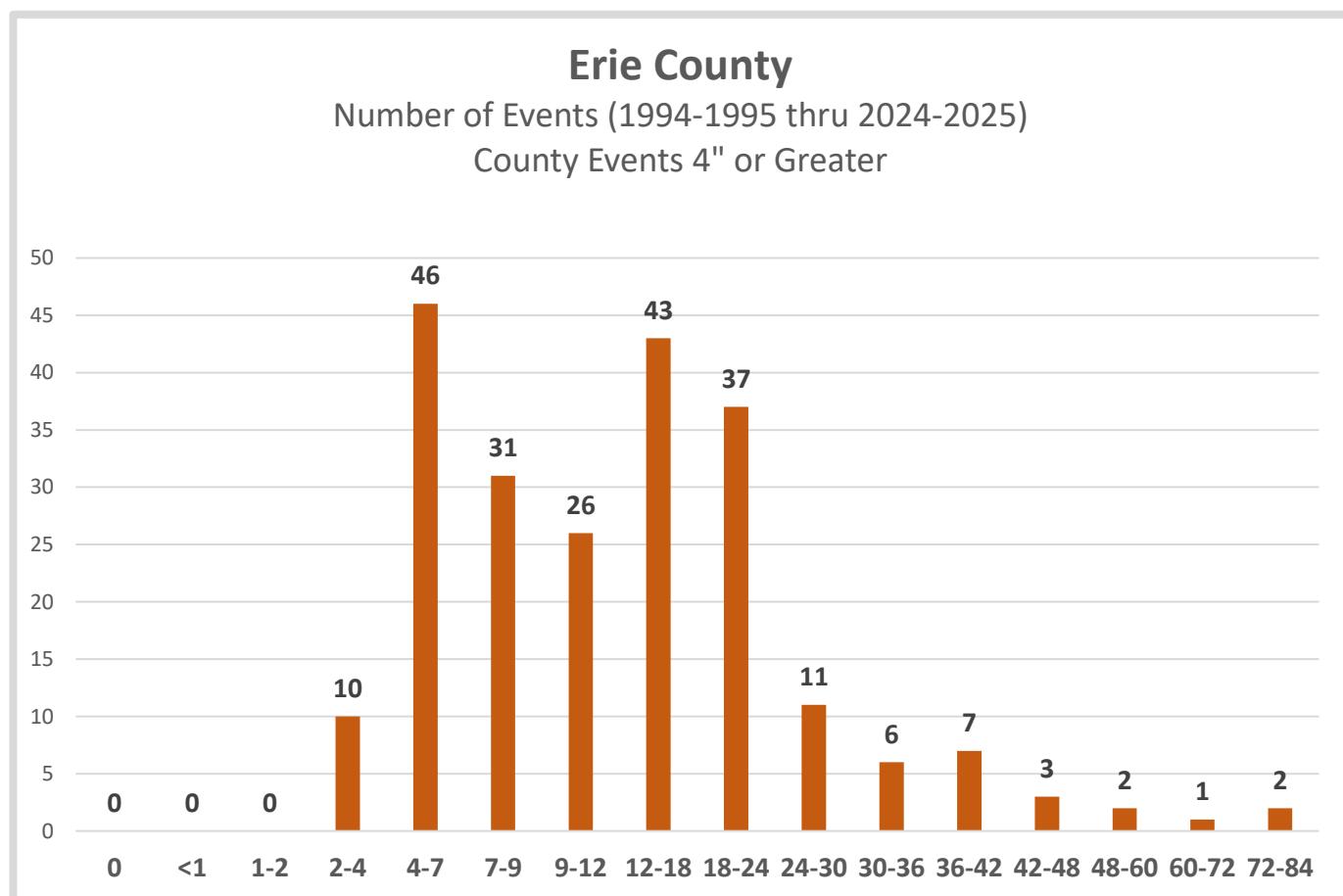
• <b>Methodology</b> .....	<u><a href="#">2</a></u>
• <b>County-Wide Findings</b> .....	<u><a href="#">2</a></u>
• <b>Breaking Down the County – Thirds</b> .....	<u><a href="#">5</a></u>
• <b>Breaking Down the County – DPW Districts</b> .....	<u><a href="#">7</a></u>
• <b>Breaking Down the County – Cities and Towns</b> .....	<u><a href="#">10</a></u>
• <b>Lake Temperature vs. Number of Events</b> .....	<u><a href="#">12</a></u>
• <b>El Niño vs La Niña</b> .....	<u><a href="#">13</a></u>
• <b>Data Sheet – Erie County</b> .....	<u><a href="#">15</a></u>
• <b>Appendix – City/Town Data Sheets</b> .....	<u><a href="#">17</a></u>
○ <b>Grand Island</b> .....	<u><a href="#">18</a></u>
○ <b>Tonawanda</b> .....	<u><a href="#">20</a></u>
○ <b>Amherst</b> .....	<u><a href="#">22</a></u>
○ <b>Clarence</b> .....	<u><a href="#">24</a></u>
○ <b>Newstead</b> .....	<u><a href="#">26</a></u>
○ <b>Buffalo</b> .....	<u><a href="#">28</a></u>
○ <b>Cheektowaga</b> .....	<u><a href="#">30</a></u>
○ <b>Lancaster</b> .....	<u><a href="#">32</a></u>
○ <b>Alden</b> .....	<u><a href="#">34</a></u>
○ <b>Lackawanna</b> .....	<u><a href="#">36</a></u>
○ <b>West Seneca</b> .....	<u><a href="#">38</a></u>
○ <b>Elma</b> .....	<u><a href="#">40</a></u>
○ <b>Marilla</b> .....	<u><a href="#">42</a></u>
○ <b>Hamburg</b> .....	<u><a href="#">44</a></u>
○ <b>Orchard Park</b> .....	<u><a href="#">46</a></u>
○ <b>Aurora</b> .....	<u><a href="#">48</a></u>
○ <b>Wales</b> .....	<u><a href="#">50</a></u>
○ <b>Evans</b> .....	<u><a href="#">52</a></u>
○ <b>Eden</b> .....	<u><a href="#">54</a></u>
○ <b>Boston</b> .....	<u><a href="#">56</a></u>
○ <b>Colden</b> .....	<u><a href="#">58</a></u>
○ <b>Holland</b> .....	<u><a href="#">60</a></u>
○ <b>Brant</b> .....	<u><a href="#">62</a></u>
○ <b>North Collins</b> .....	<u><a href="#">64</a></u>
○ <b>Concord</b> .....	<u><a href="#">66</a></u>
○ <b>Sardinia</b> .....	<u><a href="#">68</a></u>
○ <b>Cattaraugus Reservation</b> .....	<u><a href="#">70</a></u>
○ <b>Collins</b> .....	<u><a href="#">72</a></u>

## Methodology

The National Weather Service Buffalo, N.Y. website has an archive of lake effect events occurring in their county warning area since 1994. Maps of these 298 events from winter 1994-1995 through 2024-2025 were analyzed. NWS derives snowfall amounts from Cooperative Observers and a network of snow spotters. After discussion with Commissioners Neaverth and Geary, null and “insignificant” events were excluded; specifically, those events with no snow or total snow less than 4 inches occurring in Erie County. A lake effect event was defined as one that produced at least four inches of snow anywhere in Erie County. A total of 225 events with 4 inches or more were included in the study. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm.

The data analysis was done on four scales: county-wide, county divided into Northern, Central and Southern, DPW districts and City/Town boundaries. All events were analyzed on each scale.

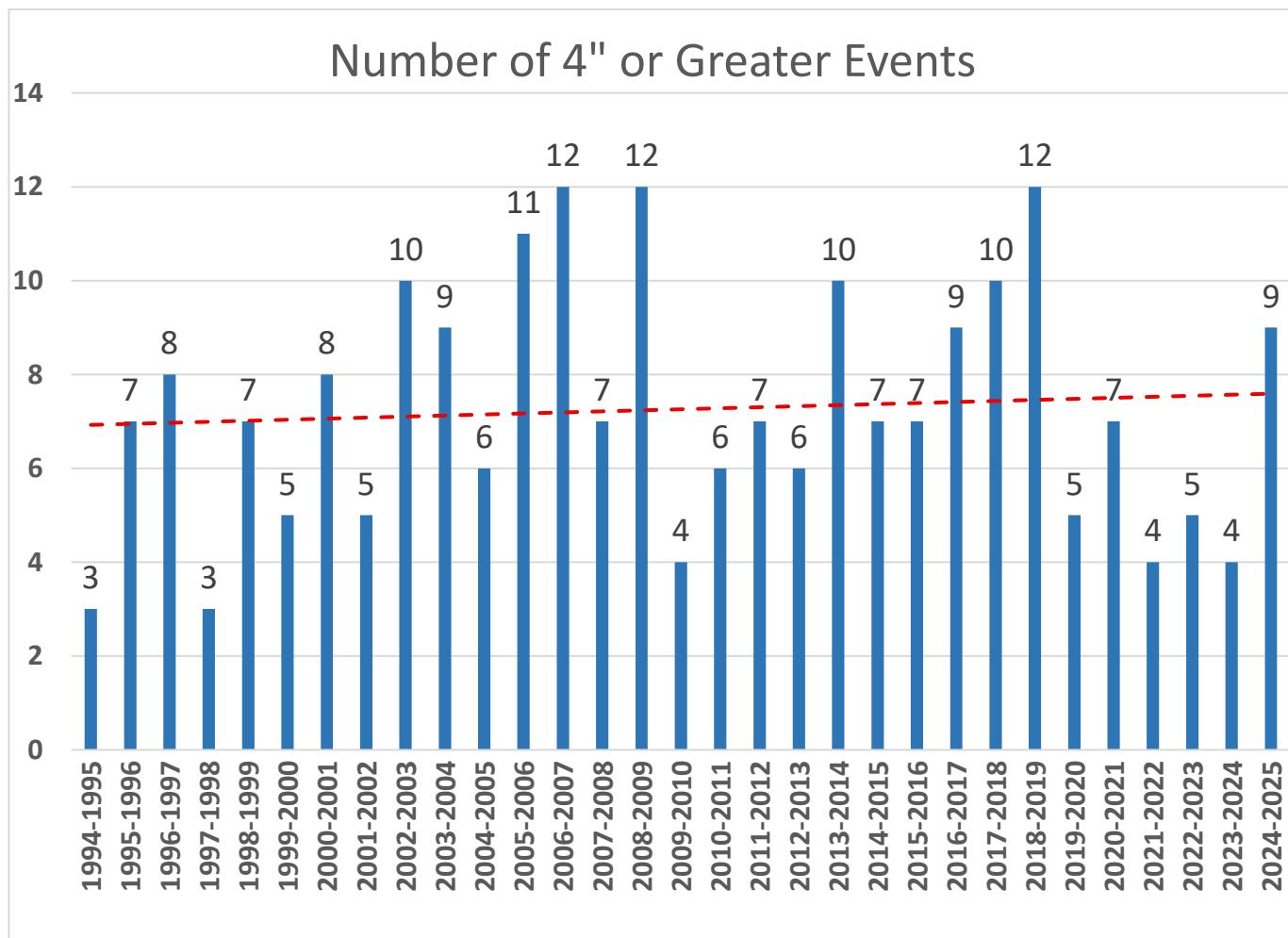
## County-Wide Findings



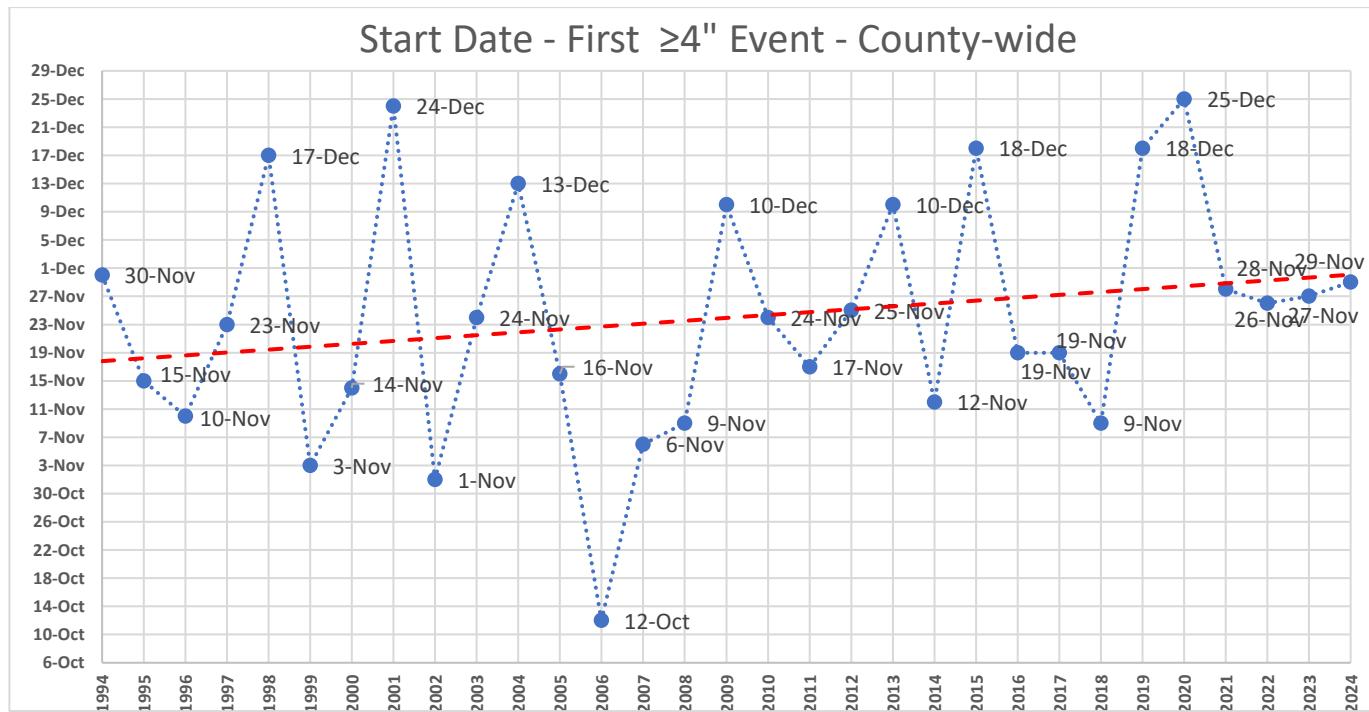
**TOP 5 LAKE EFFECT EVENTS  
(BASED ON MAXIMUM SNOWFALL)**

Storm Dates	Max Snowfall-Erie Co
12/24/2001-01/01/2002	81.6" Buffalo Airport
11/17/2022-11/20/2022	81.2" Hamburg
11/17/2014-11/19/2014	65.0" Cheektowaga
12/23/2022-12/27/2022	51.9" Buffalo Airport
11/19/2014-11/21/2014	49.0" Wales

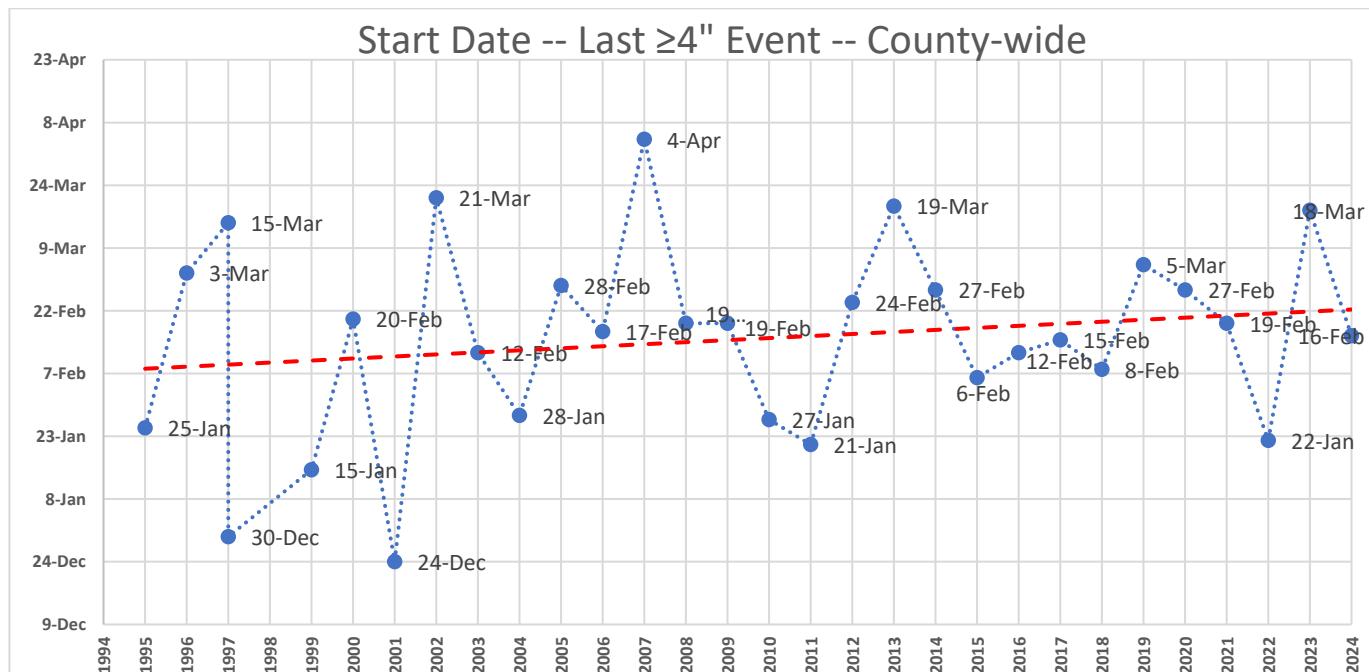
On average, about seven lake effect events occur in a normal winter with a slight increase in number over the last 30 years. The highest number of events in one winter is twelve which occurred three times: 2006-2007, 2008-2009 and 2018-2019. The least number of events in one winter was three which occurred twice: 1994-1995 and 1997-1998.



When does the lake effect snow season begin? Over the past 30 years, the average date for the first four inch or greater event is November 23 although the trend is for a later first start date. Extremes of the start date range from the earliest of October 12 (2006) to the latest December 25 (2020). Early season events can be highly elevation dependent, have higher amounts further away from the lake and lower water to snow ratios ("wetter snow").

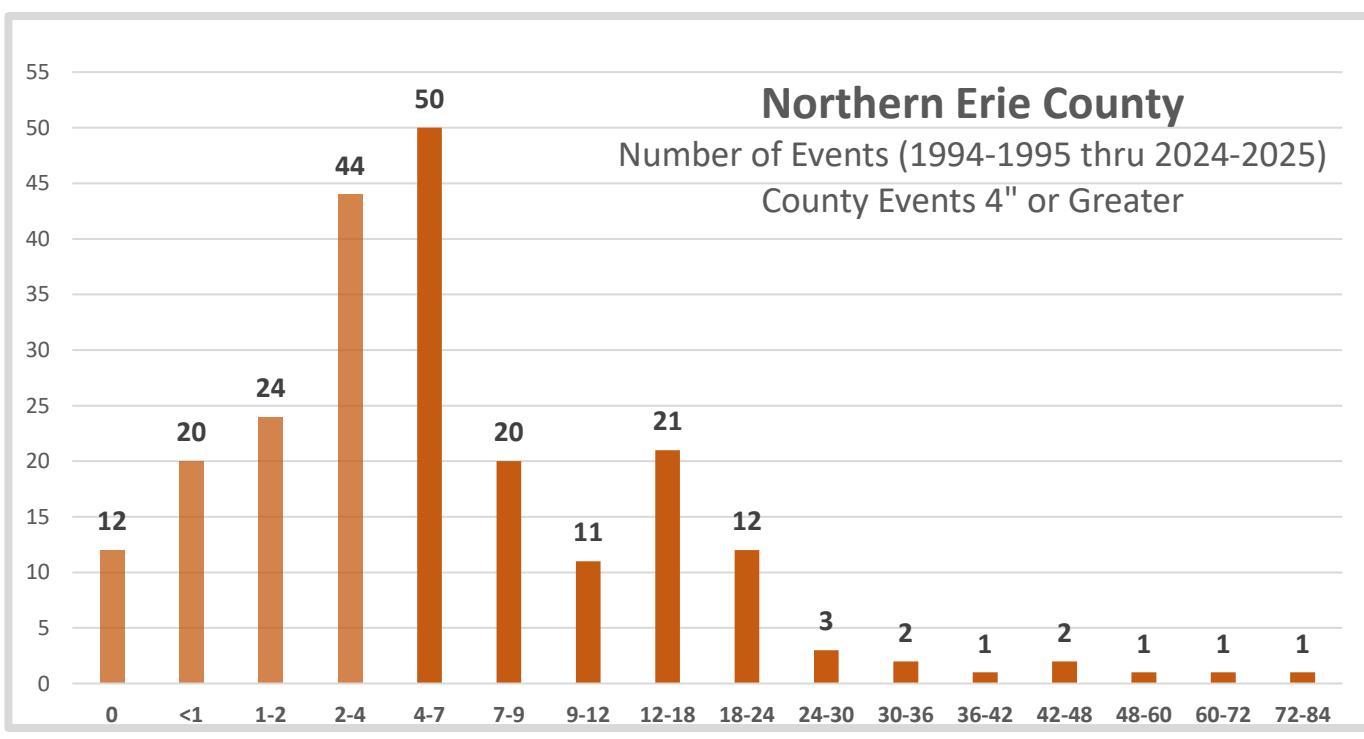
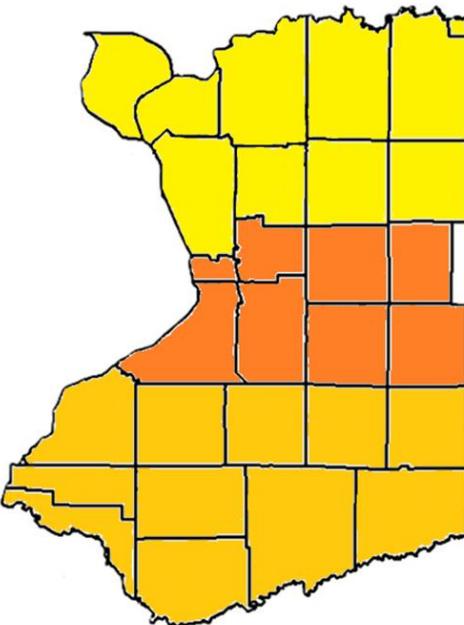


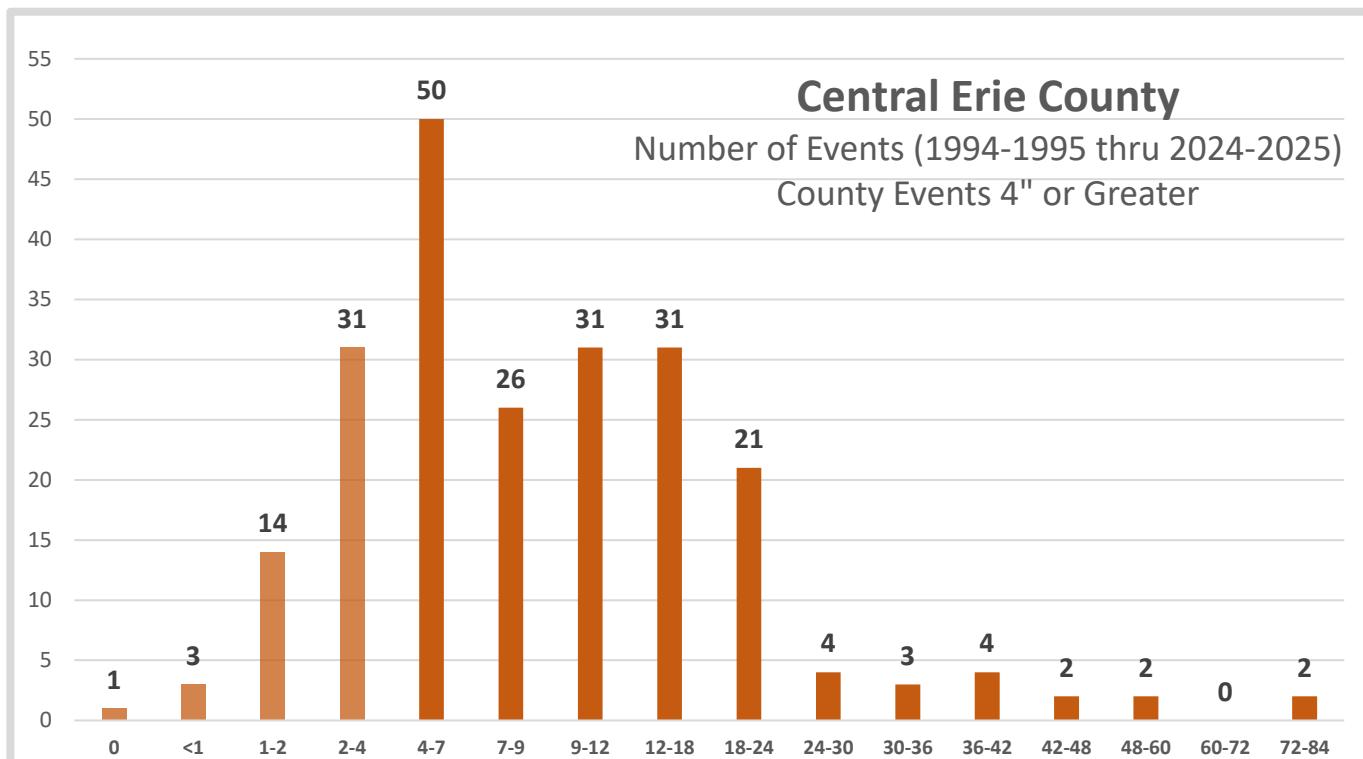
The average date for the last event of the season is February 14. Extremes of the last date range from the earliest of December 24 (2001) to the latest April 4 (2007).



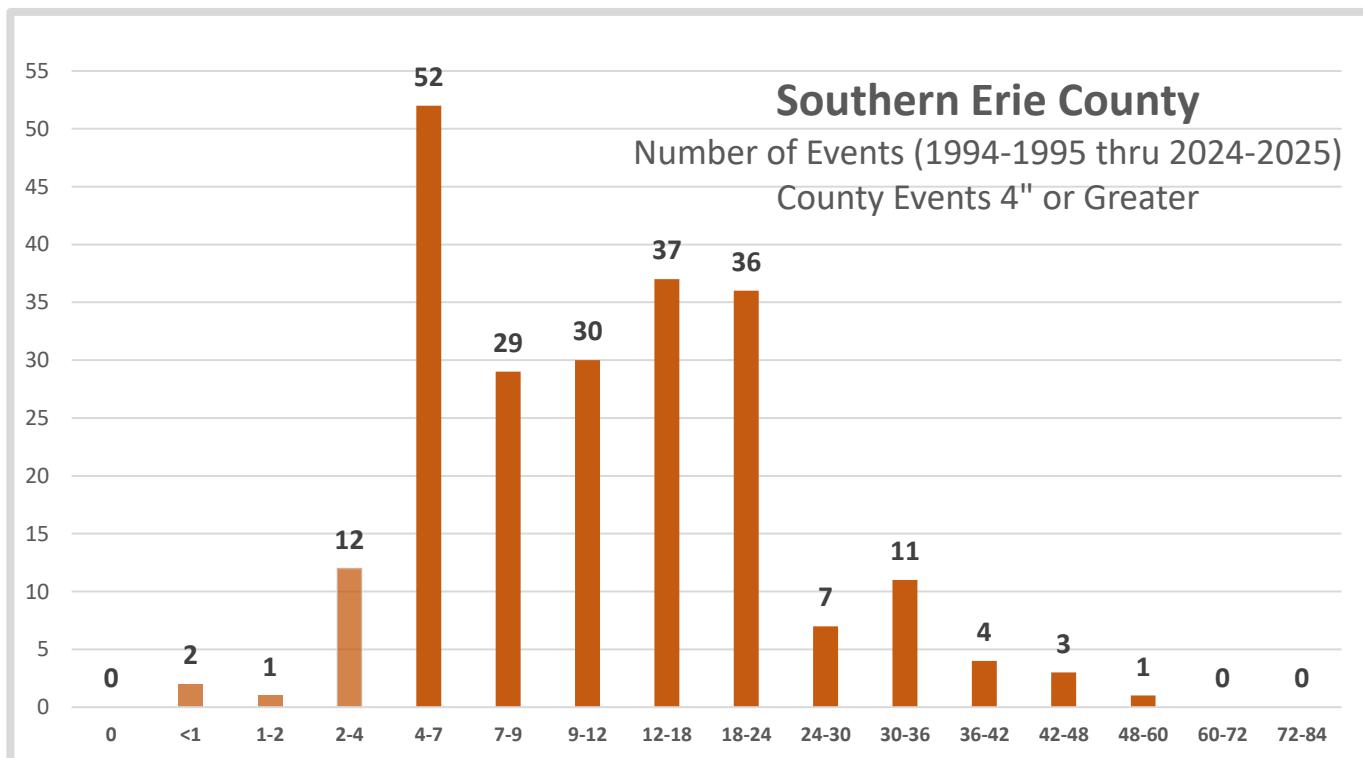
## Breaking down the County – Thirds

The vast majority of events in Erie County are snows off Lake Erie. Northern Erie County can be more susceptible to lake snows off Lake Ontario under a northerly flow. The entire county is susceptible to lake snows with upstream multi-lake influences.





In Central Erie County, of the 225 events less than four inches of snow fell 49 times (~22%)



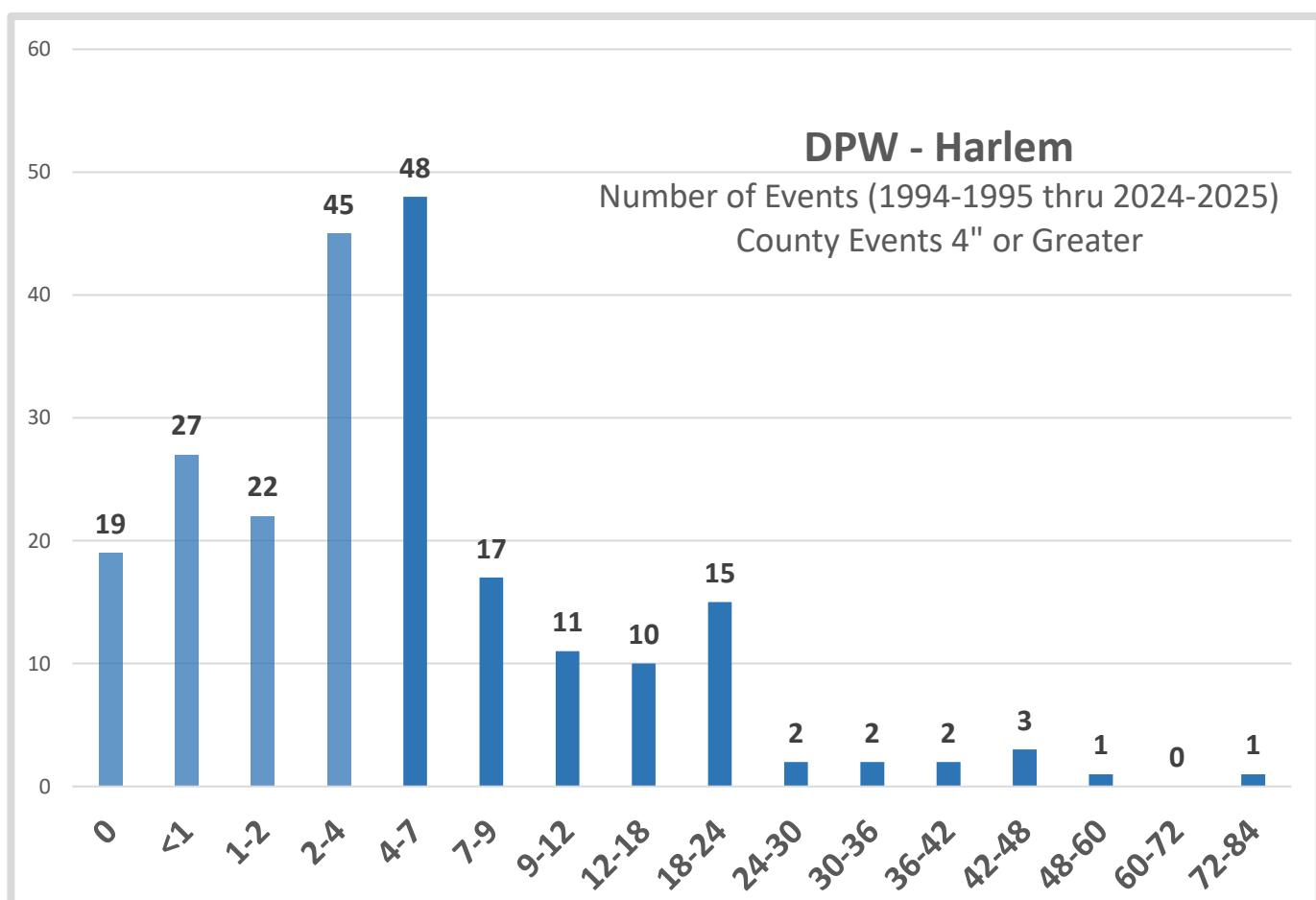
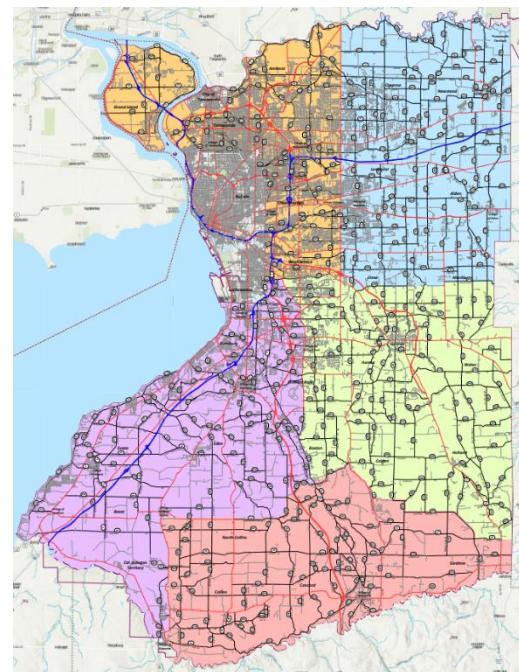
In Southern Erie County, of the 225 events less than four inches of snow only fell 15 times. (~5%)

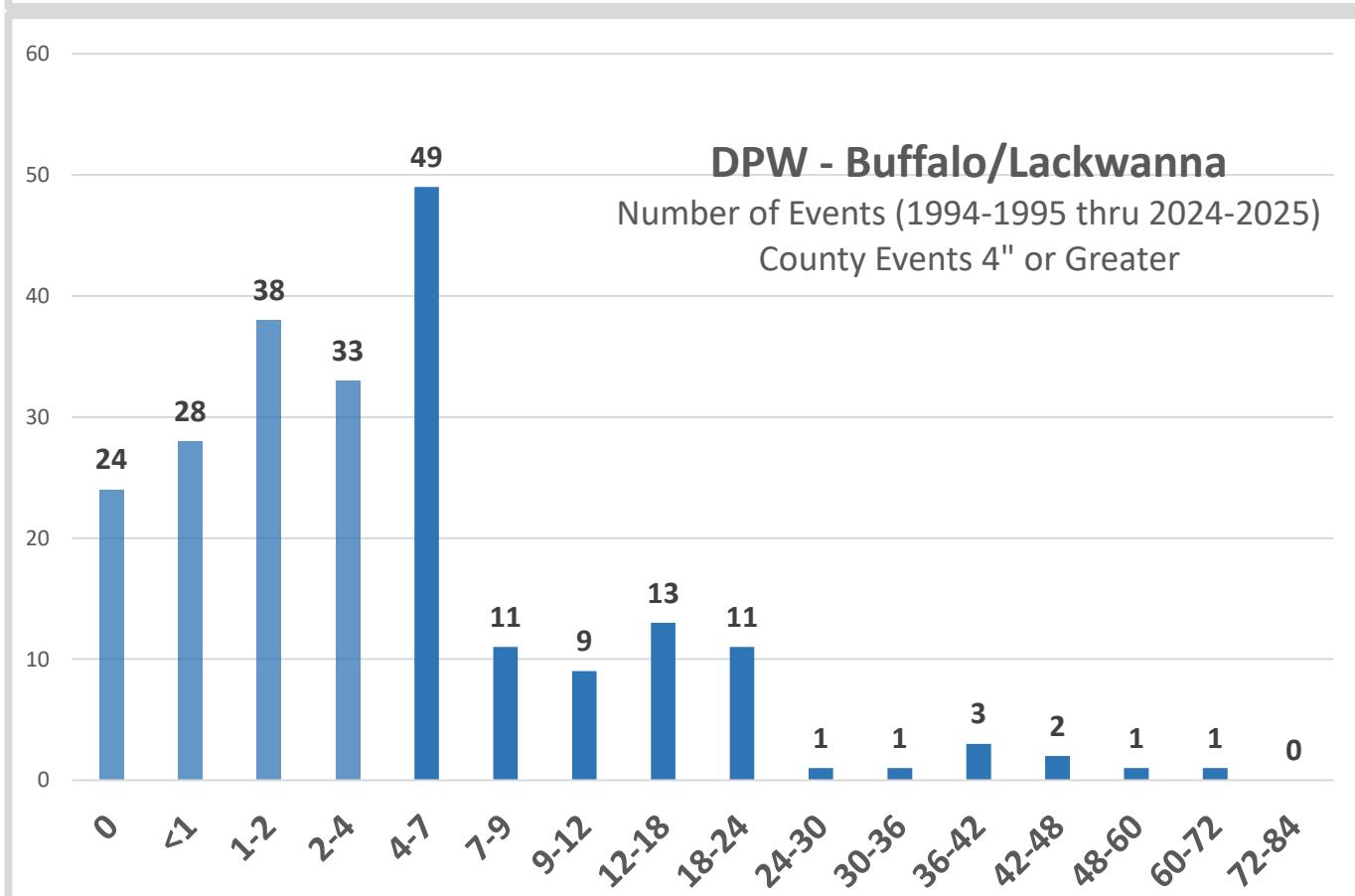
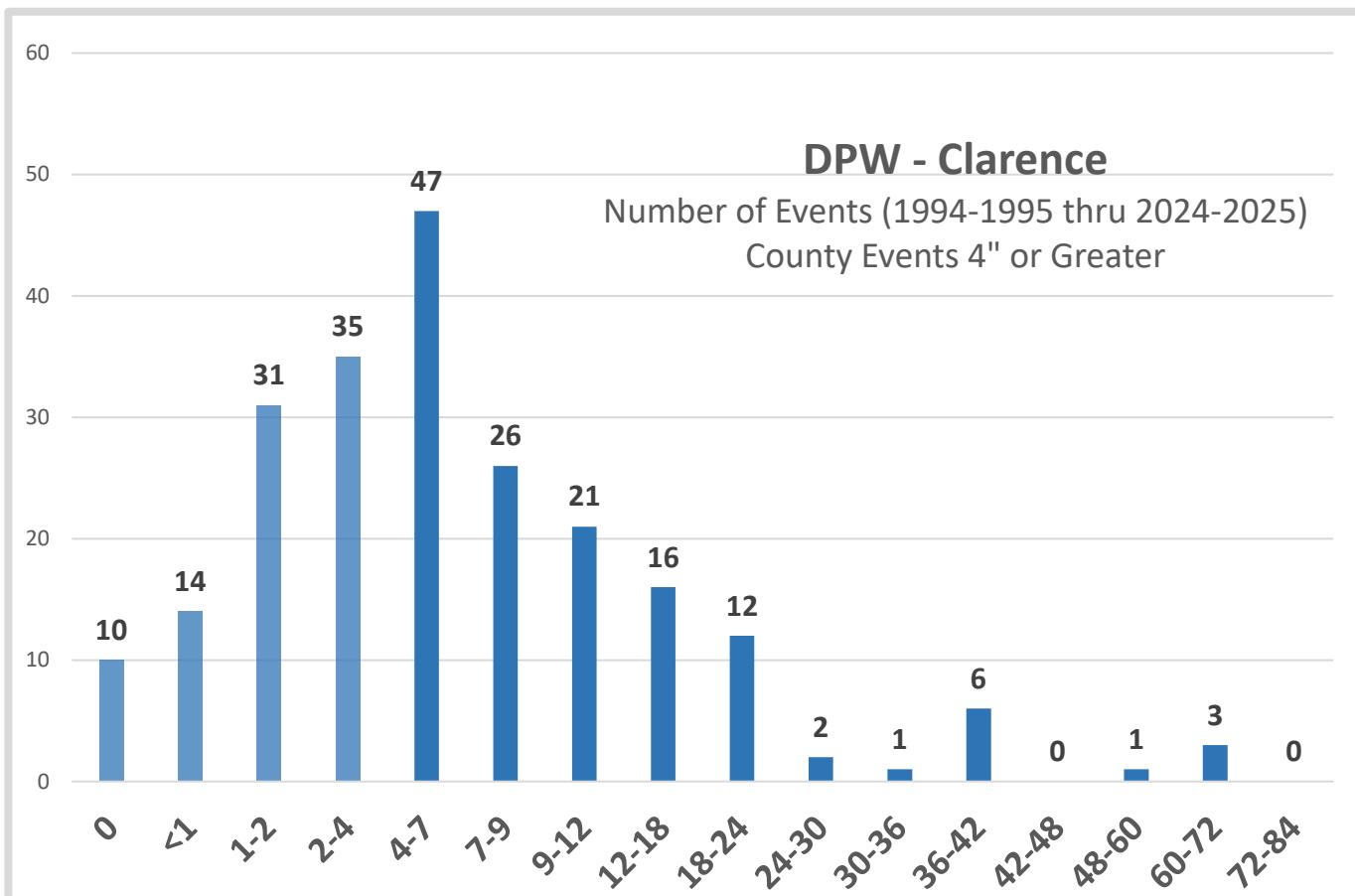
## Breaking down the County – DPW Districts

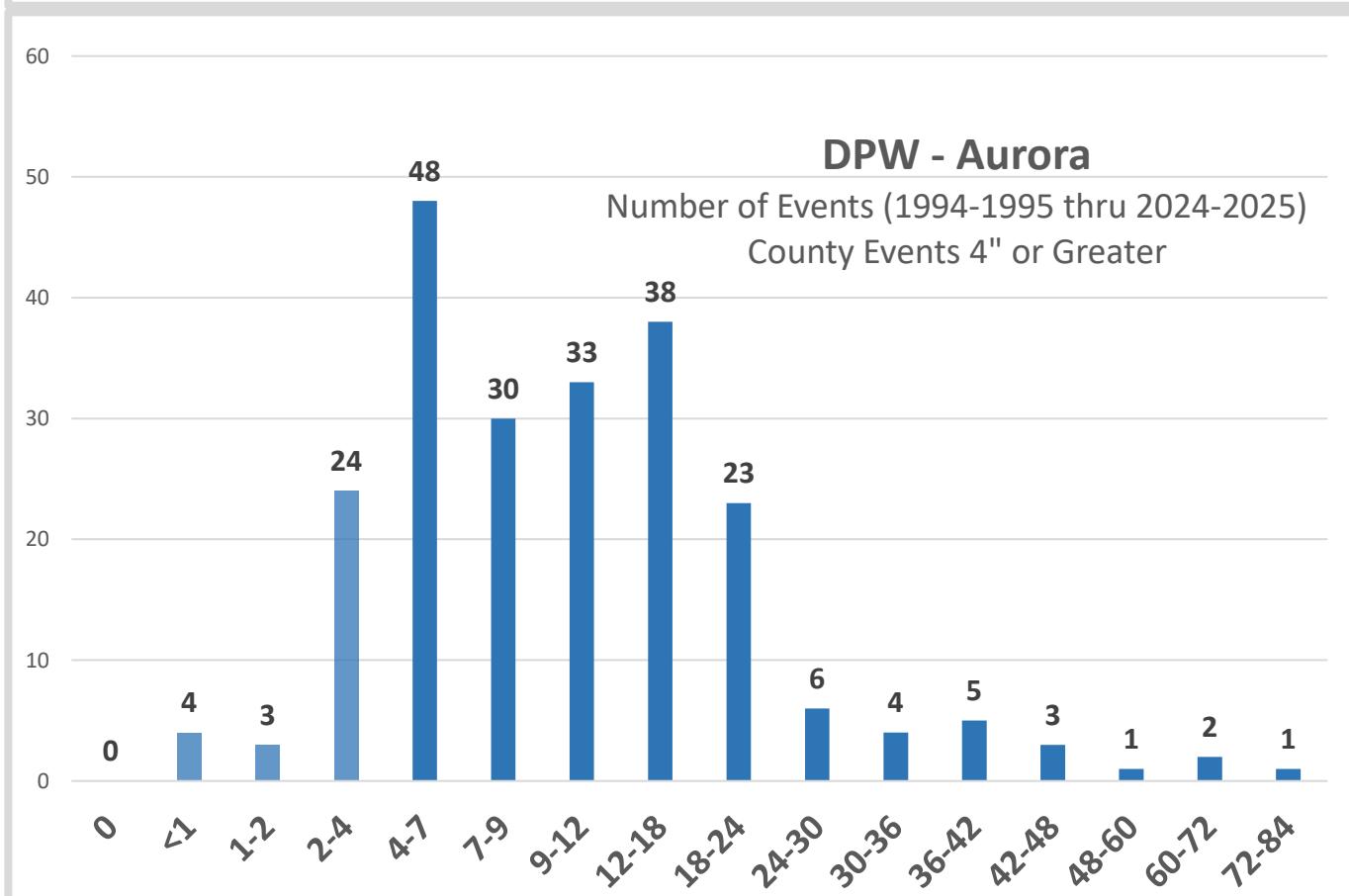
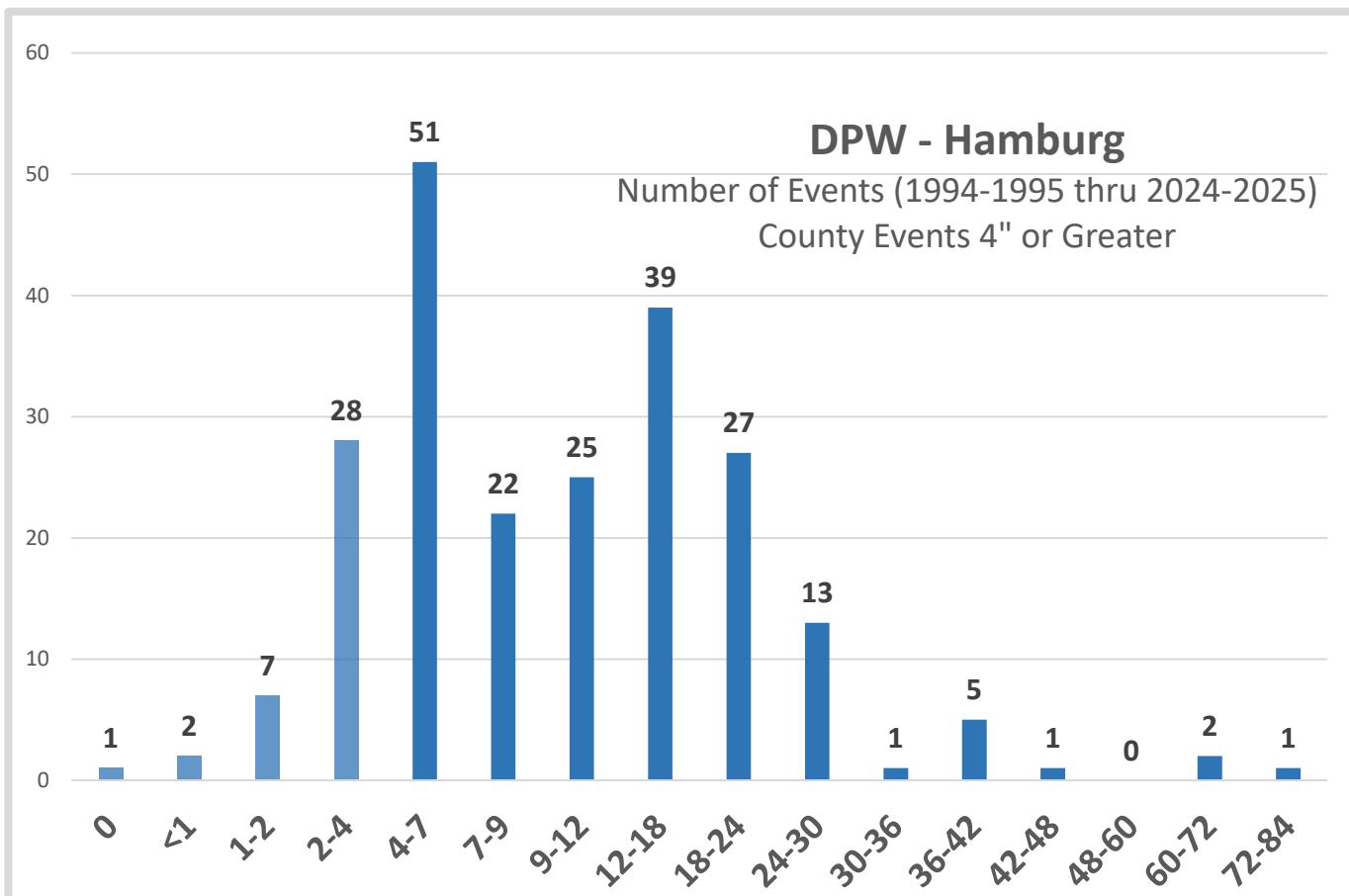
An analysis was done aligned with the DPW Districts: Harlem, Clarence, Buffalo/Lackawanna, Hamburg, Aurora and Concord.

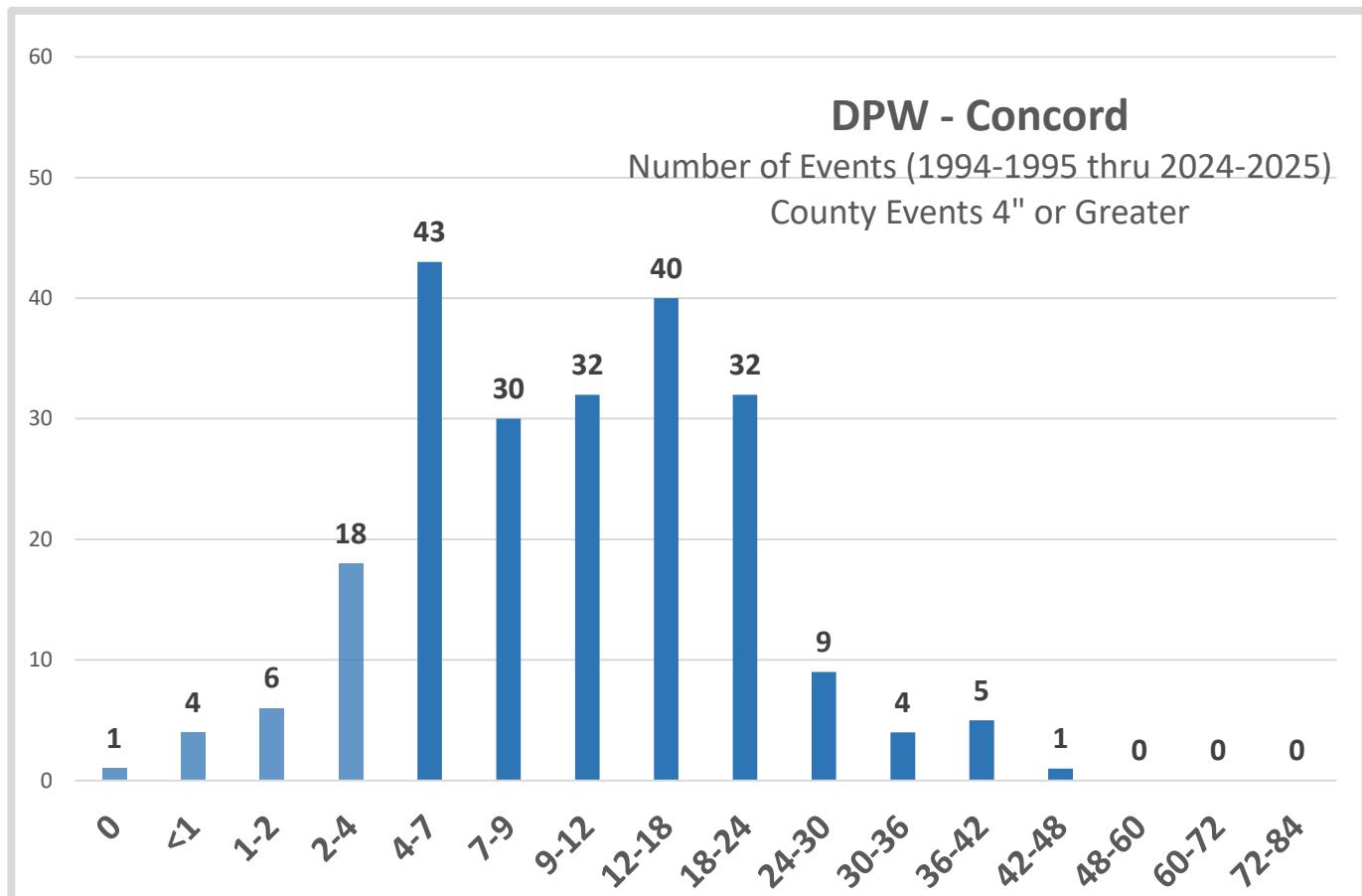
Similar results from north to south were observed although the larger north-south extents of the districts softened the data with less dramatic results.

When looking at frequency of events in the districts:  
 Harlem – 112 less than 4" events -- ~50% of the time  
 Clarence – 90 less than 4" events -- ~40% of the time  
 BUF/Lackawanna – 123 less than 4" events -- ~55% of the time  
 Hamburg – 38 less than 4" events -- ~17% of the time  
 Aurora – 31 less than 4" events -- ~15% of the time  
 Concord – 29 less than 4" events -- ~13%









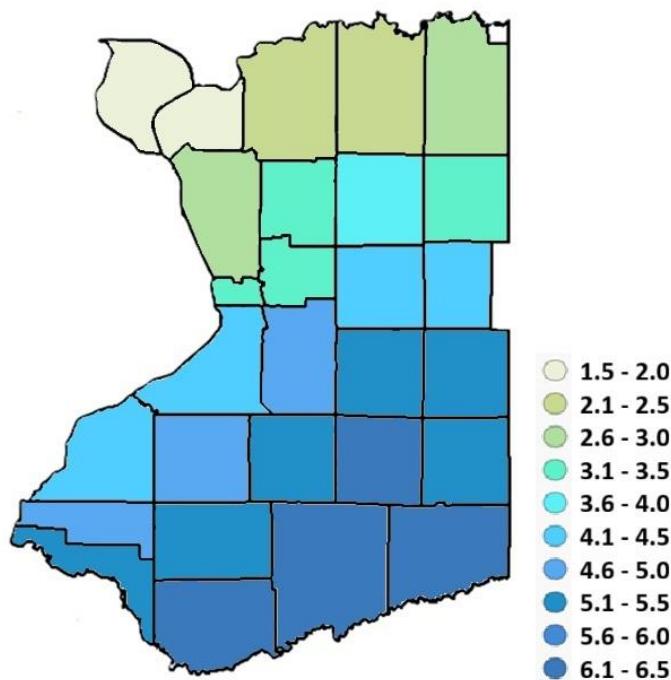
### Breaking down the County – Cities and Towns

Finally, the analysis was done using the City and Town boundaries of the County.

Each section was analyzed for frequency of snowfall events, largest snowfall events, first and last event occurrences.

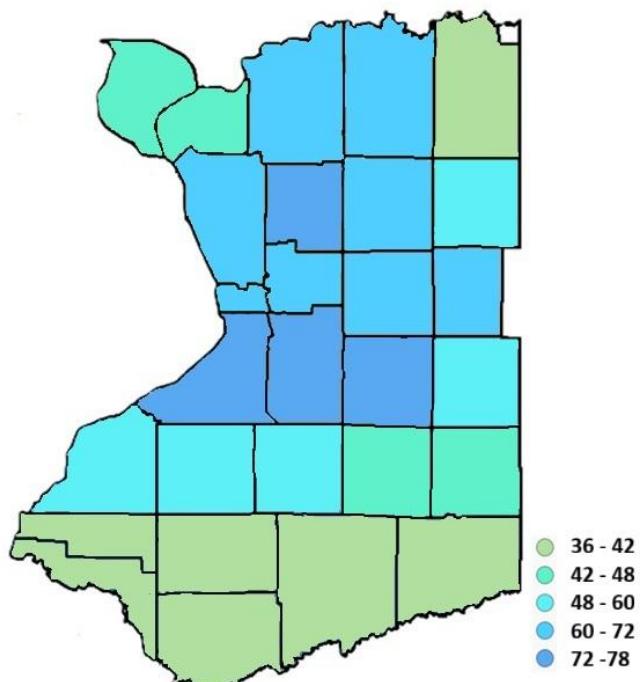


### Average Number of 4+ Inch Events Per Year



The towns in the southern part of the county have a higher frequency of events as a result of the prevailing wind direction and the higher elevation which is a factor in the early and late season snows.

### Maximum Snowfall Range Event Per Town



While the frequency of events favors the southern part of the county, the events with the highest snowfall range occur across the central portions of the county. This results from the longer fetch, single band events during prolonged southwest flow.

## "The lake is really warm. We're going to pay for that..."

We often hear that as the area moves into the fall season. An analysis was done comparing the lake temperature on October 1<sup>st</sup> to the number of lake effect events that occurred.

The highest temperature of Lake Erie at Buffalo was 70 degrees in 2024. The lowest was 59 degrees in 1966. The lake temperature has been warming. Looking at the 30 year "climatic averages" of the temperature on October 1<sup>st</sup>:

1951-1980 – 63.73 degrees

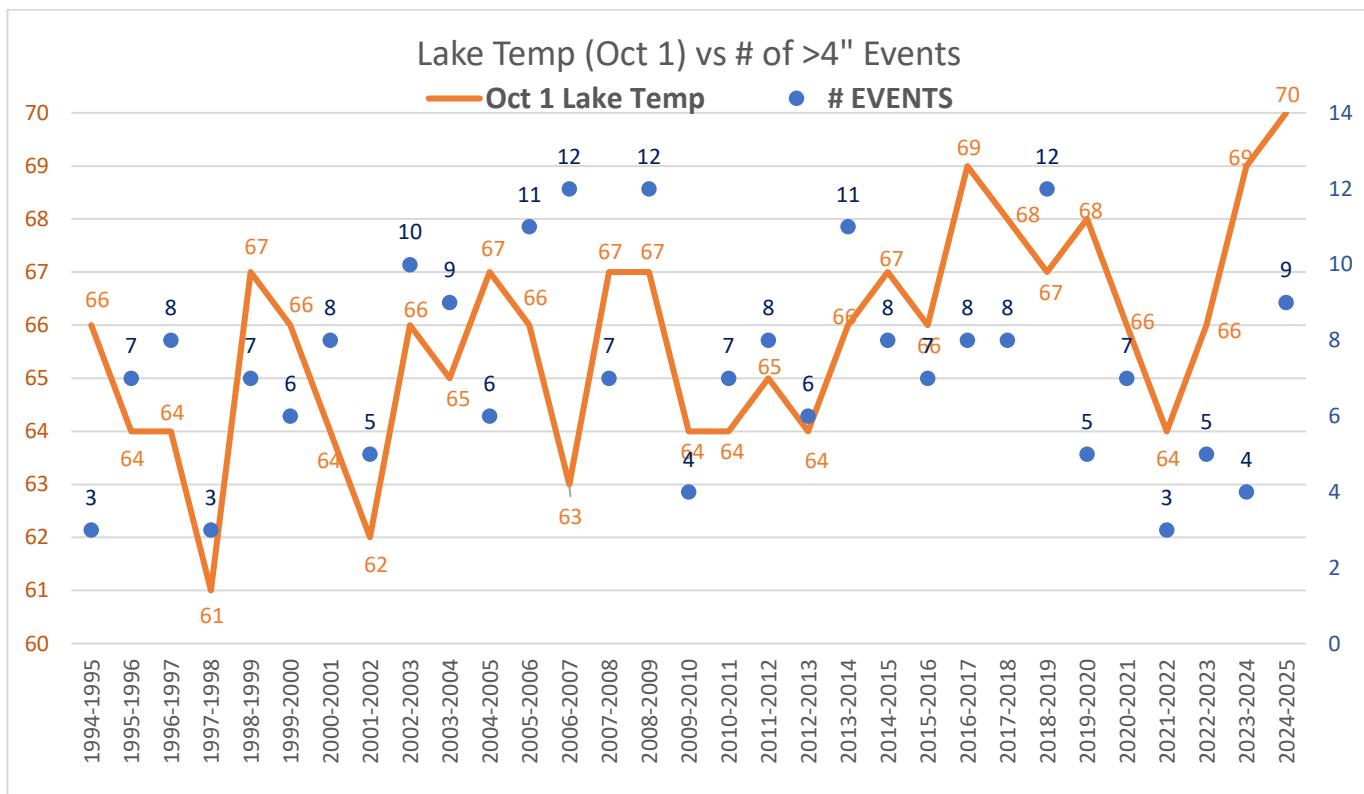
1961-1990 – 63.70 degrees

1971-2000 – 64.10 degrees

1981-2010 – 64.46 degrees

1991-2020 – 65.30 degrees

The average temperature has risen about 1.5 degree over the past five decades.



There is little correlation between number of events and the lake temperature to start the season.

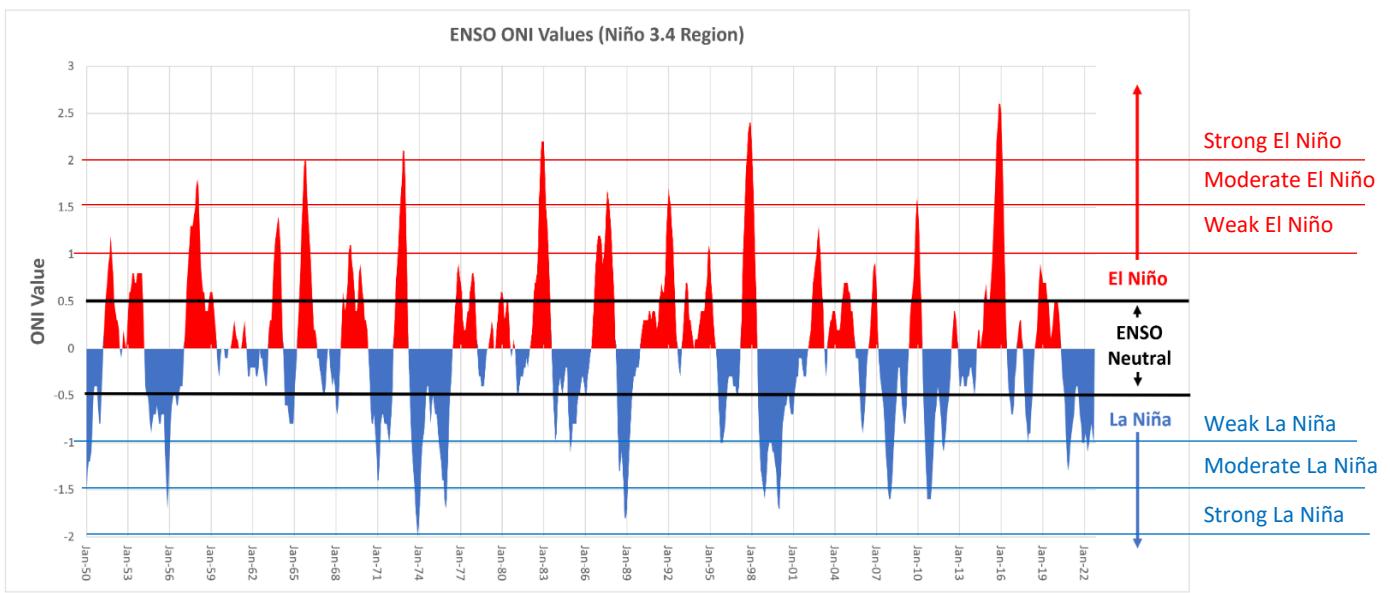
Because of the bathymetry of Lake Erie, one strong cold outbreak can drop the temperature very quickly. Conversely, the lack of any cold outbreaks could maintain a warmer lake temperature.

## El Niño vs La Niña

The Oceanic Niño Index (ONI) is NOAA's primary index for tracking oceanic component of ENSO. It is a standard and widely used metric for defining the phases of ENSO, particularly for identifying and tracking the onset and duration of El Niño and La Niña events.

The ONI simplifies monitoring by focusing on sea surface temperature anomalies (SST) in the Niño 3.4 region, a key area for ENSO activity. It utilizes a 3-month running average of SST anomalies, which helps to smooth out noise and reduce the impact of short-term variability, allowing for a clearer picture of sustained ENSO conditions. The ONI is frequently used in operational forecasts and warnings for its direct relevance to the oceanic component of ENSO.

There are seven categories to the ONI: Weak, Moderate, Strong El Niño, Neutral, and Weak, Moderate, Strong La Niña.

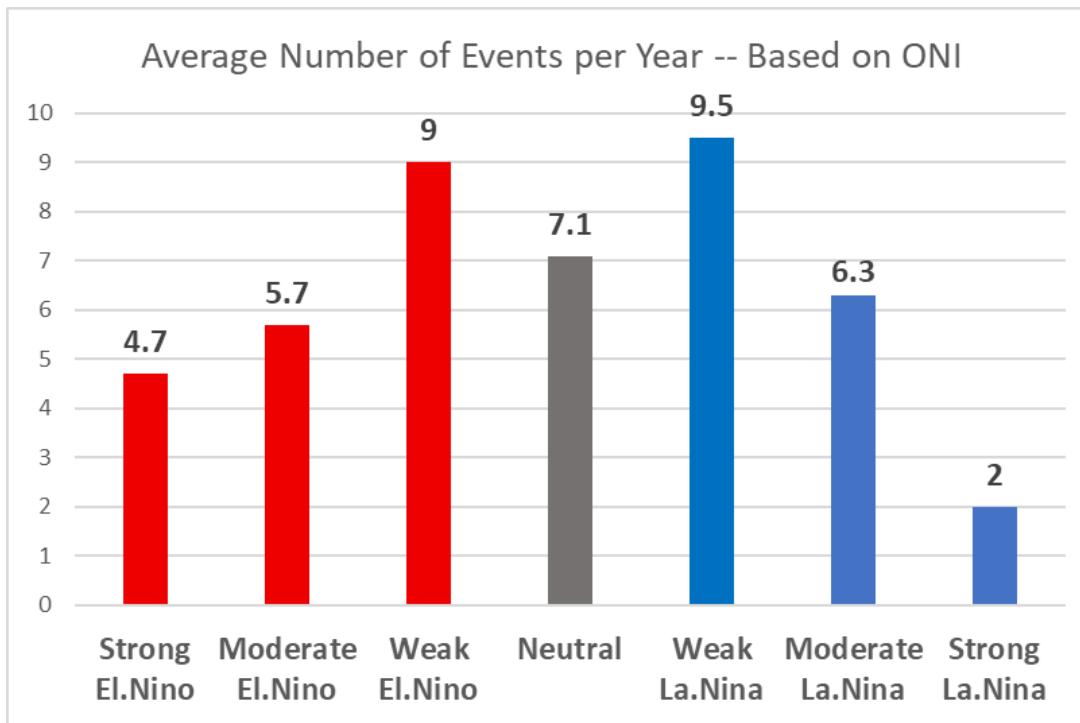


(ENSO graphic adapted from [https://mrcc.purdue.edu/index.php/climate\\_watch/special\\_topics/enso-indices-and-past-events](https://mrcc.purdue.edu/index.php/climate_watch/special_topics/enso-indices-and-past-events) which used CPC Data from [https://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/ensostuff/ONI\\_v5.php](https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ensostuff/ONI_v5.php) )

If we review the top five lake effect events (based on Maximum snowfall) we find that the ONI was either Weak El Niño, Neutral or Weak La Niña.

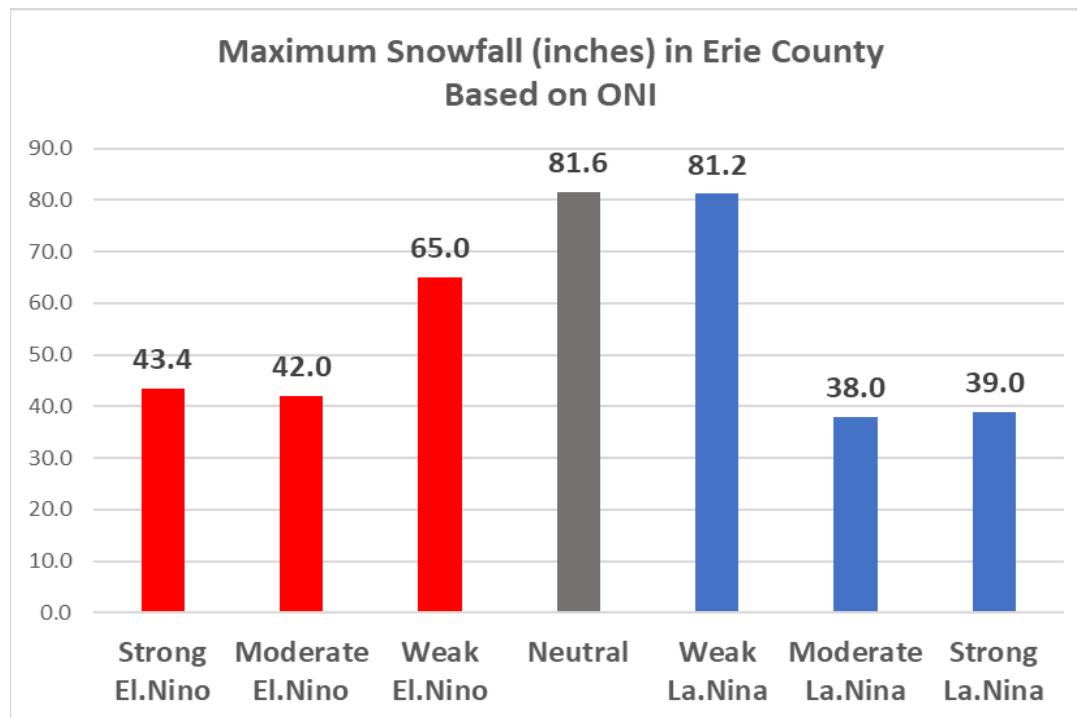
Storm Dates	Max Snowfall-Erie Co	ONI
12/24/2001-01/01/2002	81.6" Buffalo Airport	Neutral
11/17/2022-11/20/2022	81.2" Hamburg	Weak La Niña
11/17/2014-11/19/2014	65.0" Cheektowaga	Weak El Niño
12/23/2022-12/27/2022	51.9" Buffalo Airport	Weak La Niña
11/19/2014-11/21/2014	49.0" Wales	Weak El Niño

Looking at a comparison of the number of lake effect events based on the ONI for that season:



From earlier discussion, the average number of lake effect events is right around seven per winter. Clearly, an above average number of events occurs during when the ONI signals are weak.

Looking at a comparison of the maximum snowfall amount and the ONI for that season:



## Data Sheet – Erie County

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm.*  
*NWS 1994-95 through 2024-25 winter season maps archive analyzed*  
<https://www.weather.gov/buf/lesEventArchive>

### Number of events per season:

Average: 7.3

Greatest: 12 (2006-2007, 2008-2009 and 2018-2019)

Least: 3 (1994-1995, 1997-1998)

### First Event of the season:

Average Start Date: November 23

Earliest Start Date: October 12 (2006)

Latest Start Date: December 25 (2020)

### Last Event of the season:

Average Start Date: February 14

Earliest Start Date: December 24 (2001)

Latest Start Date: April 4 (2007)

### Top five lake effect events (based on maximum snowfall):

12/24/2001-01/01/2002 81.6" Buffalo Airport

11/17/2022-11/20/2022 81.2" Hamburg

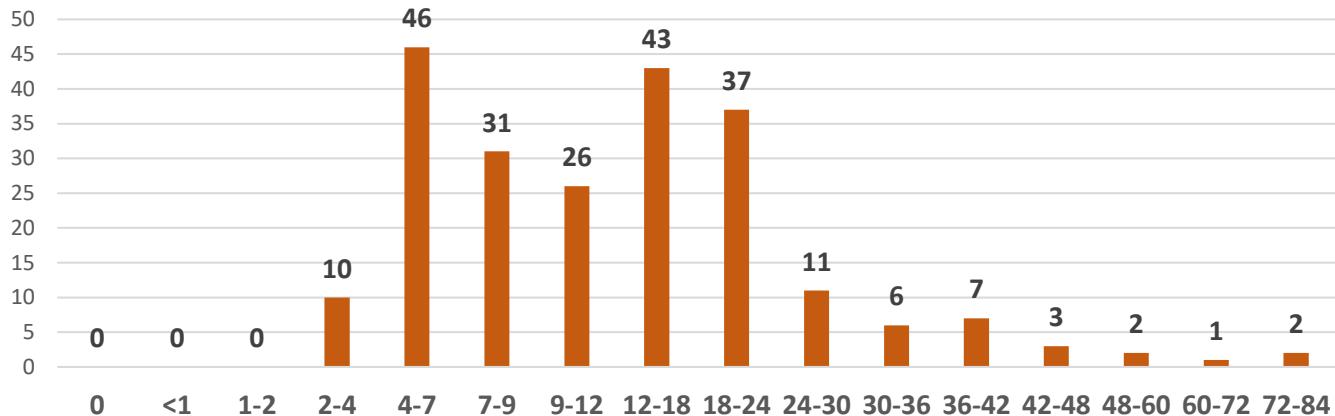
11/17/2014-11/19/2014 65.0" Cheektowaga

12/23/2022-12/27/2022 51.9" Buffalo Airport

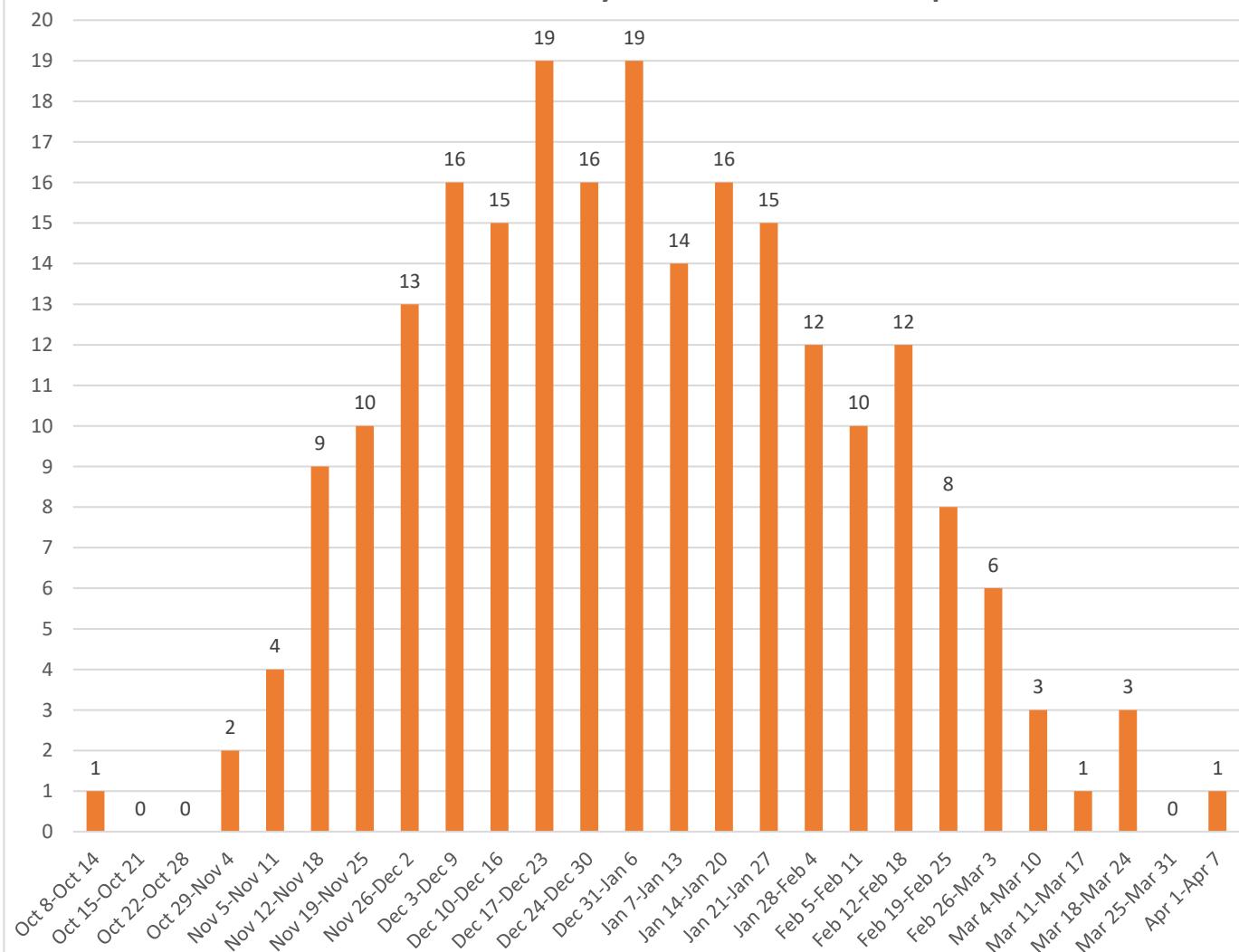
11/19/2014-11/21/2014 49.0" Wales

## Erie County

Number of Events (1994-1995 thru 2024-2025)  
County Events 4" or Greater



## ≥4" Event Distribution by Week - October 8 to April 7



**APPENDIX – CITY/TOWN DATA SHEETS**

## Data Sheet – Grand Island

*Lake Effect Event defined as one in which four or more inches of snow fell.  
 The study used snowfall amounts/totals for the analysis. It did not consider seasonality,  
 day of the week, time of day, type of snow, etc.,  
 all of which can affect the potential impacts of a storm.  
 NWS 1994-95 through 2024-25 winter season maps archive analyzed  
<https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 1.5  
 Greatest: 3 (1996-97, 1998-99, 2000-01, 2013-14, 2015-20, 2023-24)  
 Least: 0 (1997-98, 1999-2000, 2003-04, 2007-08, 2016-17, 2019-20, 2021-22)

First Event of the season\*:

Average Start Date: December 31  
 Earliest Start Date: October 12 (2006)  
 Latest Start Date: February 5 (2006, 2006)

Last Event of the season\*:

Average Start Date: February 14  
 Earliest Start Date: December 24 (2001)  
 Latest Start Date: April 4 (2007)

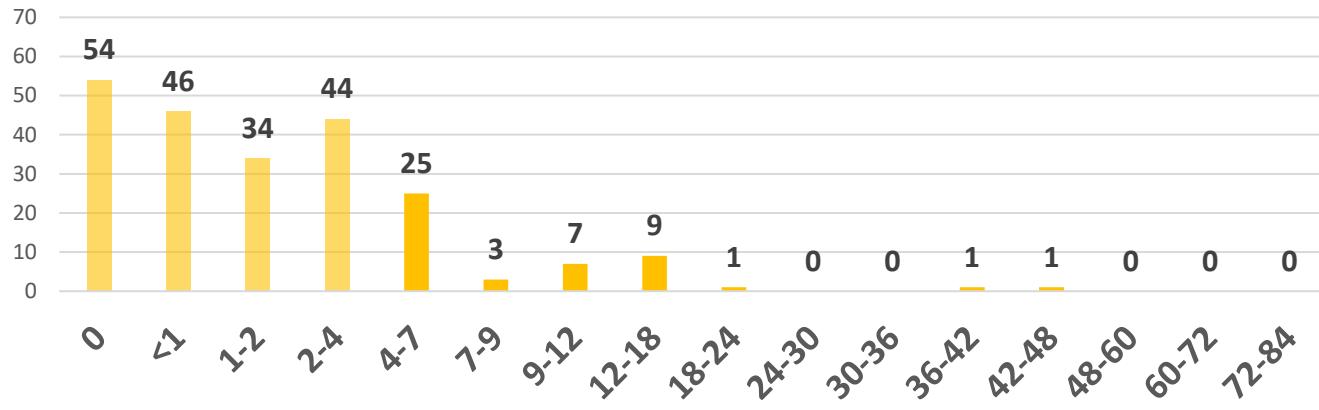
\* Excluding years when no event occurred

Top five lake effect events (based on range of maximum snowfall):

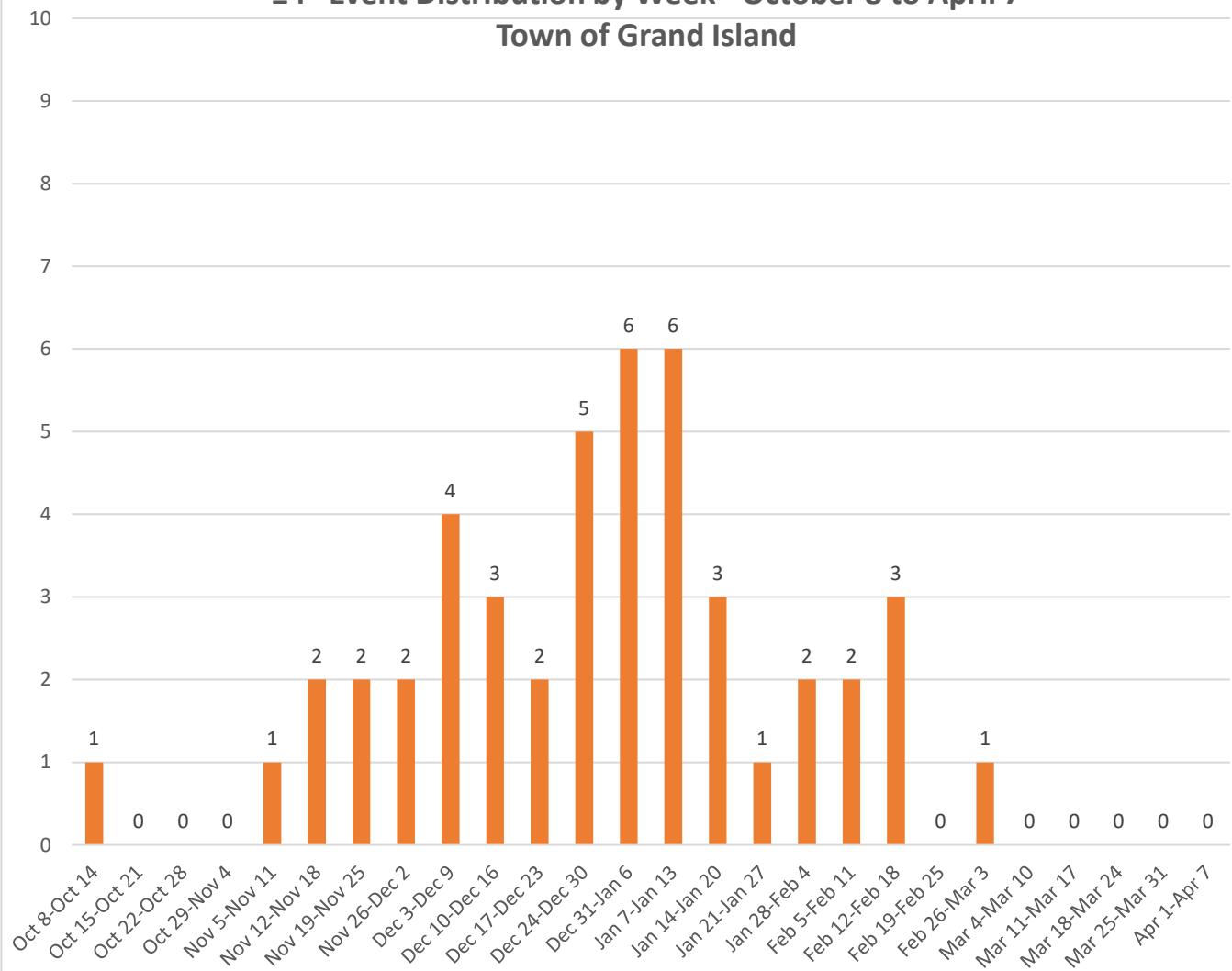
12/24/2001-01/01/2002	42-48"
12/23/2022-12/27/2022	36-42"
01/01/2010- 01/04/2010	18-24"
01/13/2024-01/15/2024	12-18" (latest of several)
01/16/2024-01/18/2024	12-18" (latest of several)

## Grand Island

Number of Events (1994-1995 thru 2024-2025)  
County Events 4" or Greater



### ≥4" Event Distribution by Week - October 8 to April 7 Town of Grand Island



## Data Sheet – City of Tonawanda, Towns of Tonawanda and Kenmore

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 1.9

Greatest: 4 (2000-01, 2018-19)

Least: 0 (1997-98, 1999-2000, 2003-04, 2007-08, 2016-17, 2019-20)

First Event of the season\*:

Average Start Date: December 12

Earliest Start Date: October 12 (2006)

Latest Start Date: January 31 (2013)

Last Event of the season\*:

Average Start Date: January 19

Earliest Start Date: December 1 (2002)

Latest Start Date: March 21 (2002)

\* Excluding years when no event occurred

Top five lake effect events (based on range of maximum snowfall):

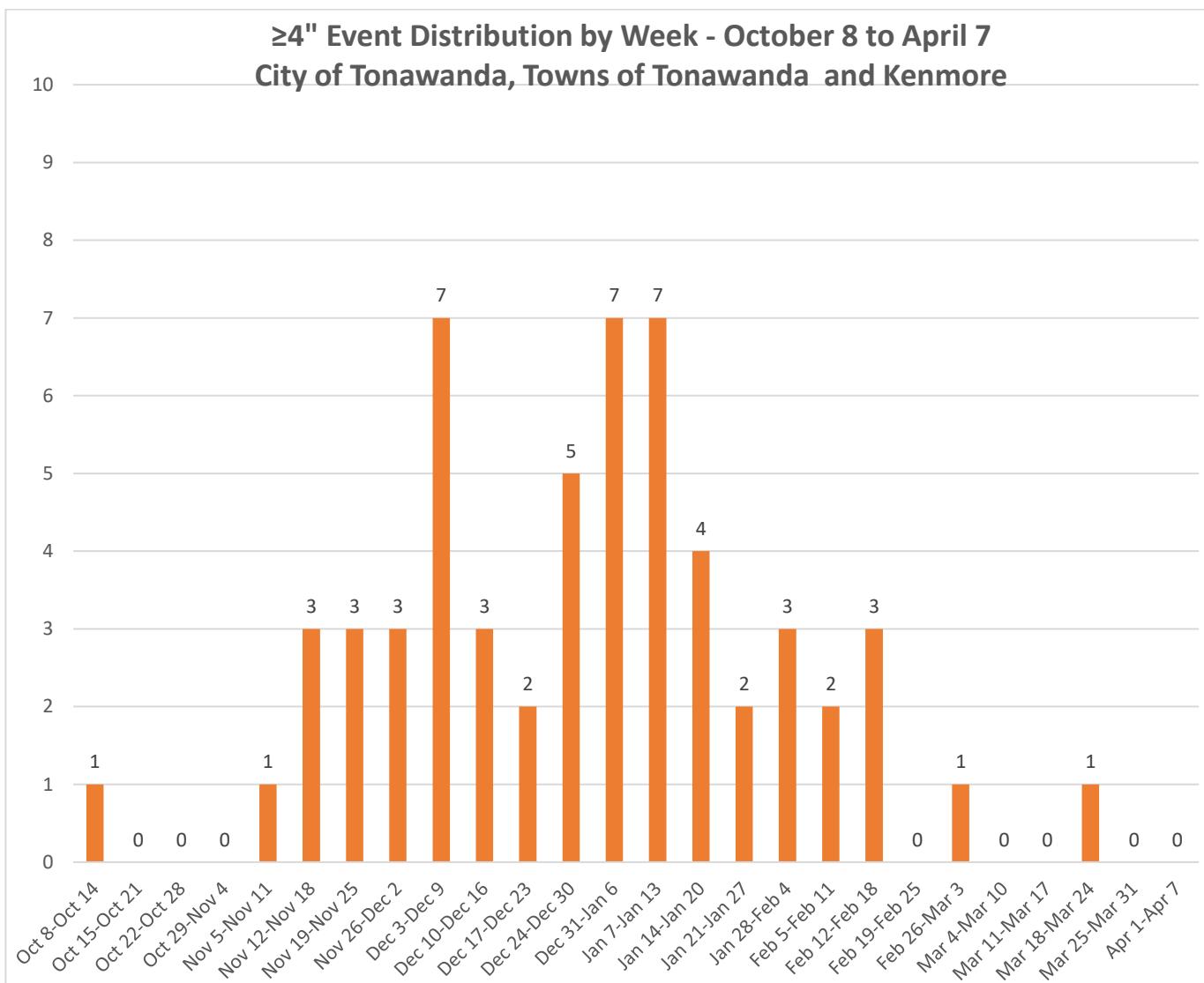
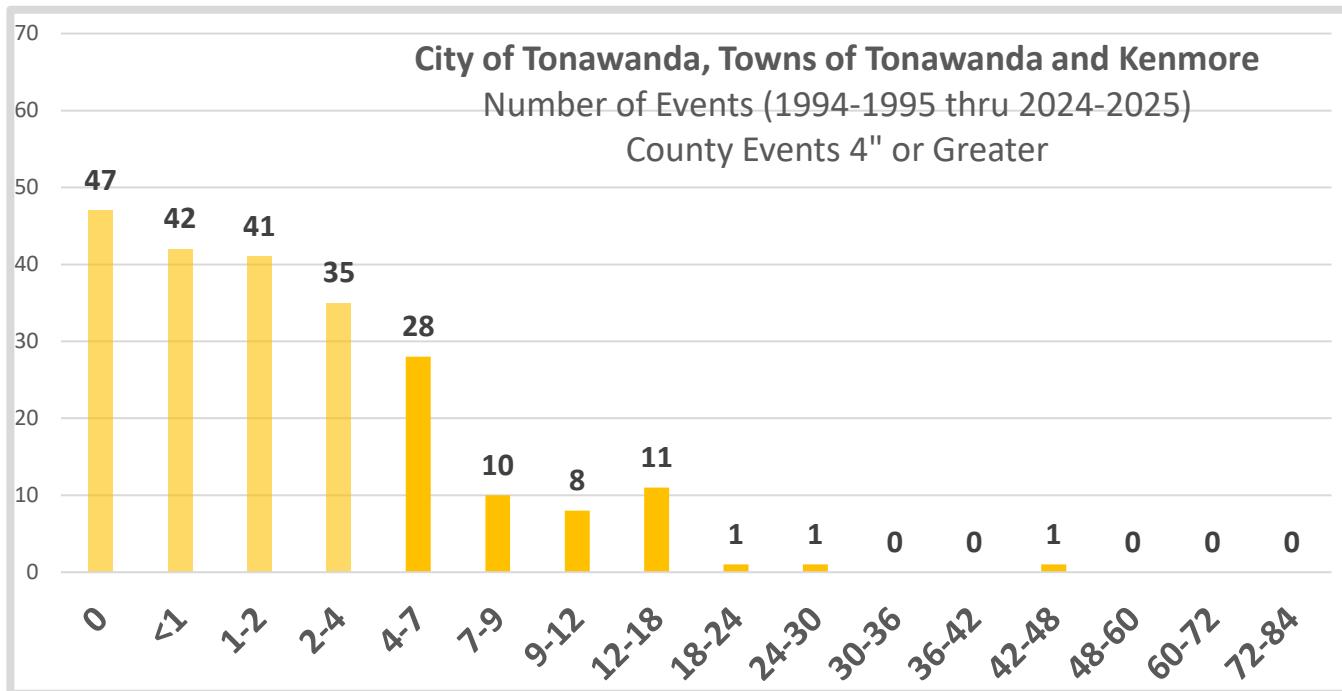
12/24/2001-01/01/2002 42-48"

12/23/2022-12/27/2022 36-42"

01/01/2010- 01/04/2010 18-24"

11/17/2022-11/20/2022 12-18" (latest of several)

01/29/2019-02/01/2019 12-18" (latest of several)



## Data Sheet – Amherst

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 2.4  
 Greatest: 5 (2018-19)  
 Least: 0 (1997-98, 1999-2000)

First Event of the season\*:

Average Start Date: December 15  
 Earliest Start Date: October 12 (2006)  
 Latest Start Date: February 27 (2020)

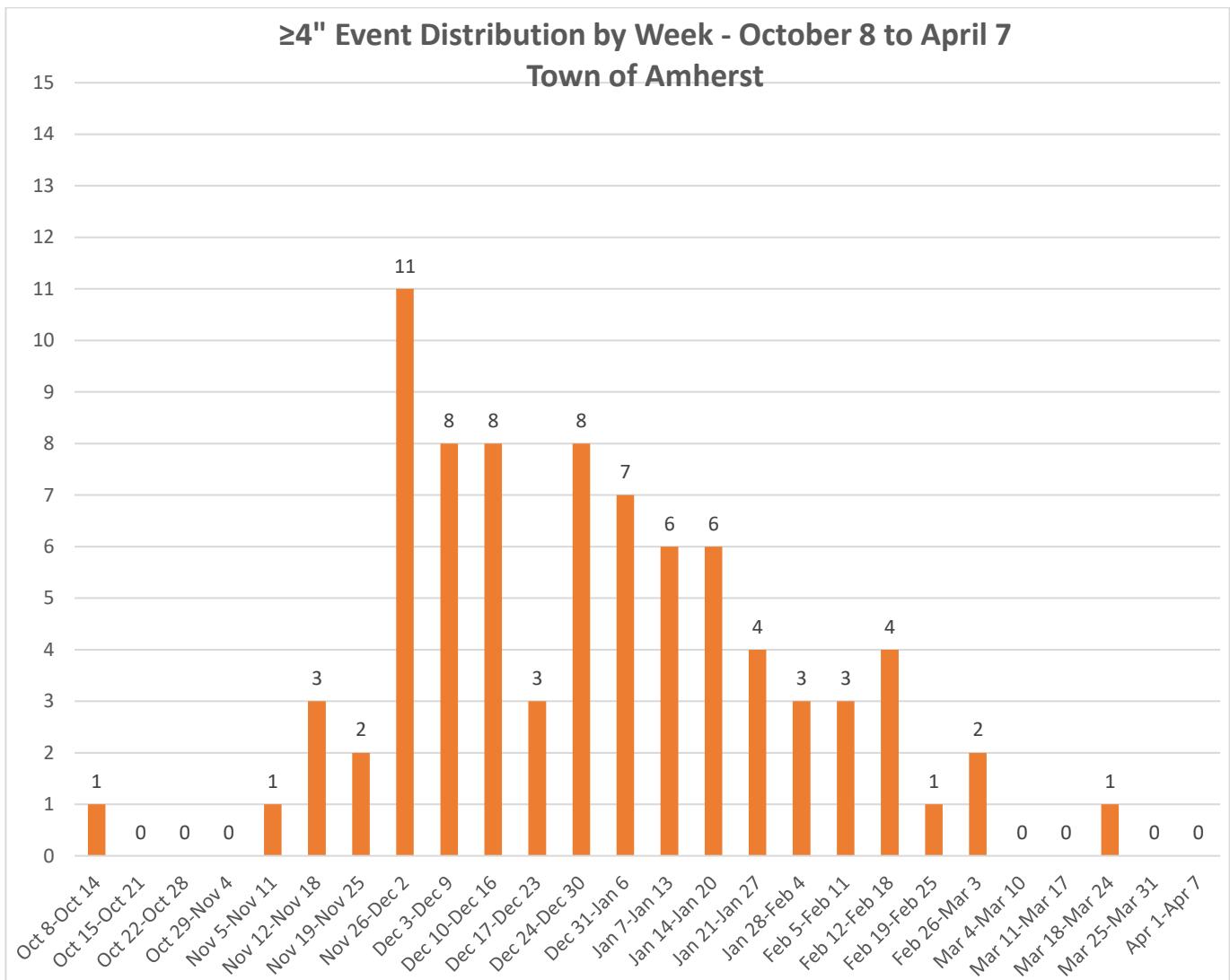
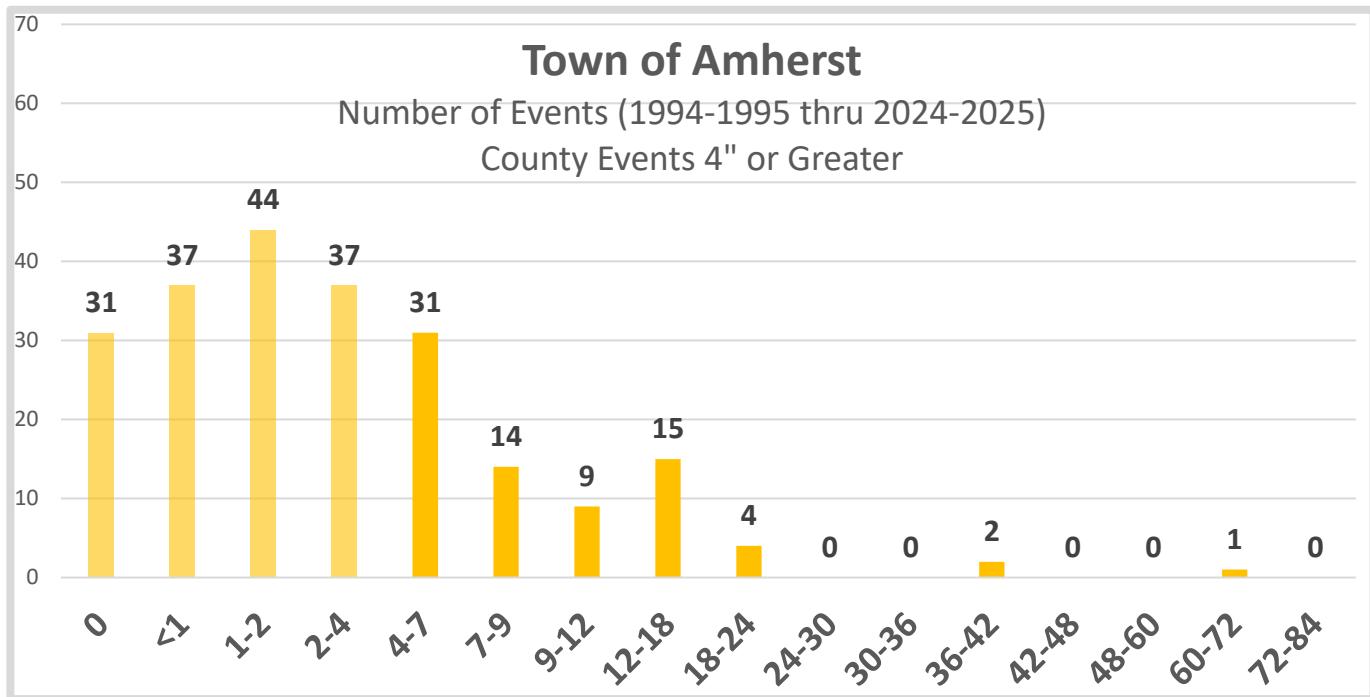
Last Event of the season\*:

Average Start Date: January 17  
 Earliest Start Date: December 1 (2002)  
 Latest Start Date: March 21 (2002)

\* Excluding years when no event occurred

Top five lake effect events (based on range of maximum snowfall):

12/24/2001-01/01/2002	60-72"
12/23/2022-12/27/2022	36-42"
12/09/1995-12/12/1995	36-42"
11/17/2022-11/20/2023	18-24" (latest of several)
01/01/2010- 01/04/2010	18-24" (latest of several)



## Data Sheet – Clarence

*Lake Effect Event defined as one in which four or more inches of snow fell.  
 The study used snowfall amounts/totals for the analysis. It did not consider seasonality,  
 day of the week, time of day, type of snow, etc.,  
 all of which can affect the potential impacts of a storm.  
 NWS 1994-95 through 2024-25 winter season maps archive analyzed  
<https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 2.5  
 Greatest: 6 (2018-19)  
 Least: 0 (1997-98, 1999-2000)

First Event of the season\*:

Average Start Date: December 16  
 Earliest Start Date: October 12 (2006)  
 Latest Start Date: February 27 (2020)

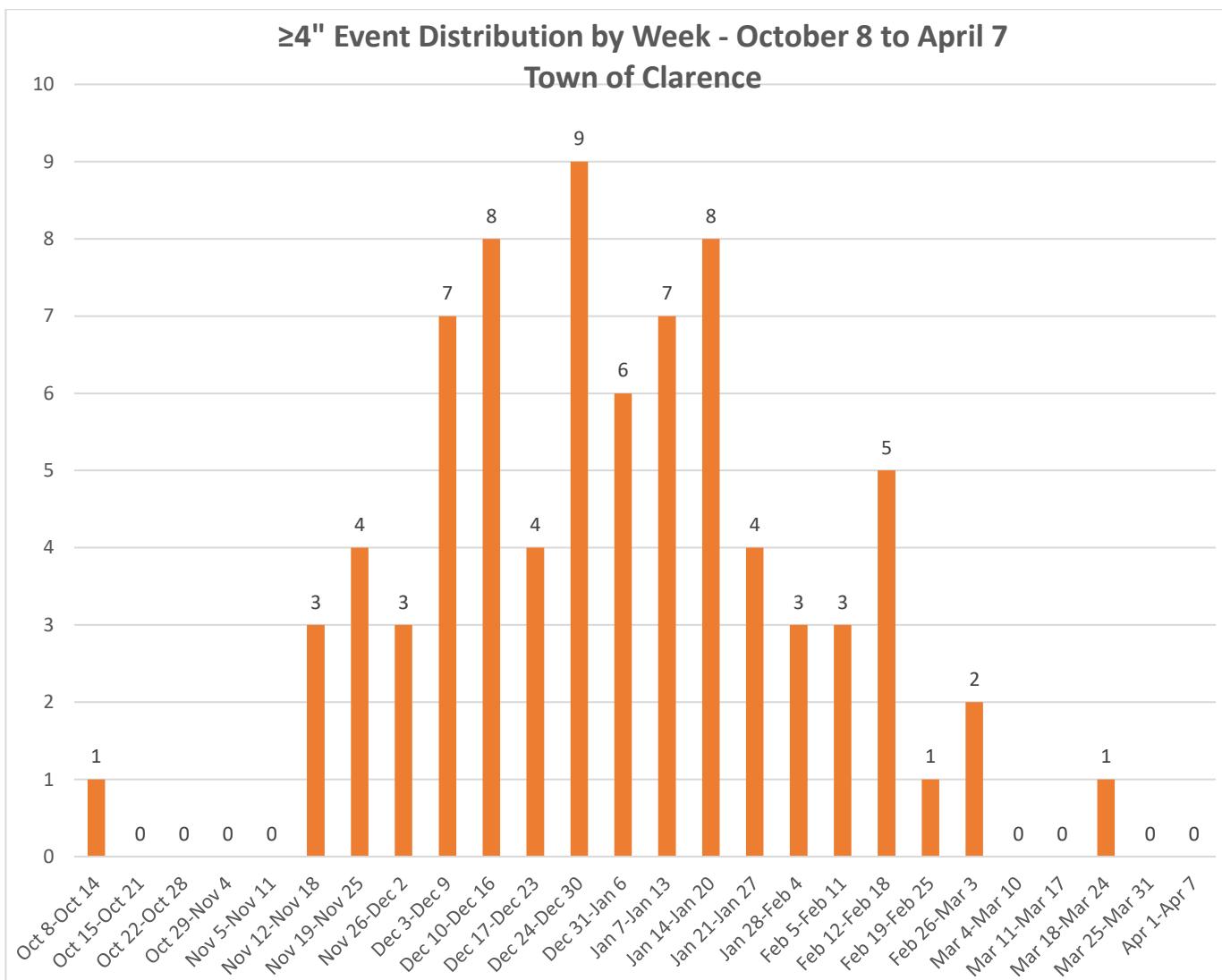
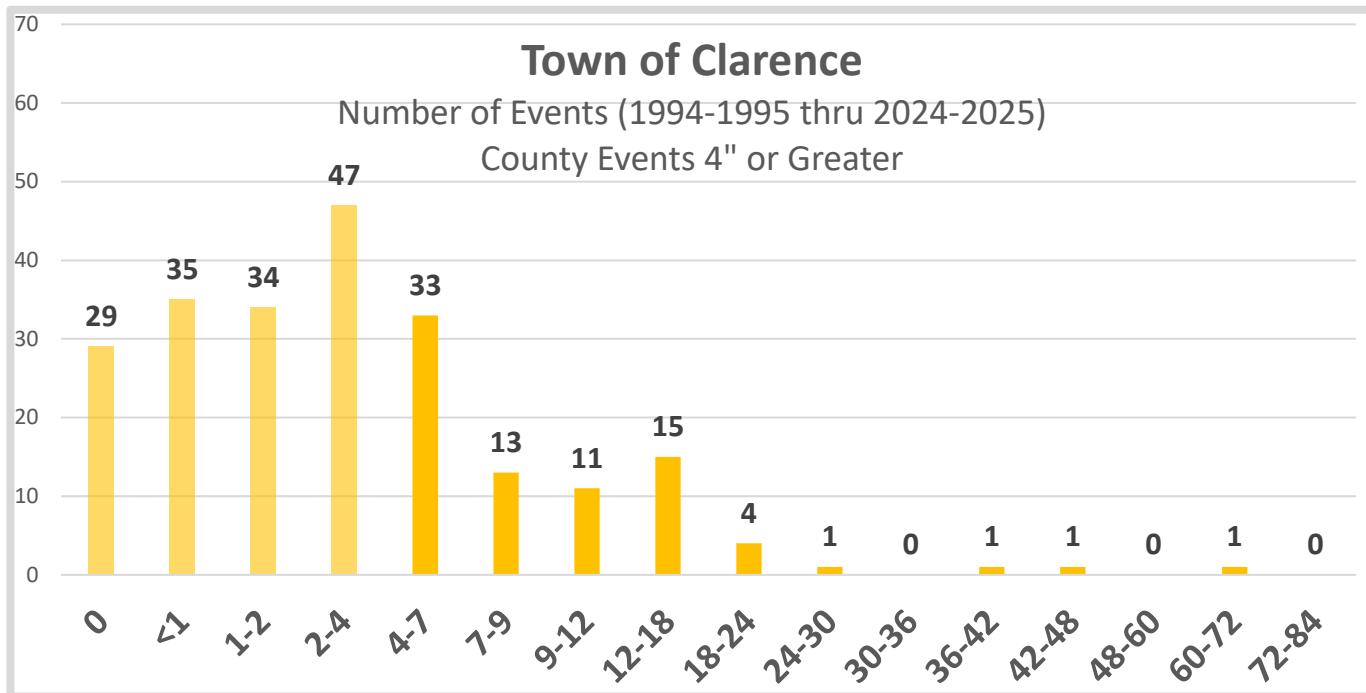
Last Event of the season\*:

Average Start Date: February 26  
 Earliest Start Date: December 1 (2002)  
 Latest Start Date: March 21 (2002)

\* Excluding years when no event occurred

Top five lake effect events (based on range of maximum snowfall):

12/24/2001-01/01/2002	60-72"
12/23/2022-12/27/2022	42-48"
12/09/1995-12/12/1995	36-42"
11/17/2022-11/20/2022	24-30"
01/16/2024-01/18/2024	18-24" (latest of several)



## Data Sheet – Newstead

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm.*  
*NWS 1994-95 through 2024-25 winter season maps archive analyzed*  
*<https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 2.6  
 Greatest: 7 (2024-2025)  
 Least: 0 (1999-2000)

First Event of the season\*:

Average Start Date: December 17  
 Earliest Start Date: October 12 (2006)  
 Latest Start Date: February 27 (2020)

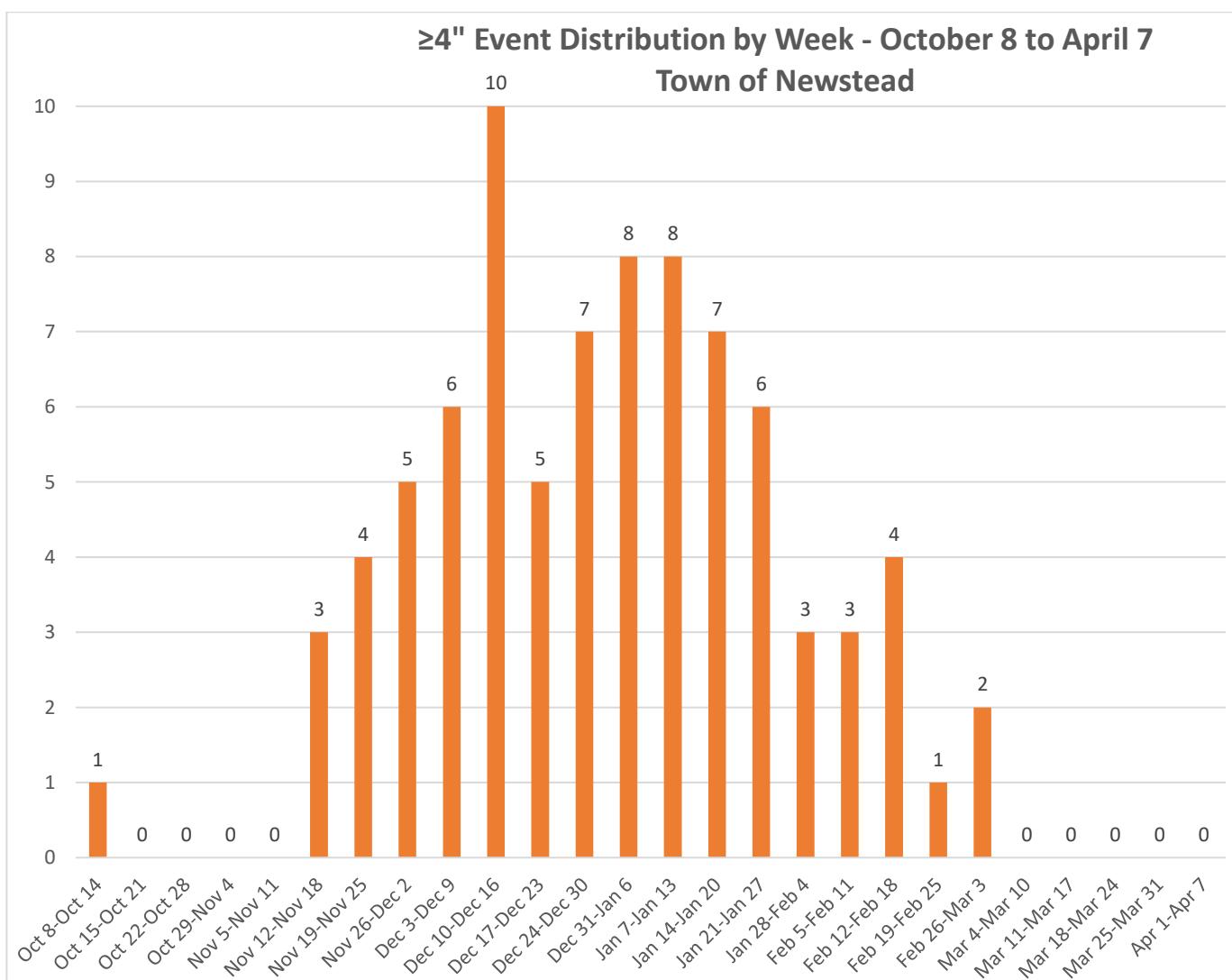
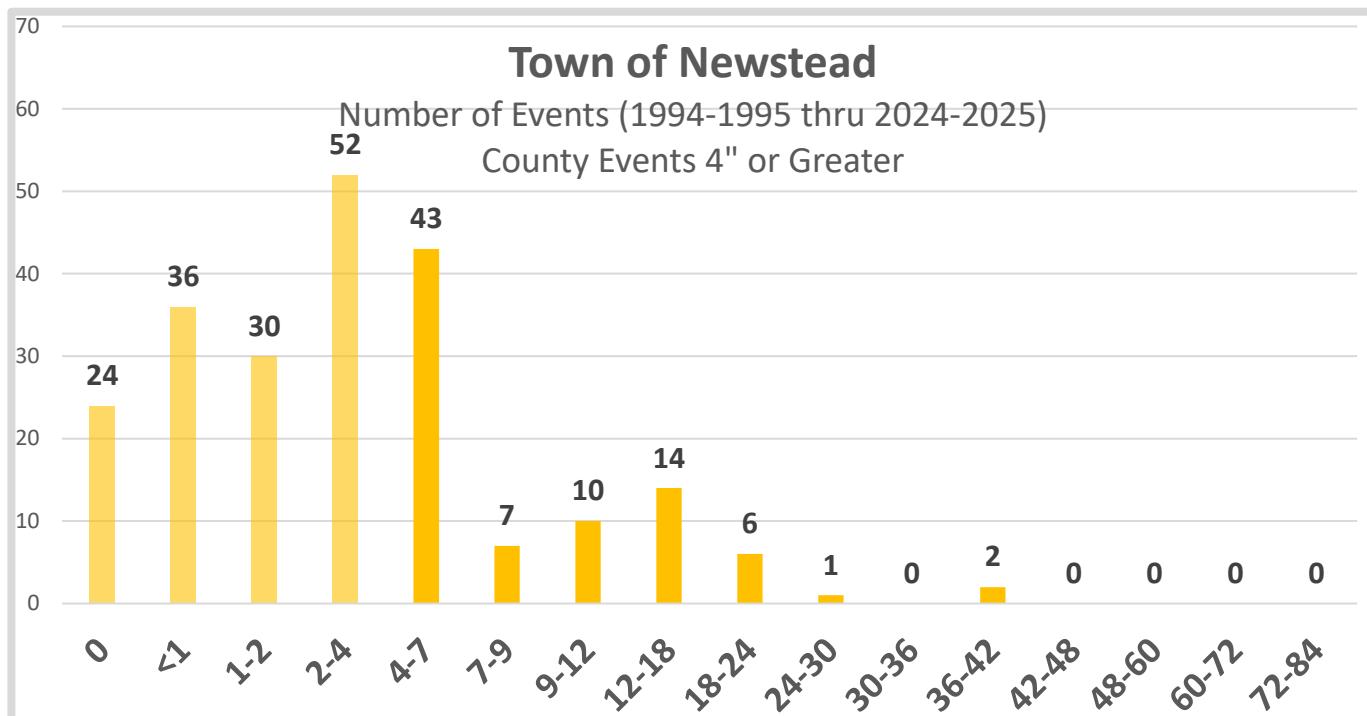
Last Event of the season\*:

Average Start Date: February 22  
 Earliest Start Date: November 24 (2003) (Only one event that season)  
 Latest Start Date: February 28 (2005)

\* Excluding years when no event occurred

Top five lake effect events (based on range of maximum snowfall):

12/23/2022-12/27/2022	36-42"
12/24/2001-01/01/2002	36-42"
11/17/2022-11/20/2022	24-30"
01/16/2024-01/18/2024	18-24" (latest of several)
01/13/2024-01/15/2024	18-24" (latest of several)



## Data Sheet – City of Buffalo

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm.*  
*NWS 1994-95 through 2024-25 winter season maps archive analyzed*  
*<https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 2.8

Greatest: 5 (1996-97, 2000-01, 2006-07, 2010-11, 2024-25)

Least: 0 (1997-98, 1999-2000, 2019-20)

First Event of the season\*:

Average Start Date: December 13

Earliest Start Date: October 12 (2006)

Latest Start Date: February 19 (2008)

Last Event of the season\*:

Average Start Date: January 21

Earliest Start Date: December 1 (2002)

Latest Start Date: March 21 (2002)

\* Excluding years when no event occurred

Top five lake effect events (based on range of maximum snowfall):

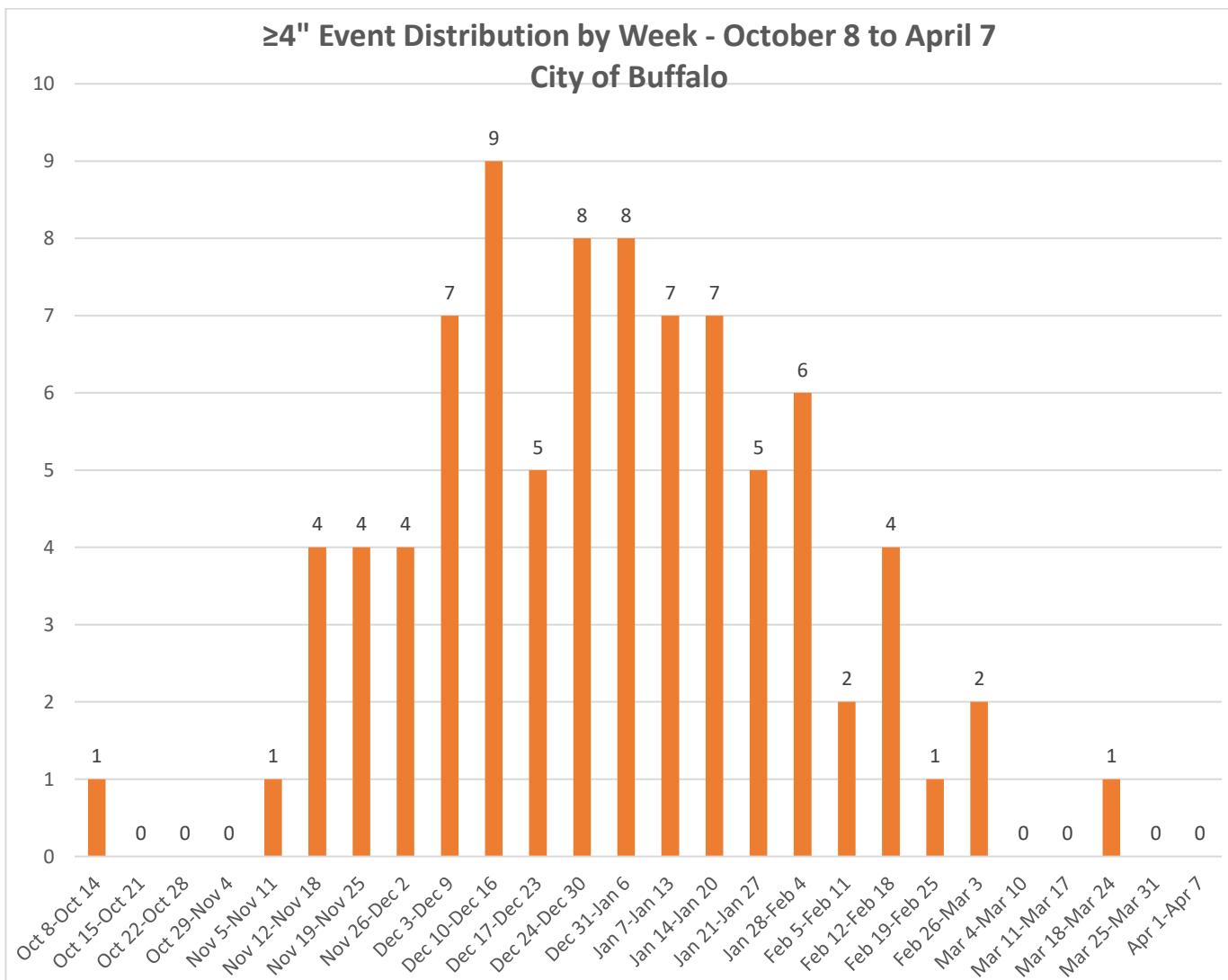
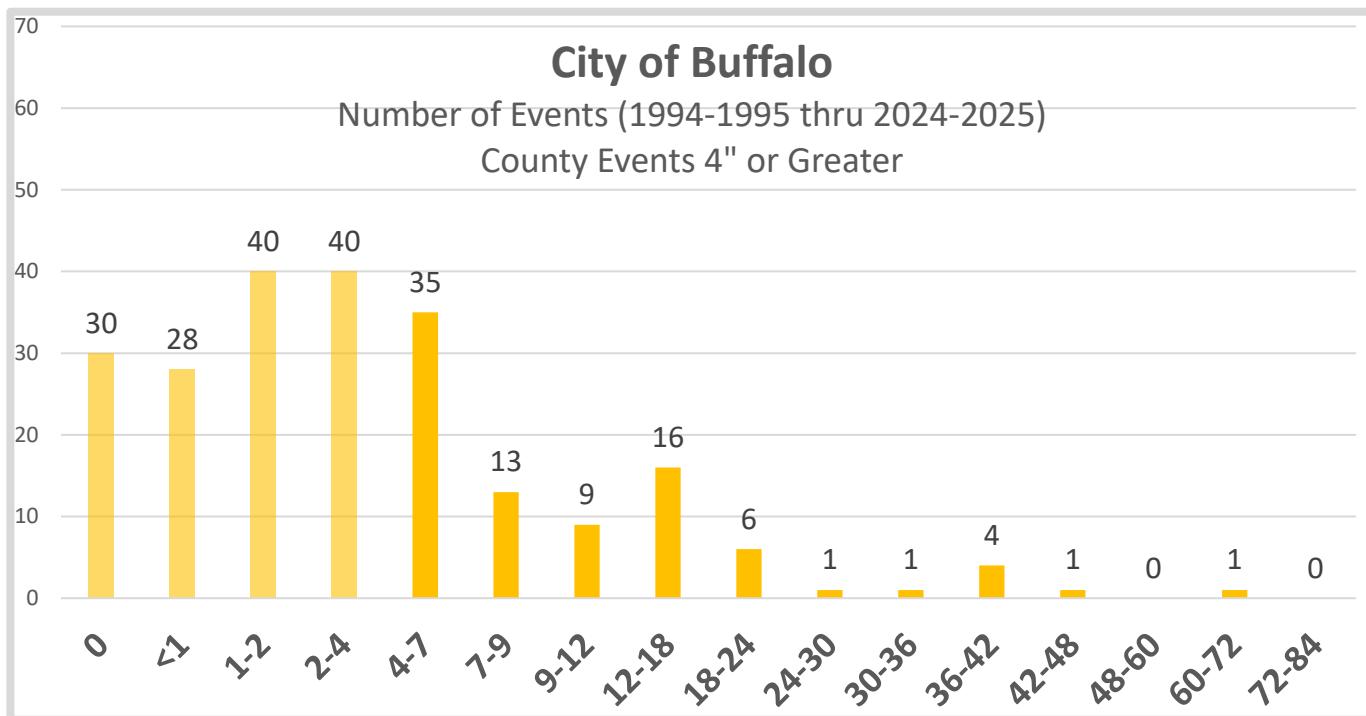
12/24/2001-01/01/2002 60-72"

12/23/2022-12/27/2022 42-48"

11/17/2014-11/19/2024 36-42" (latest of several)

11/17/2022-11/20/2022 36-42" (latest of several)

12/01/2010-12/03/2010 36-42" (latest of several)



## Data Sheet – Cheektowaga

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 3.1  
 Greatest: 6 (2015-16, 2024-25)  
 Least: 0 (2019-20)

First Event of the season\*:

Average Start Date: December 10  
 Earliest Start Date: October 12 (2006)  
 Latest Start Date: January 19 (2008)

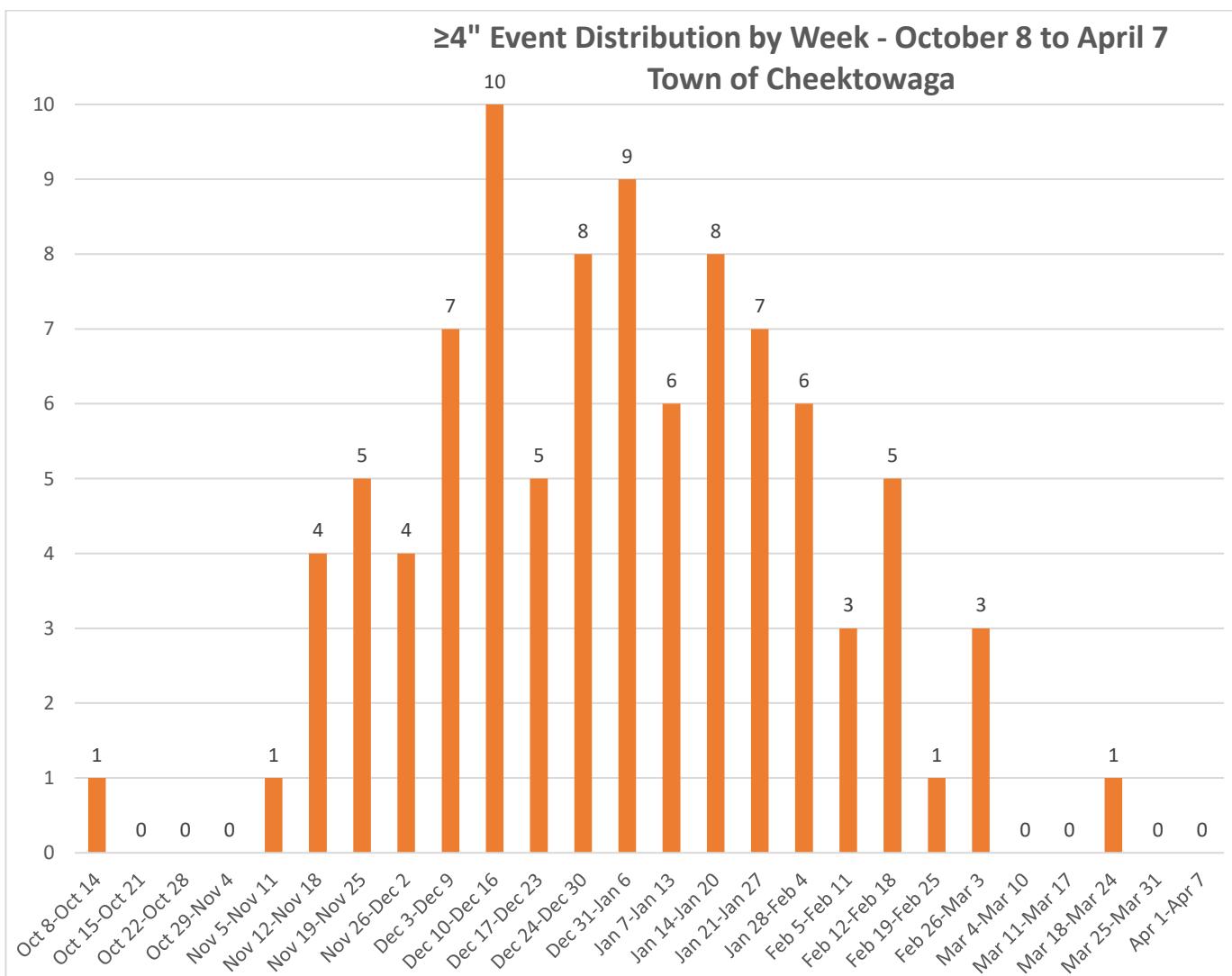
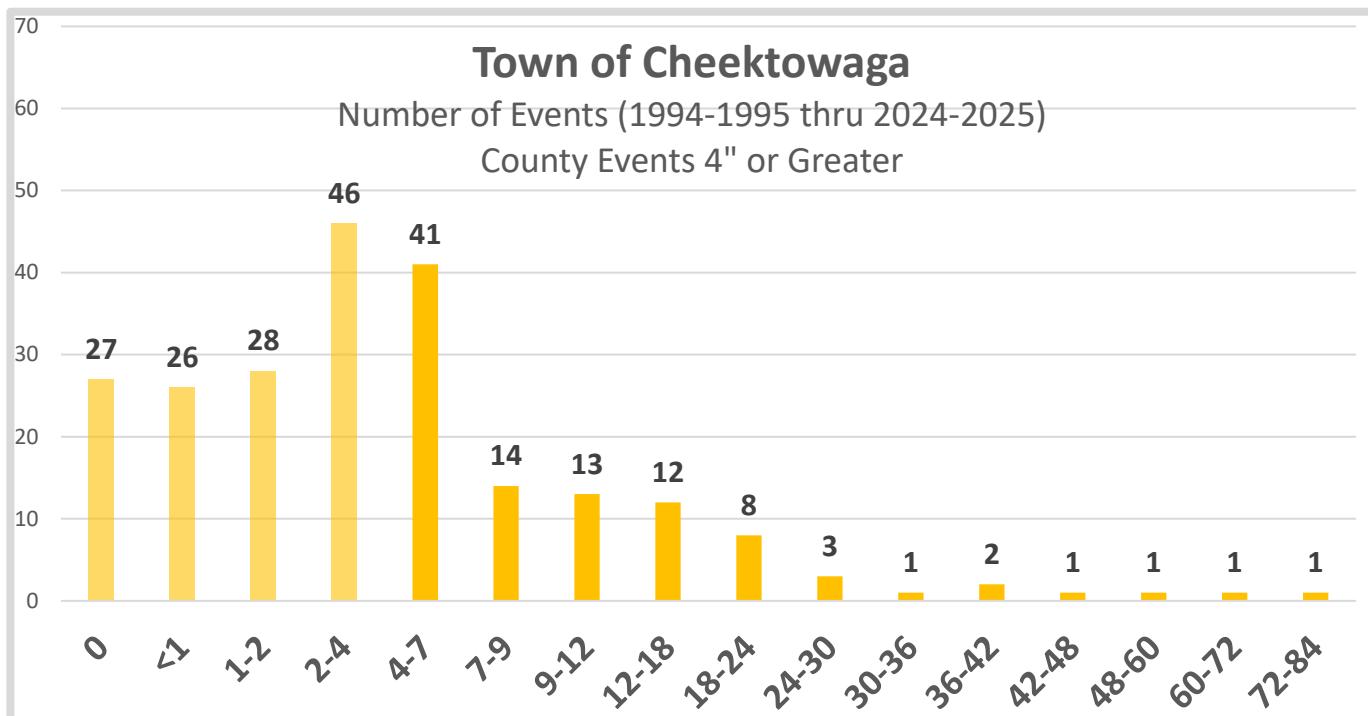
Last Event of the season\*:

Average Start Date: January 22  
 Earliest Start Date: December 1 (2002)  
 Latest Start Date: March 21 (2002)

\* Excluding years when no event occurred

Top five lake effect events (based on range of maximum snowfall):

12/24/2001-01/01/2002	72-84"
11/17/2014-11/19/2014	60-72"
12/23/2022-12/27/2022	48-60"
12/09/1995-12/12/1995	42-48"
11/17/2022-11/20/2022	36-42" (latest of several)



## Data Sheet – Lancaster

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm.*  
*NWS 1994-95 through 2024-25 winter season maps archive analyzed*  
*<https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 3.7

Greatest: 7 (2000-01, 2024-25)

Least: 1 (1997-98, 1999-2000, 2019-20)

First Event of the season:

Average Start Date: December 10

Earliest Start Date: October 12 (2006)

Latest Start Date: January 19 (2008)

Last Event of the season:

Average Start Date: January 27

Earliest Start Date: December 5 (1997)

Latest Start Date: March 21 (2002)

Top five lake effect events (based on range of maximum snowfall):

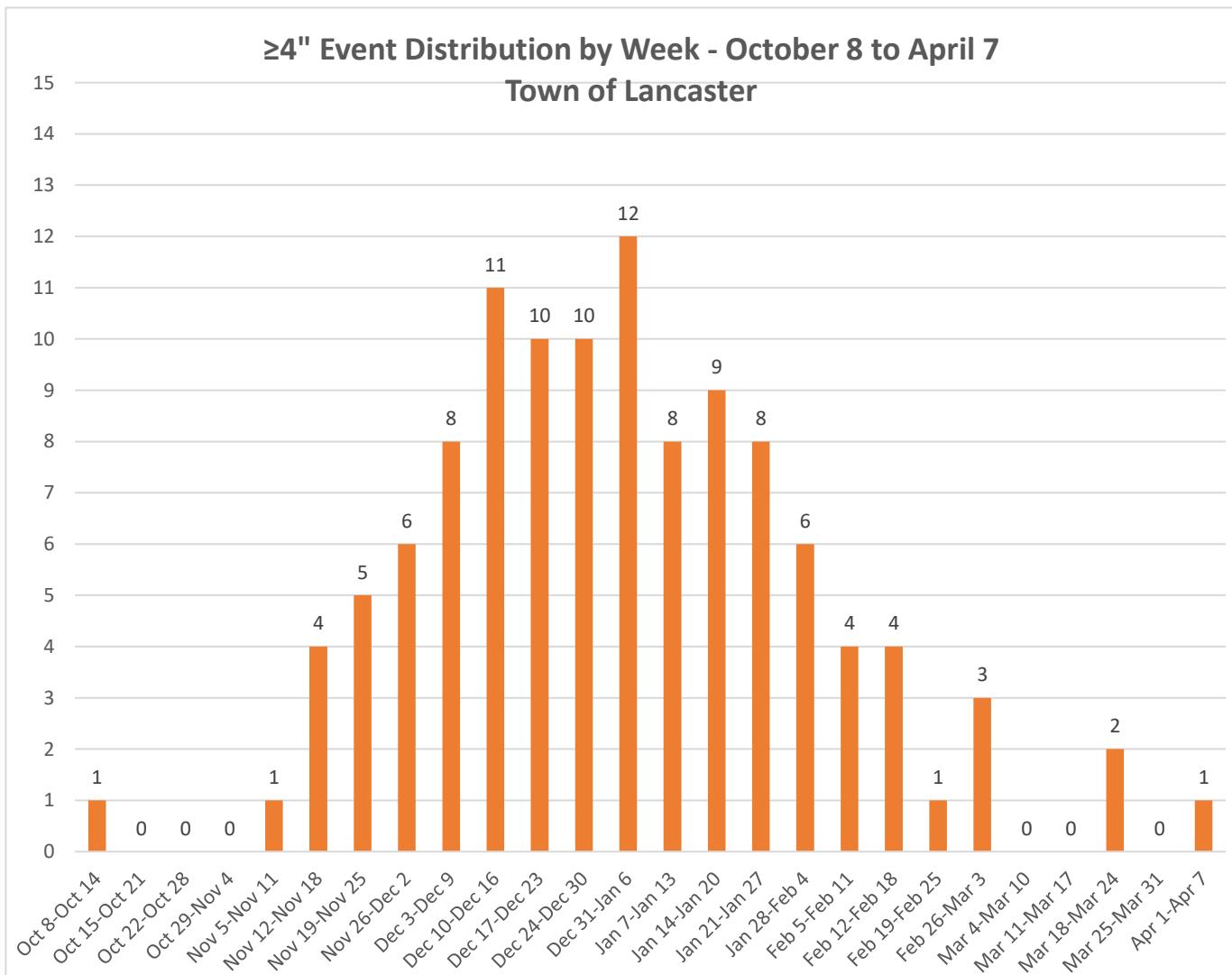
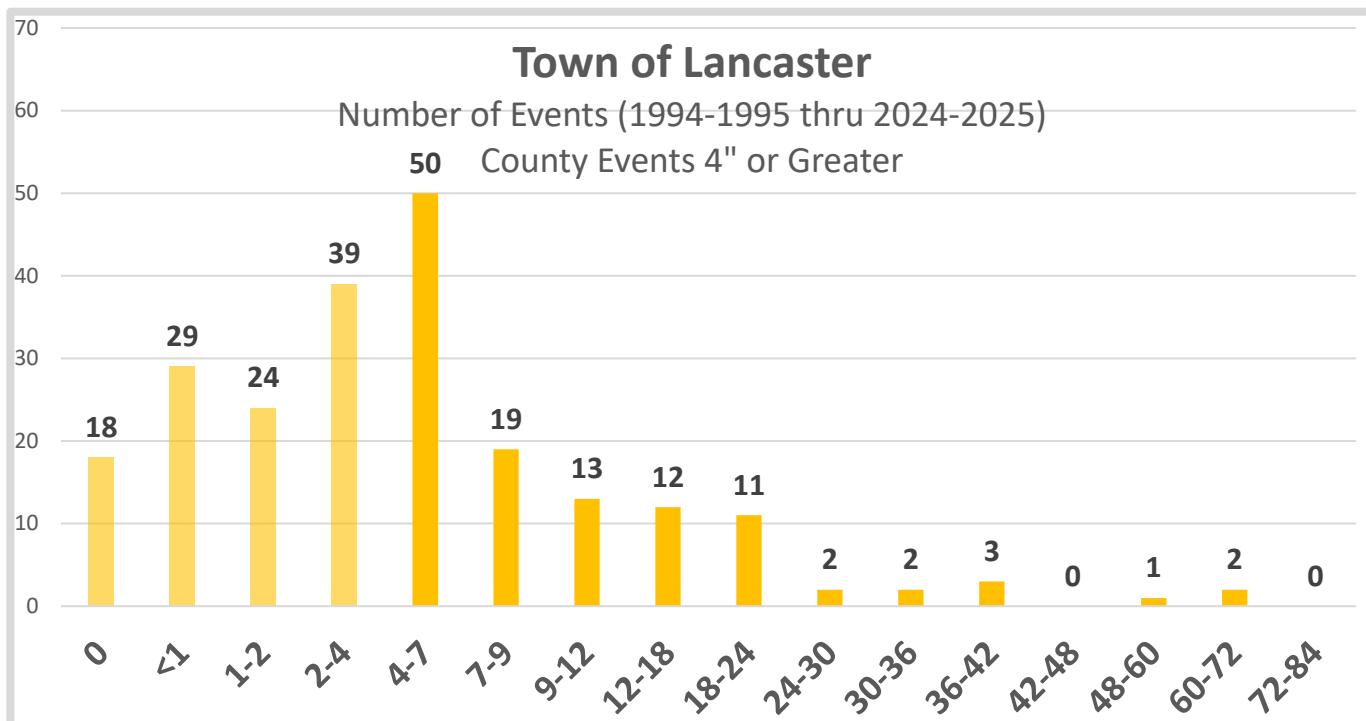
11/17/2014-11/19/2014 60-72"

12/24/2001-01/01/2002 60-72"

12/23/2022-12/27/2022 48-60"

11/17/2022-11/20/2022 36-42" (latest of several)

12/01/2010-12/03/2010 36-42" (latest of several)



## Data Sheet – Alden

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm.*  
*NWS 1994-95 through 2024-25 winter season maps archive analyzed*  
*<https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 3.4

Greatest: 6 (2000-01, 2015-16, 2024-25)

Least: 1 (1997-98, 1999-2000, 2001-02, 2007-08)

First Event of the season:

Average Start Date: December 13

Earliest Start Date: October 12 (2006)

Latest Start Date: February 19 (2008)

Last Event of the season:

Average Start Date: January 22

Earliest Start Date: December 5 (1997)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

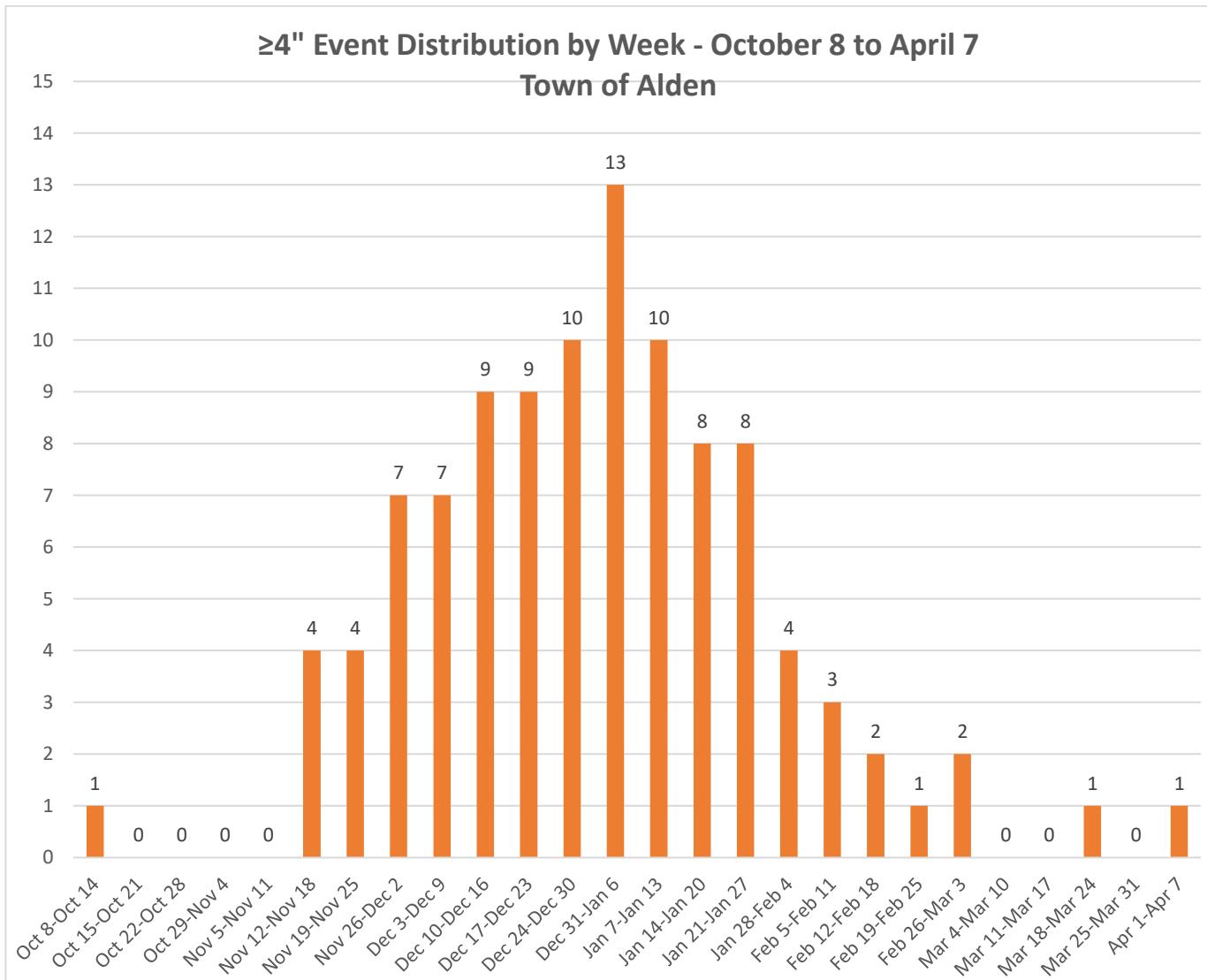
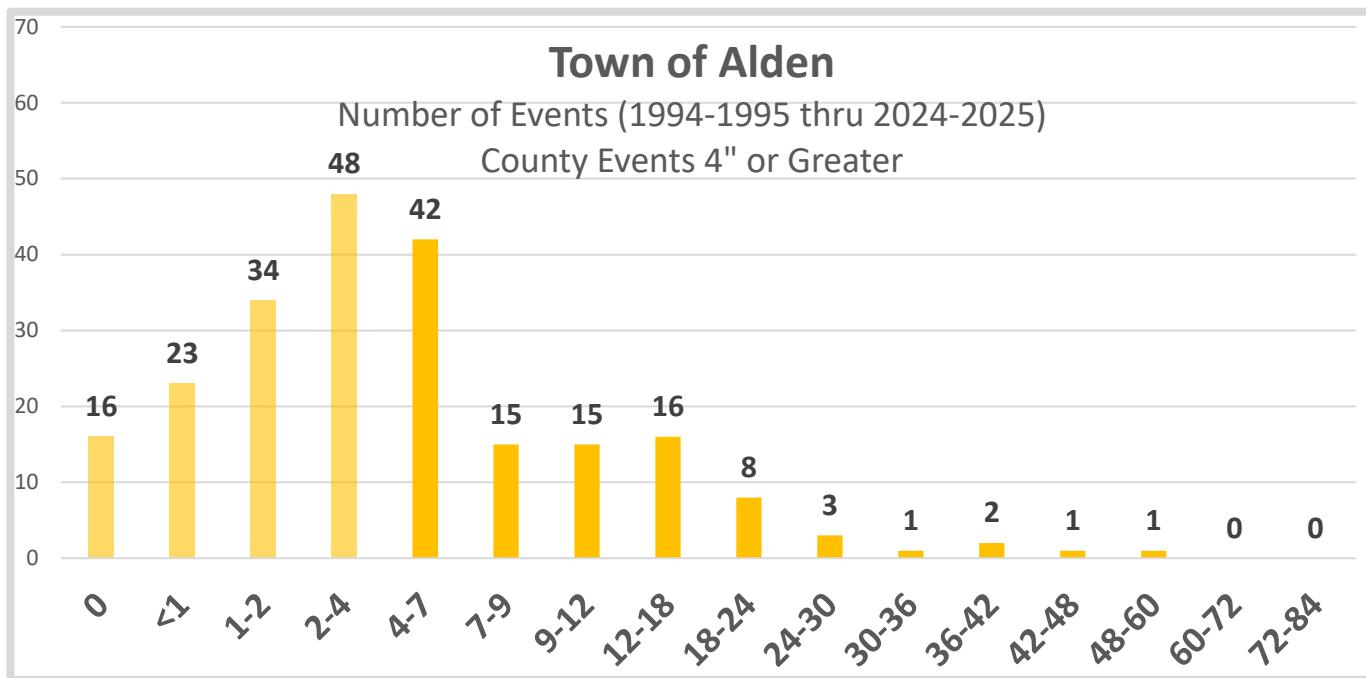
11/17/2014-11/19/2014	48-60"
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11/17/2022-11/20/2022	42-48"
-----------------------	--------

12/23/2022-12/27/2022	36-42"
-----------------------	--------

12/24/2001-01/01/2002	36-42"
-----------------------	--------

01/13/2024-01/15/2024	30-36"
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## Data Sheet – Lackawanna

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 3.2  
 Greatest: 6 (2000-01, 2024-24)  
 Least: 0 (2019-20)

First Event of the season\*:

Average Start Date: December 9  
 Earliest Start Date: October 12 (2006)  
 Latest Start Date: January 23 (2008)

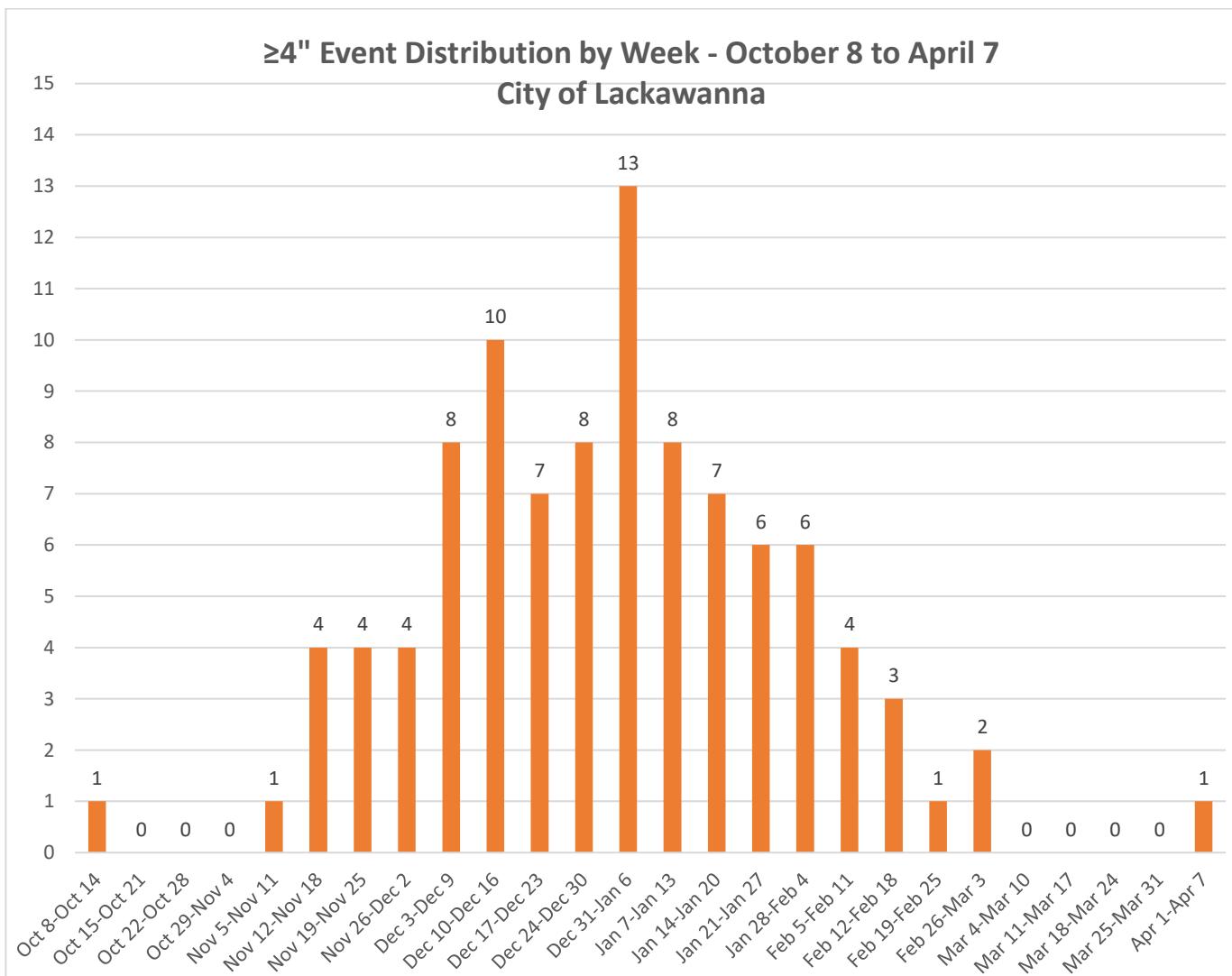
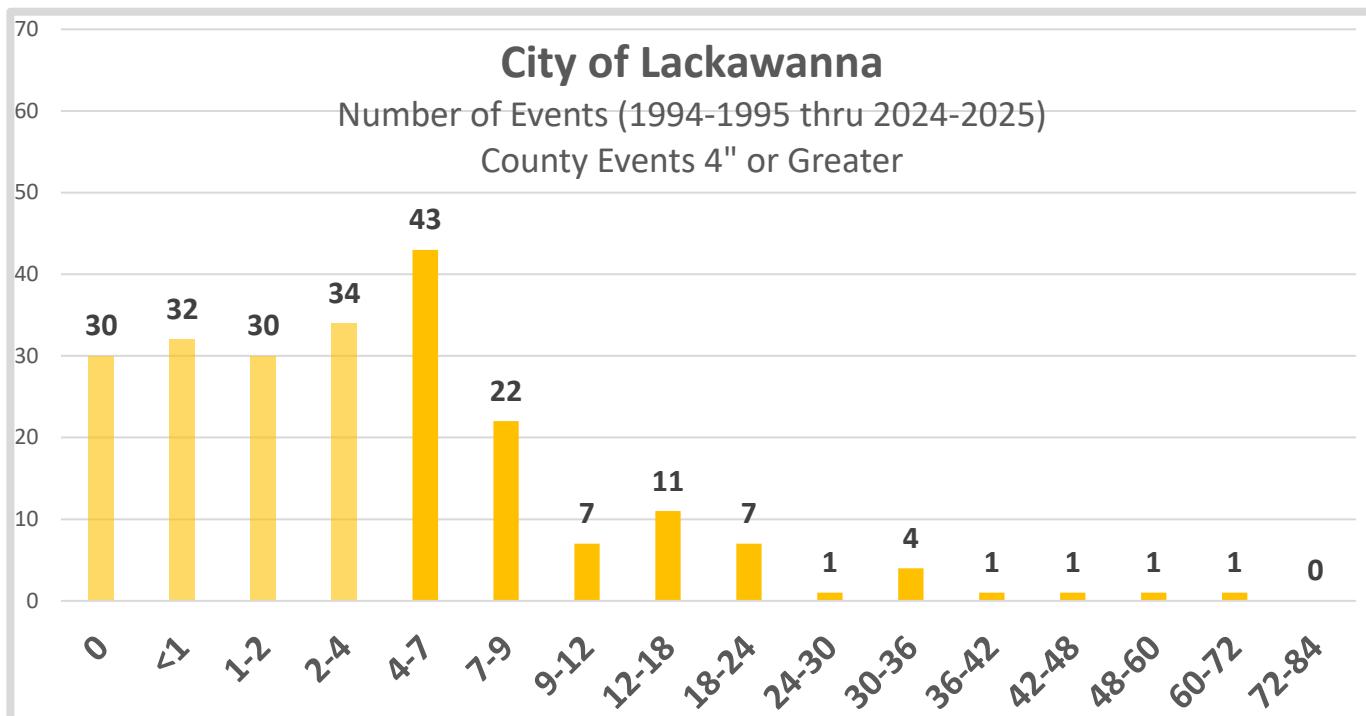
Last Event of the season\*:

Average Start Date: January 20  
 Earliest Start Date: December 1 (2002)  
 Latest Start Date: April 4 (2007)

\* Excluding years when no event occurred

Top five lake effect events (based on range of maximum snowfall):

12/24/2001-01/01/2002	60-72"
11/17/2022-11/20/2022	48-60"
11/17/2014-11/19/2014	42-48"
01/13/2024-01/15/2024	36-42"
01/16/2024-01/18/2024	30-36" (latest of several)



## Data Sheet – West Seneca

*Lake Effect Event defined as one in which four or more inches of snow fell.  
 The study used snowfall amounts/totals for the analysis. It did not consider seasonality,  
 day of the week, time of day, type of snow, etc.,  
 all of which can affect the potential impacts of a storm.  
 NWS 1994-95 through 2024-25 winter season maps archive analyzed  
<https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 3.5

Greatest: 6 (2000-01, 2006-07, 2024-25)

Least: 1 (1994-95, 1997-98, 1999-2000, 2011-12, 2019-20)

First Event of the season:

Average Start Date: December 9

Earliest Start Date: October 12 (2006)

Latest Start Date: January 19 (2020)

Last Event of the season:

Average Start Date: January 24

Earliest Start Date: December 5 (1997) (Only one event that season)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

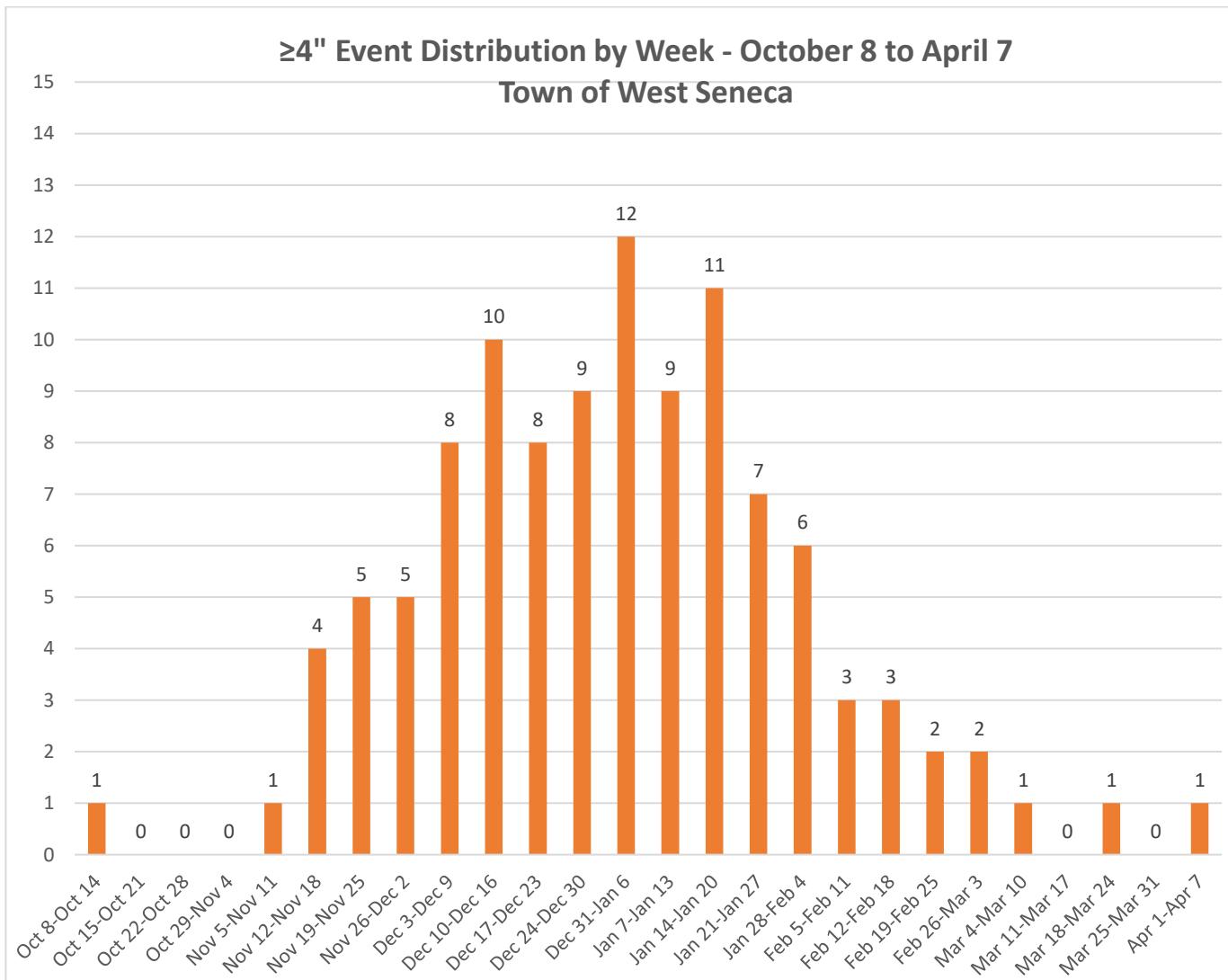
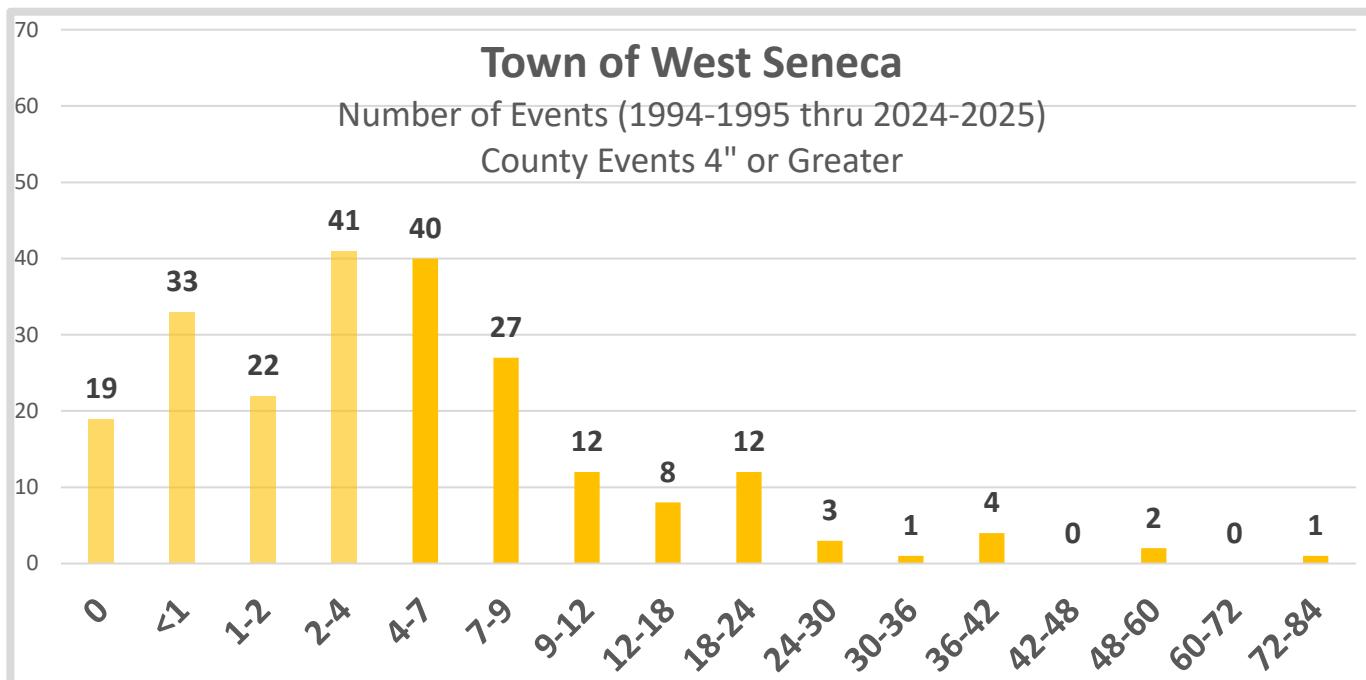
12/24/2001-01/01/2002 72-84"

11/17/2022-11/20/2022 48-60"

11/17/2014-11/19/2014 48-60"

01/16/2024-01/18/2024 36-42" (latest of several)

01/13/2024-01/15/2024 36-42" (latest of several)



## Data Sheet – Elma

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm.*  
*NWS 1994-95 through 2024-25 winter season maps archive analyzed*  
<https://www.weather.gov/buf/lesEventArchive>

Number of events per season:

Average: 4.3

Greatest: 7 (2000-01, 2006-07, 2024-25)

Least: 1 (2019-20)

First Event of the season:

Average Start Date: December 7

Earliest Start Date: October 12 (2006)

Latest Start Date: January 19 (2020)

Last Event of the season:

Average Start Date: January 28

Earliest Start Date: December 21 (1999)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

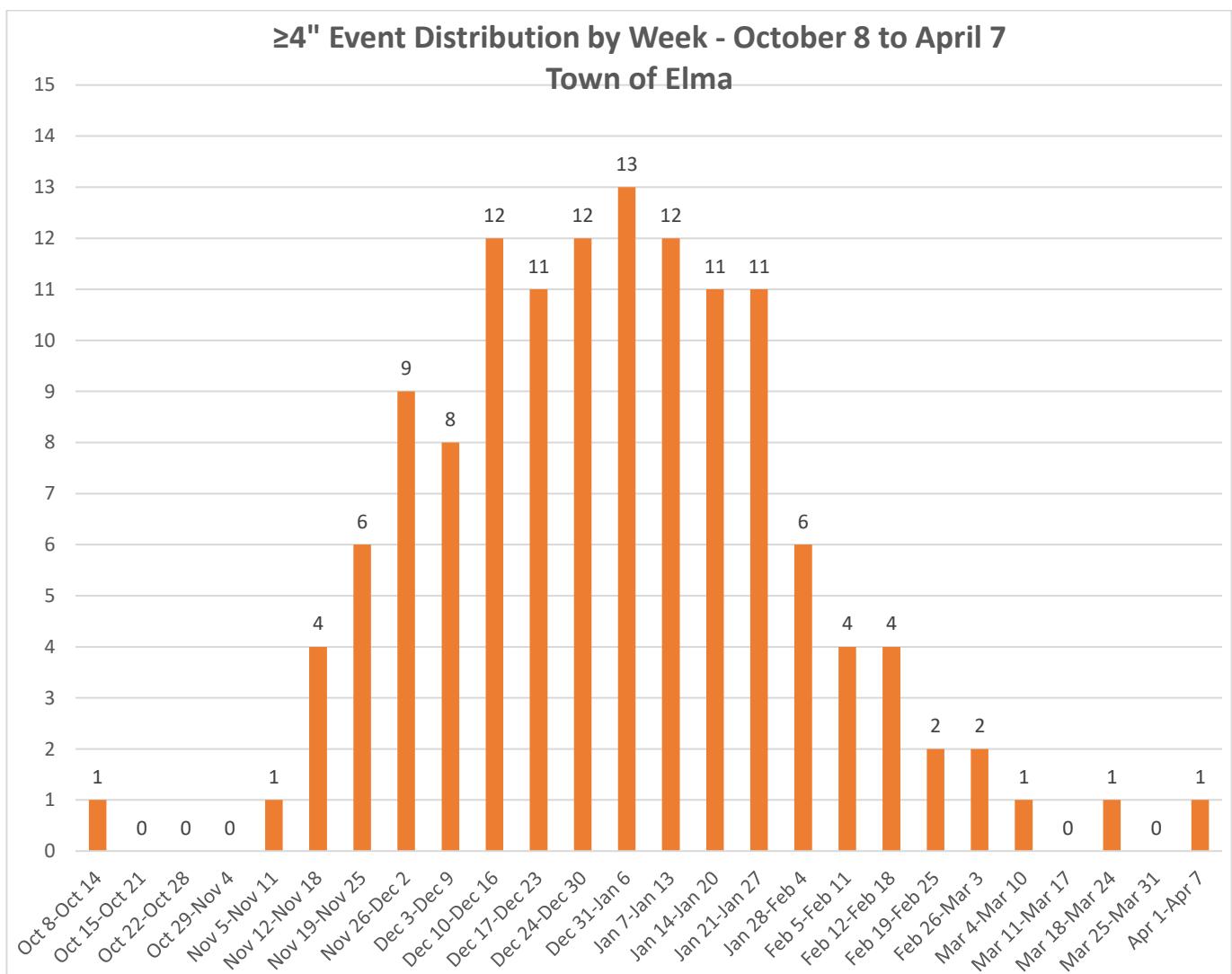
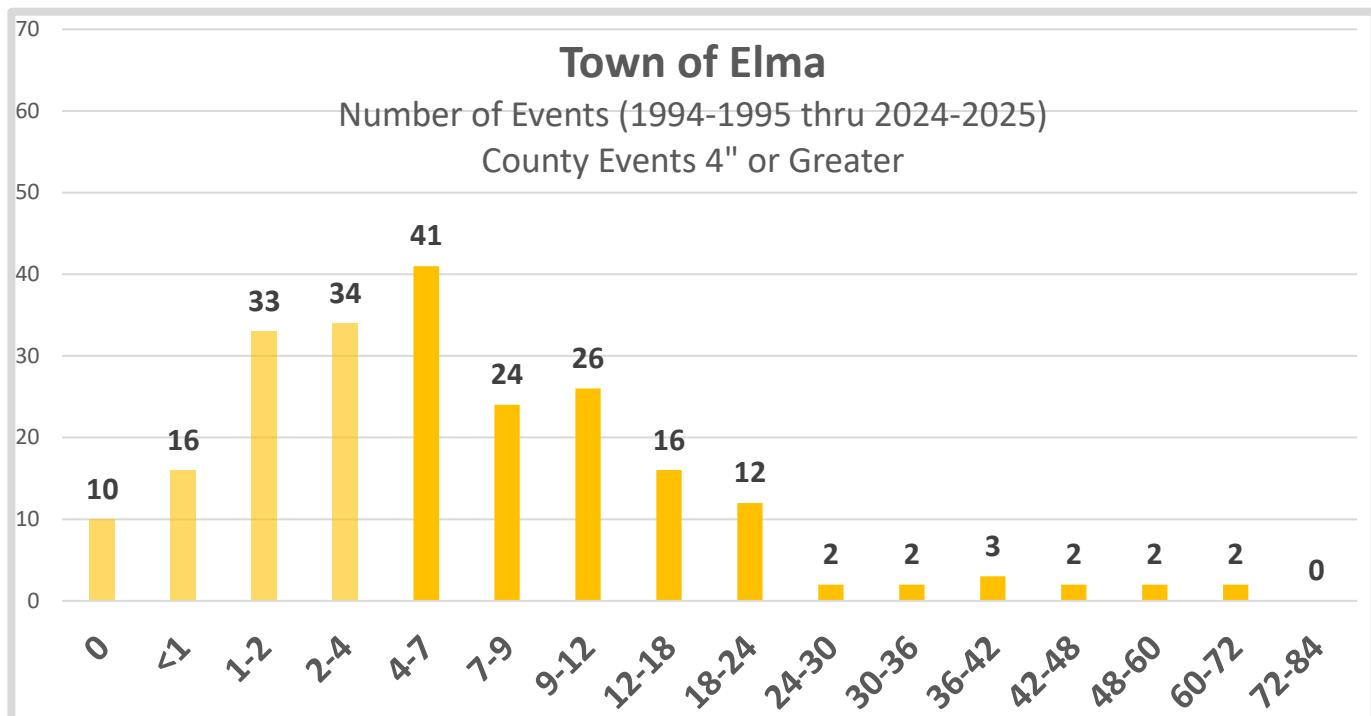
11/17/2022-11/20/2022 60-72"

12/24/2001-01/01/2002 60-72"

12/23/2022-12/27/2022 48-60"

11/17/2014-11/19/2014 48-60"

01/16/2024-01/18/2024 42-48" (latest of several)



## Data Sheet – Marilla

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 4.4

Greatest: 8 (2006-07)

Least: 2 (1999-2000, 2011-12, 2019-20)

First Event of the season:

Average Start Date: December 7

Earliest Start Date: October 12 (2006)

Latest Start Date: January 19 (2020)

Last Event of the season:

Average Start Date: January 30

Earliest Start Date: December 23 (2022)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

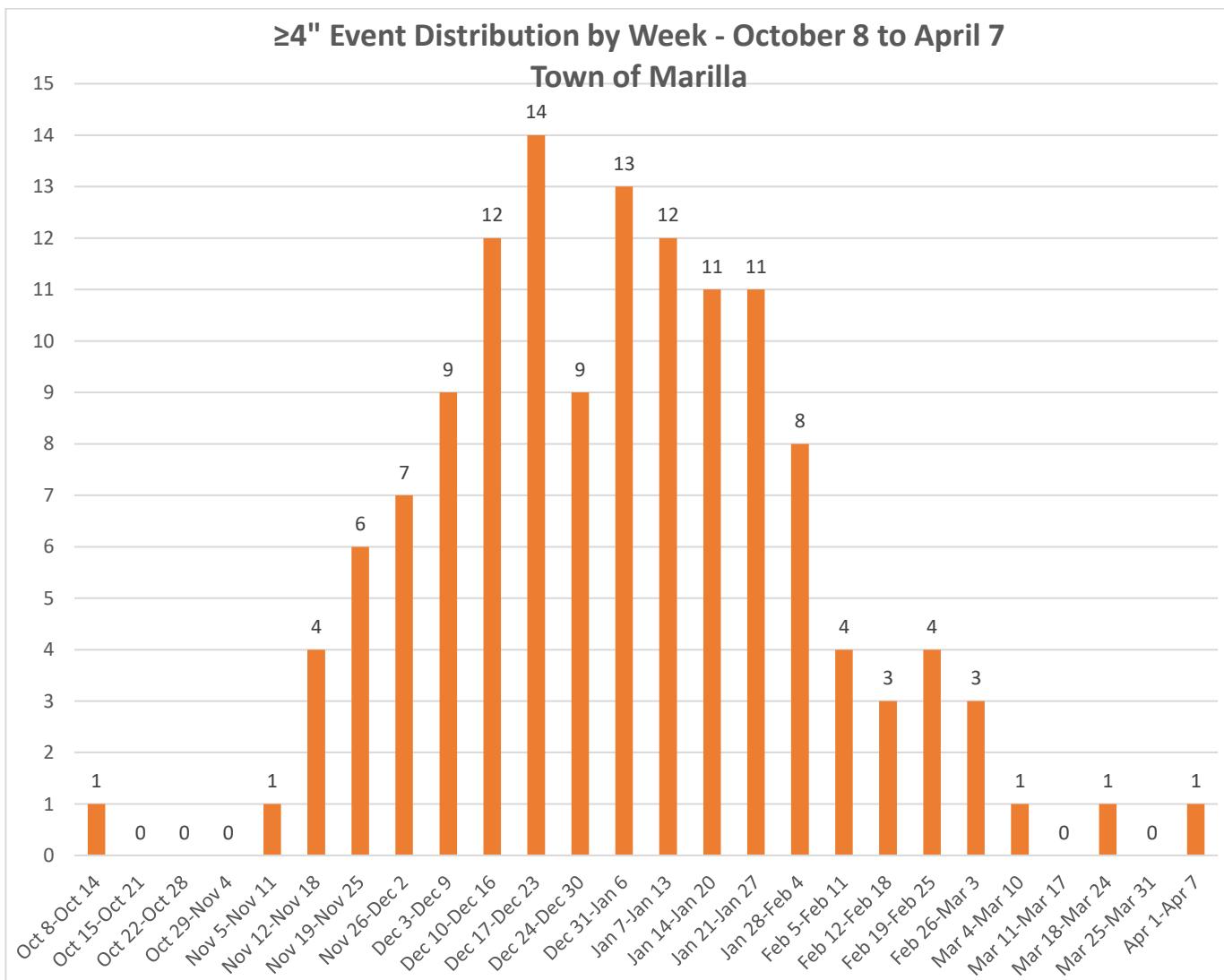
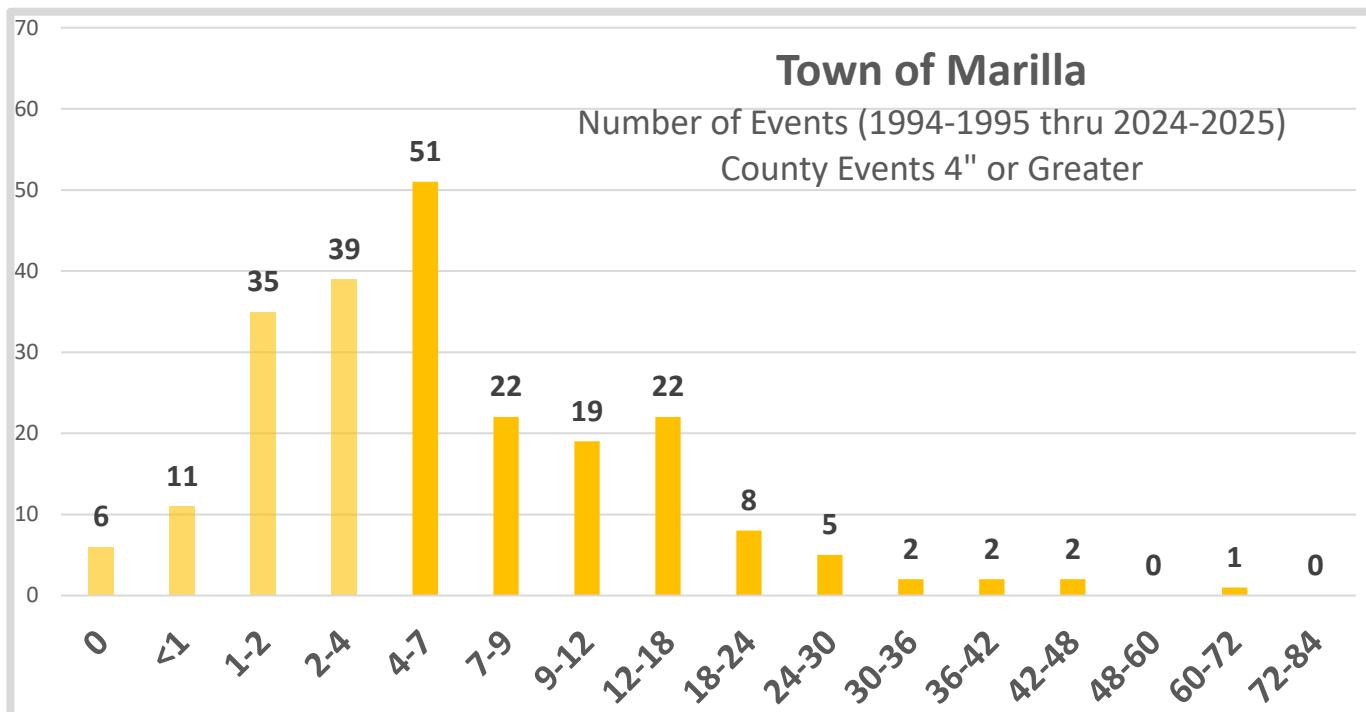
11/17/2022-11/20/2022 60-72"

11/17/2014-11/19/2014 42-48"

11/19/2014-11/21/2014 42-48"

12/11/2024-12/13/2024 36-42" (latest of several)

12/23/2022-12/27/2022 36-42" (latest of several)



## Data Sheet – Hamburg

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 4.1

Greatest: 7 (2005-06, 2006-07, 2024-25)

Least: 1 (1997-98, 2019-20)

First Event of the season:

Average Start Date: December 8

Earliest Start Date: October 12 (2006)

Latest Start Date: January 19 (2020)

Last Event of the season:

Average Start Date: January 27

Earliest Start Date: December 21 (1999)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

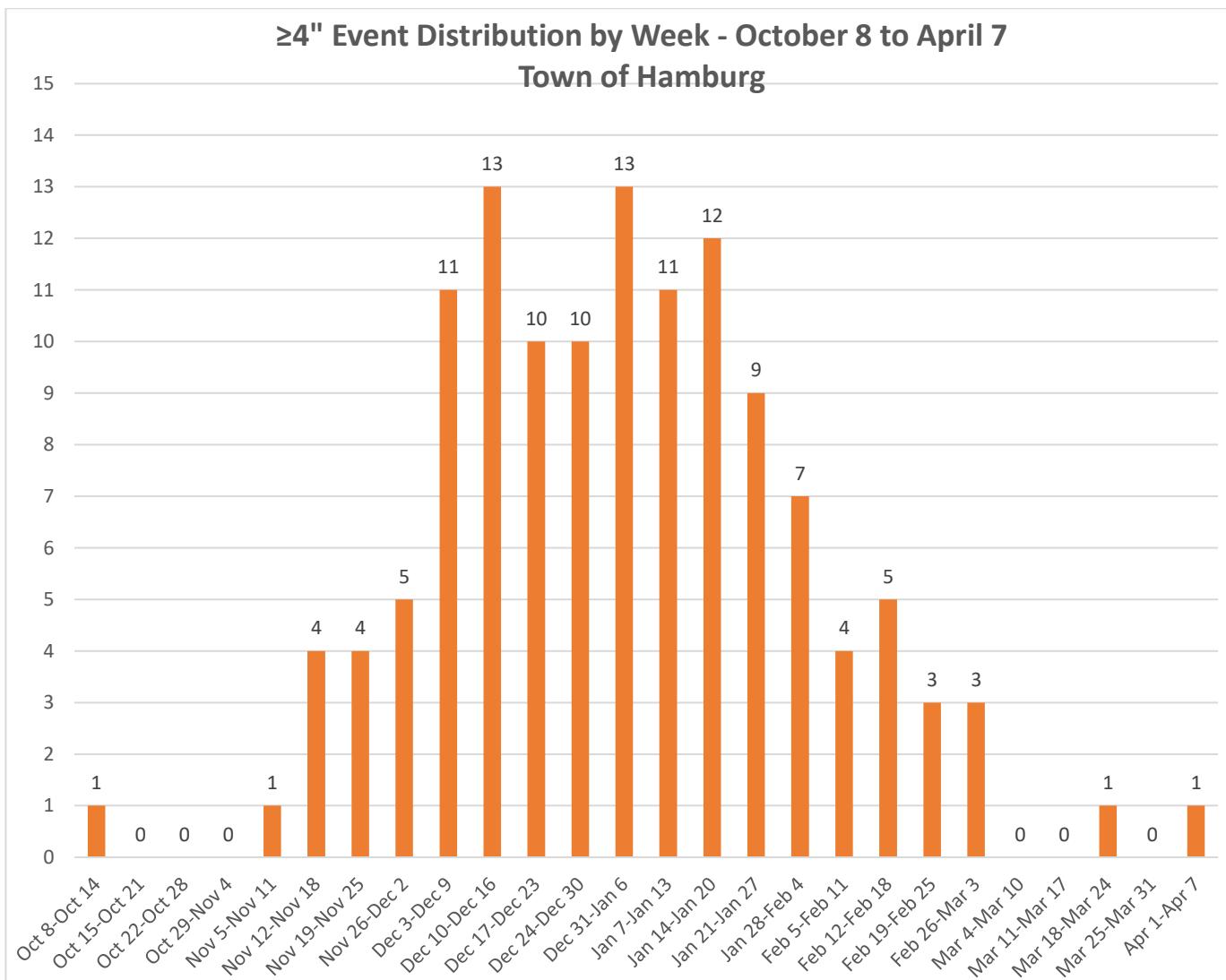
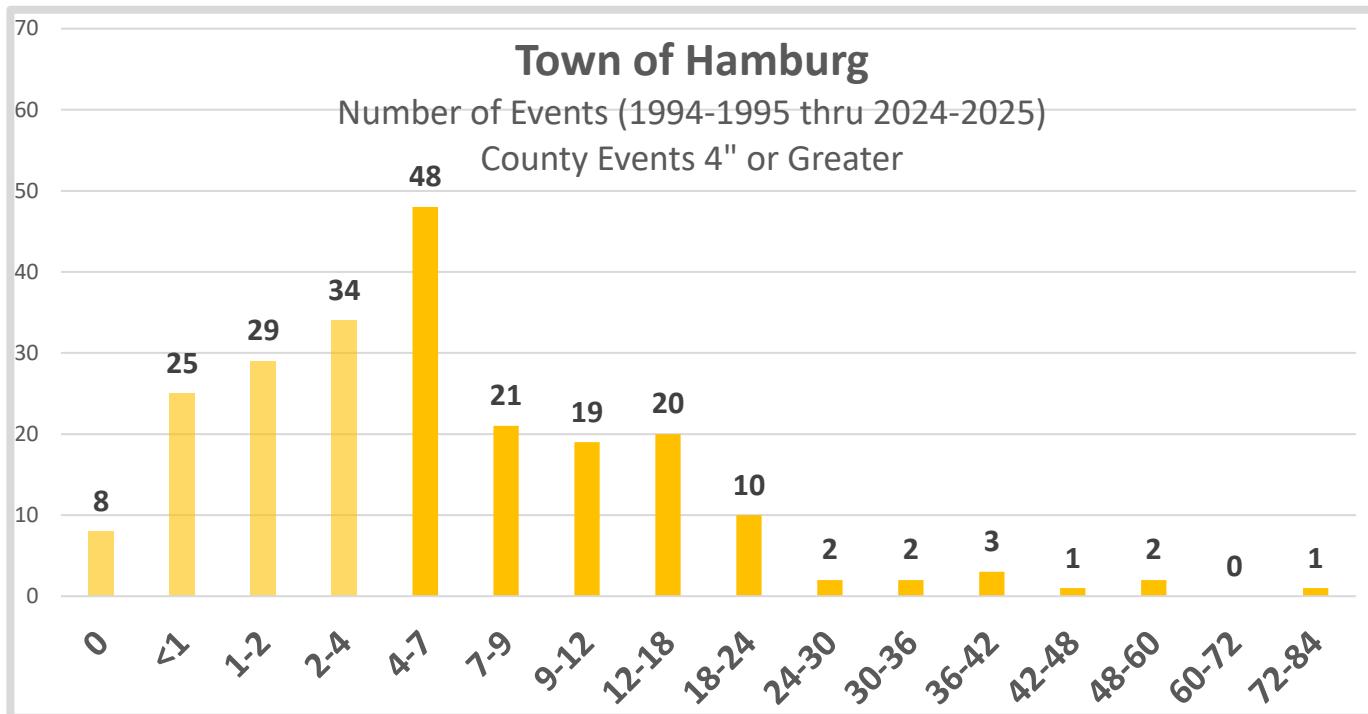
11/17/2022-11/20/2022 72-84"

11/17/2014-11/19/2014 48-60"

12/24/2001-01/01/2002 48-60"

12/23/2022-12/27/2022 42-48"

12/11/2024-12/13/2024 36-42" (latest of several)



## Data Sheet – Orchard Park

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 4.9

Greatest: 8 (2006-07, 2008-09)

Least: 2 (1997-98, 1999-2000, 2019-20, 2021-22)

First Event of the season:

Average Start Date: December 5

Earliest Start Date: October 12 (2006)

Latest Start Date: January 19 (2020)

Last Event of the season:

Average Start Date: February 1

Earliest Start Date: December 5 (1997)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

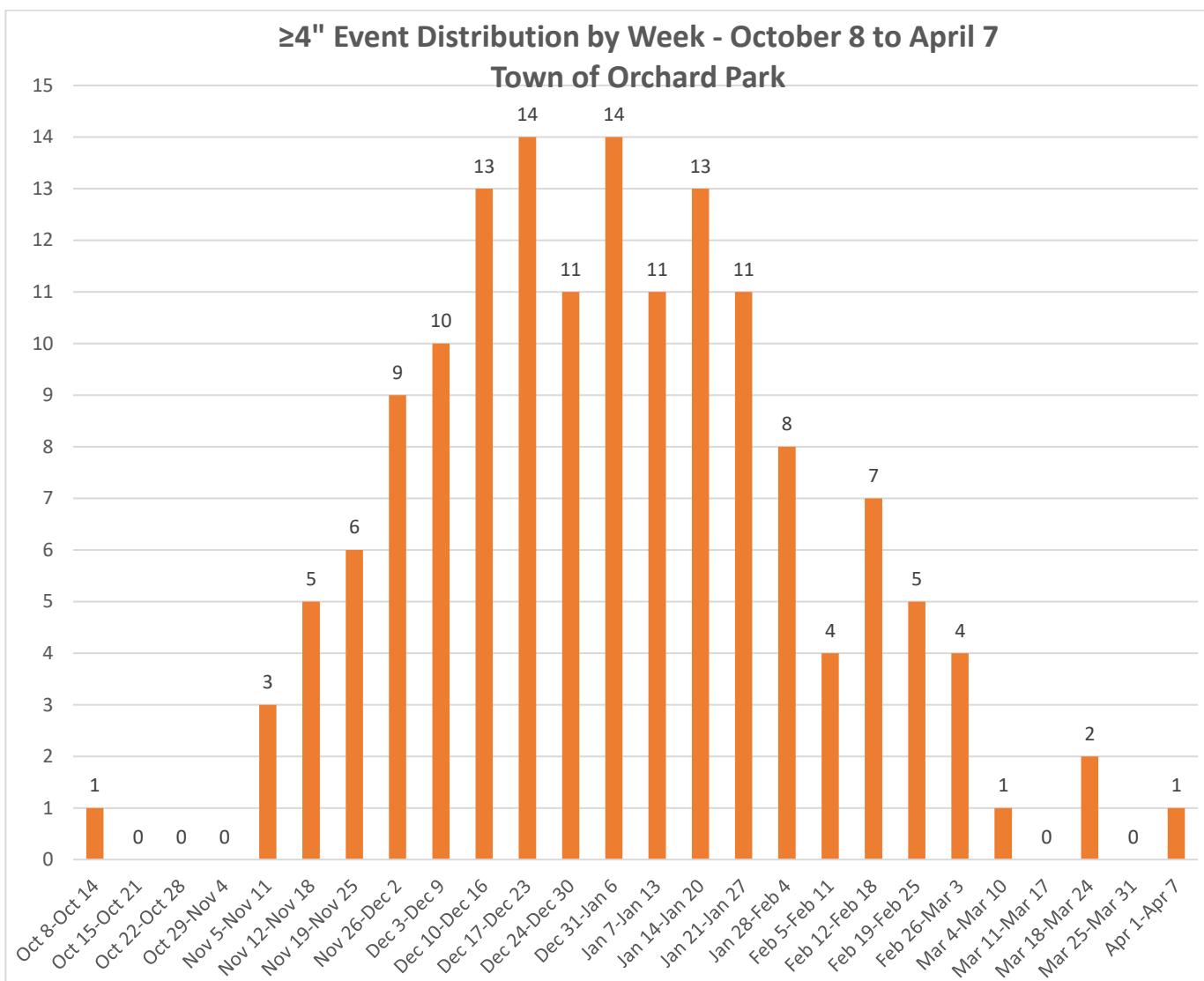
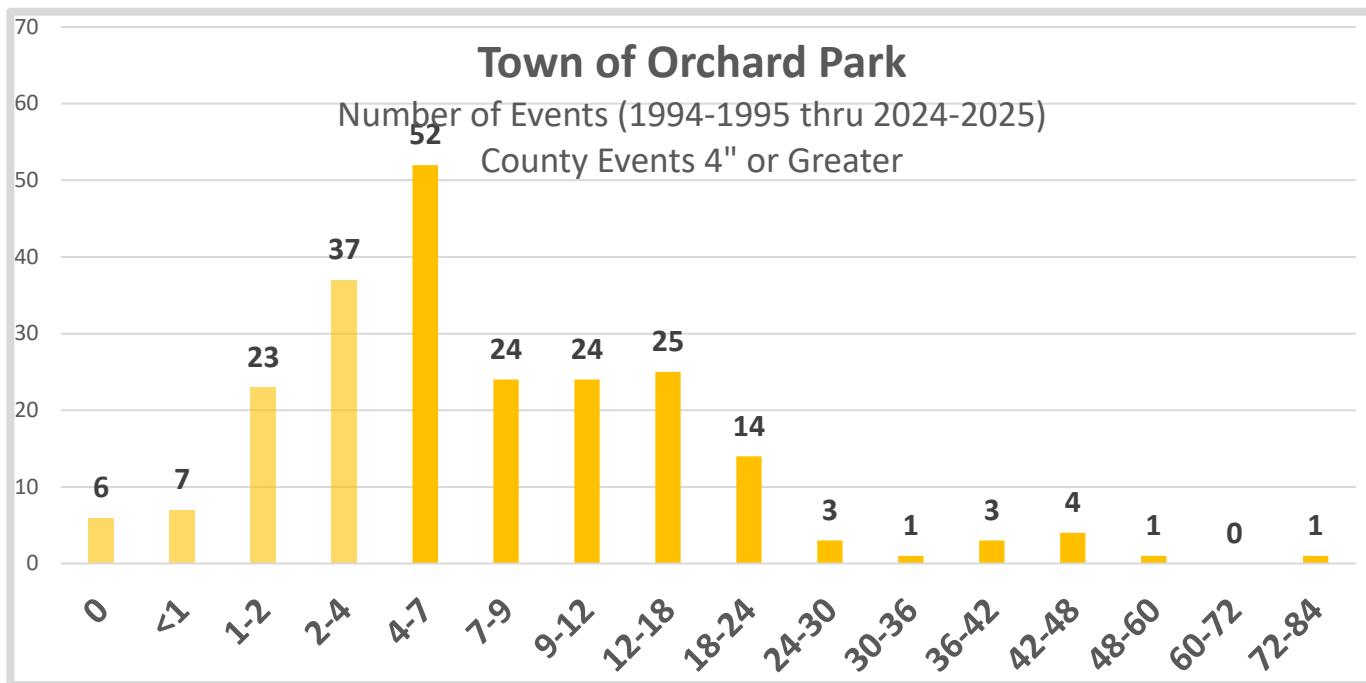
11/17/2022-11/20/2022 72-84"

12/24/2001-01/01/2002 48-60"

01/16/2024-01/18/2024 42-48" (latest of several)

12/23/2022-12/27/2022 42-48" (latest of several)

11/19/2014-11/21/2014 42-48" (latest of several)



## Data Sheet – Aurora

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.3  
Greatest: 9 (2018-19)  
Least: 2 (2019-20, 2021-22)

First Event of the season:

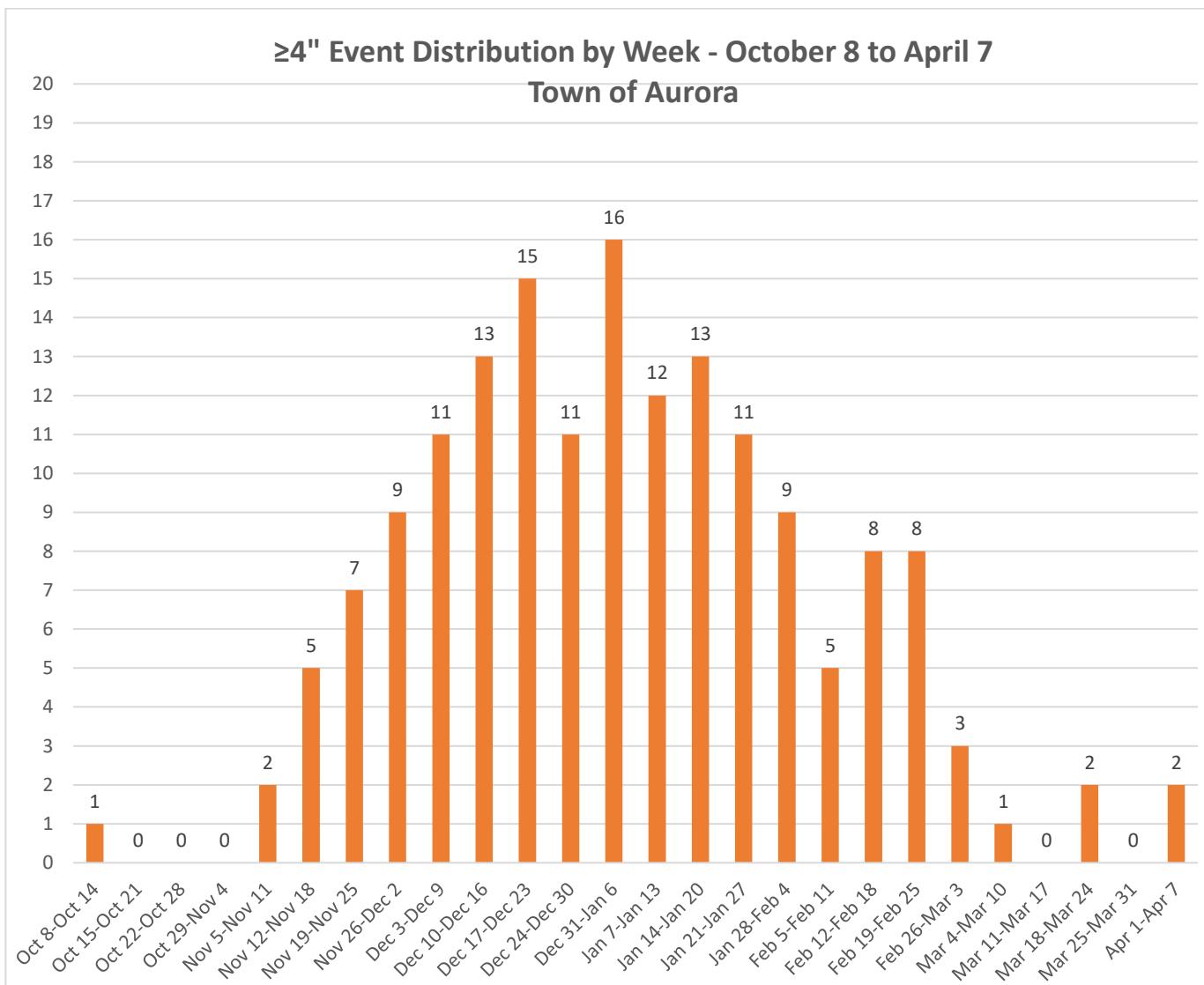
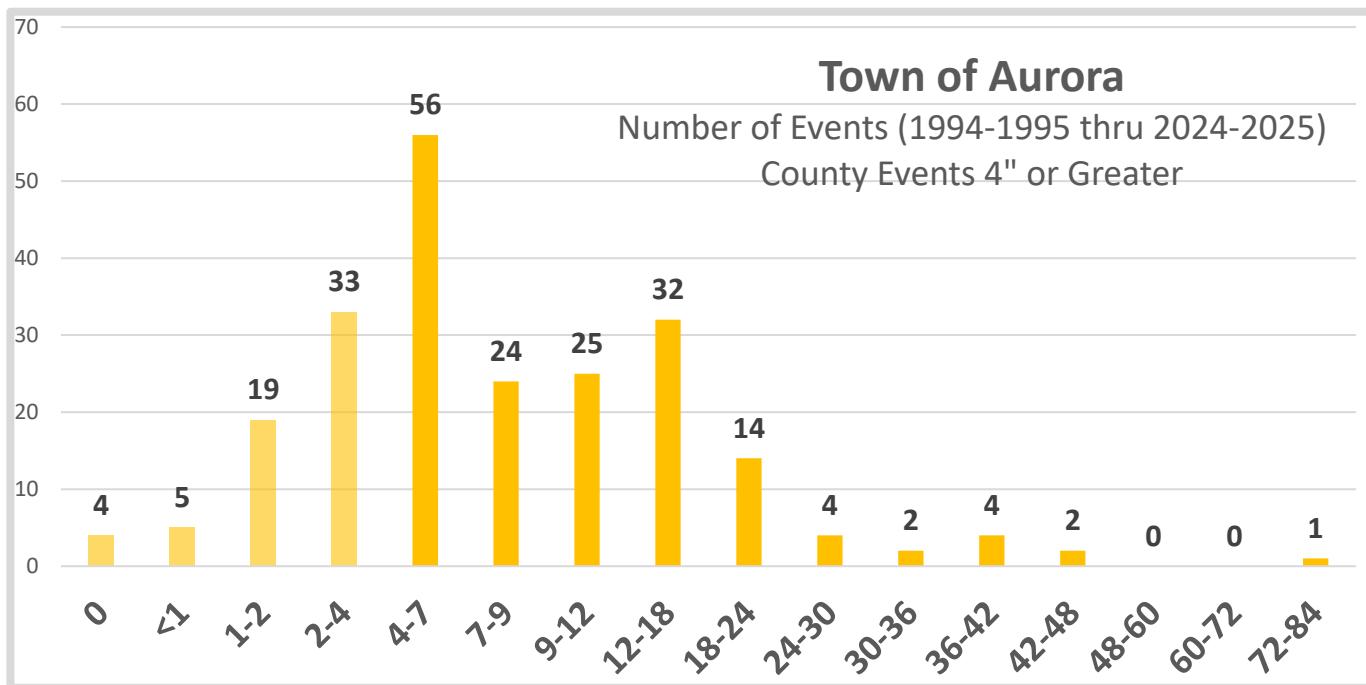
Average Start Date: December 4  
Earliest Start Date: October 12 (2006)  
Latest Start Date: January 19 (2020)

Last Event of the season:

Average Start Date: February 5  
Earliest Start Date: December 23 (2022)  
Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

11/17/2022-11/20/2022	72-84"
11/19/2014-11/21/2014	72-84"
12/24/2001-01/01/2002	42-48"
12/11/2004-12/13/2004	36-42" (latest of several)
12/23/2022-12/27/2022	36-42" (latest of several)



## Data Sheet – Wales

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm.*  
NWS 1994-95 through 2024-25 winter season maps archive analyzed  
<https://www.weather.gov/buf/lesEventArchive>

Number of events per season:

Average: 5.2  
Greatest: 10 (2018-19)  
Least: 2 (2021-22)

First Event of the season:

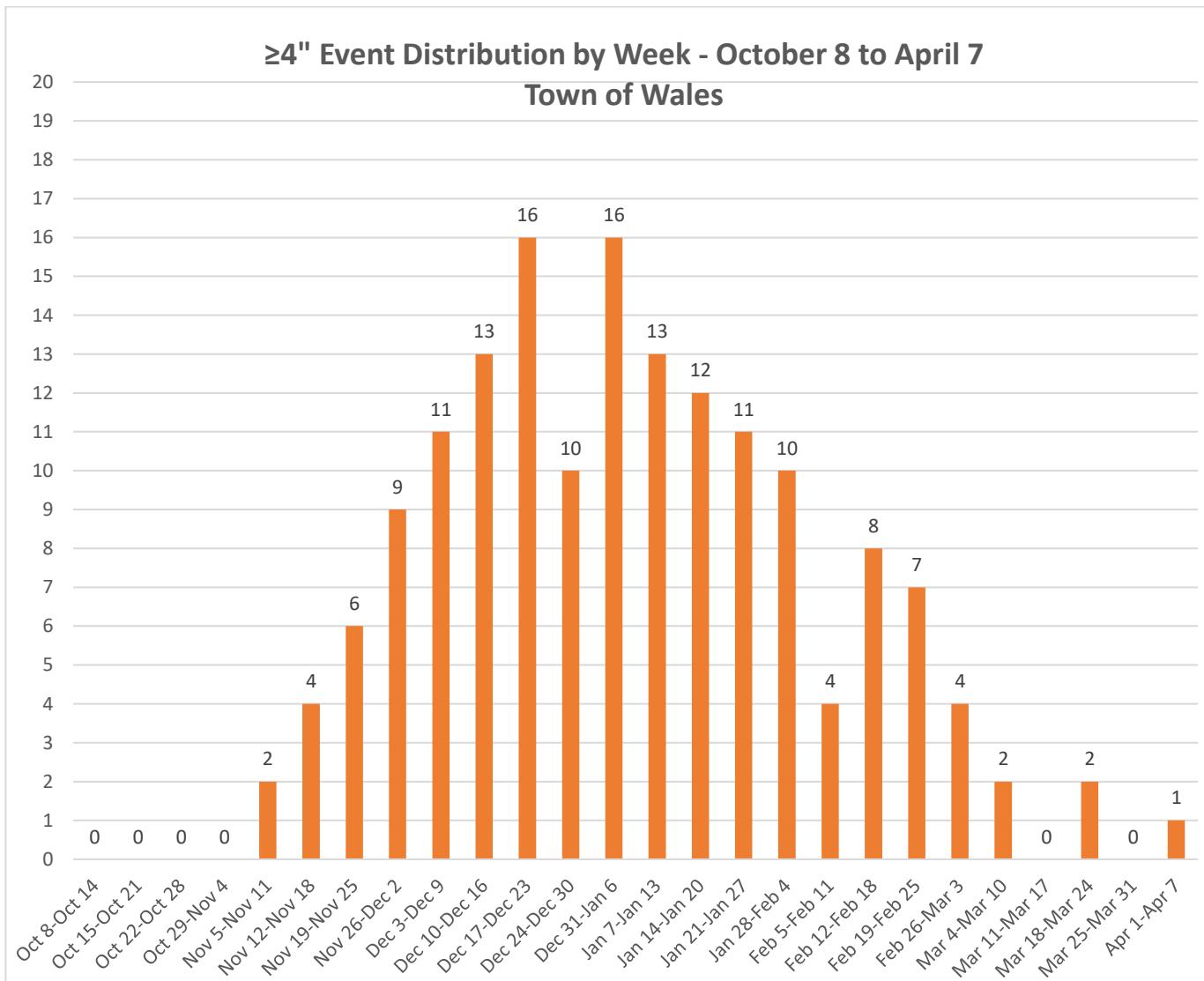
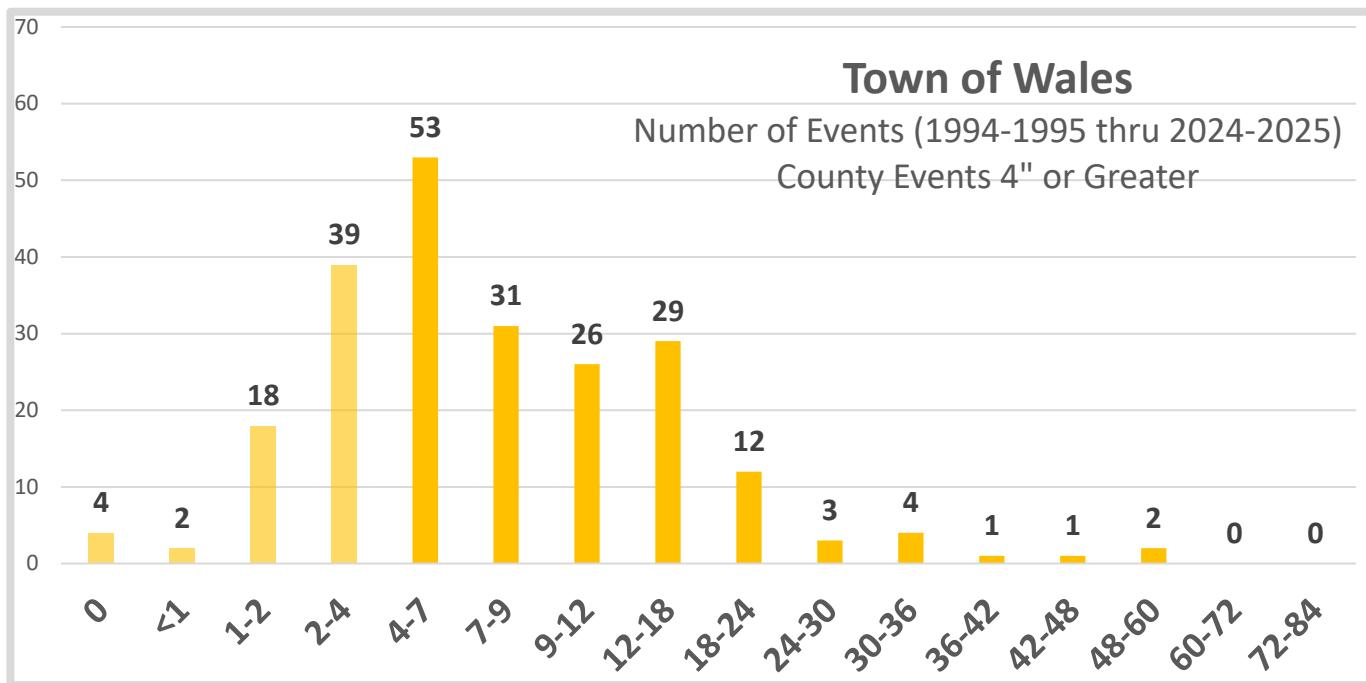
Average Start Date: December 4  
Earliest Start Date: November 9 (2018)  
Latest Start Date: January 5 (2022)

Last Event of the season:

Average Start Date: February 5  
Earliest Start Date: December 23 (2022)  
Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

11/17/2022-11/20/2022	48-60"
11/19/2014-11/21/2014	48-60"
12/24/2001-01/01/2002	42-48"
02/03/2007-02/12/2007	36-42"
12/11/2024-12/13/2024	30-36" (latest of several)



## Data Sheet – Evans

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 4.2

Greatest: 8 (2006-07)

Least: 1 (1994-95, 1997-98, 2019-20)

First Event of the season:

Average Start Date: December 7

Earliest Start Date: October 12 (2006)

Latest Start Date: January 20 (2020)

Last Event of the season:

Average Start Date: January 26

Earliest Start Date: December 5 (1997)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

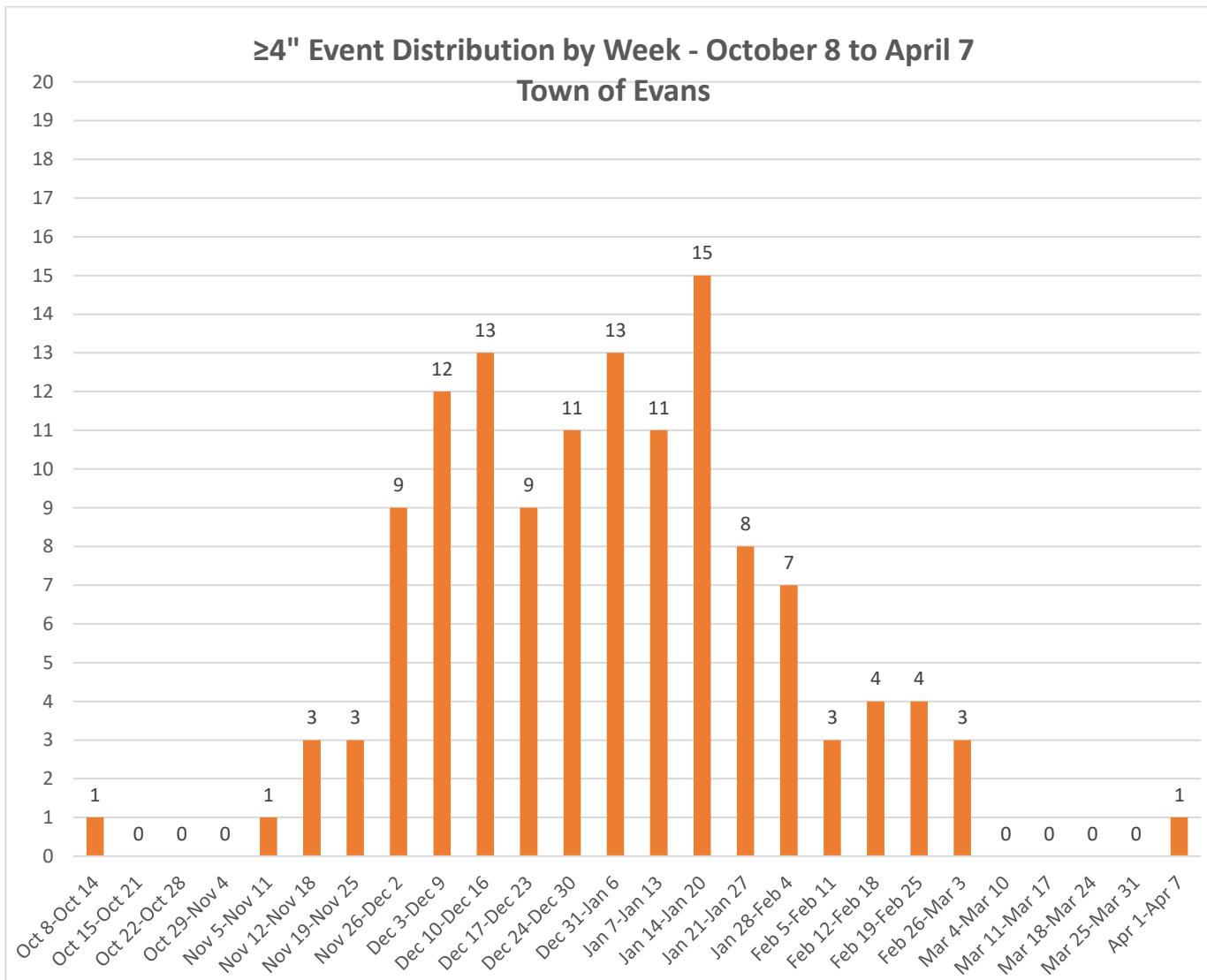
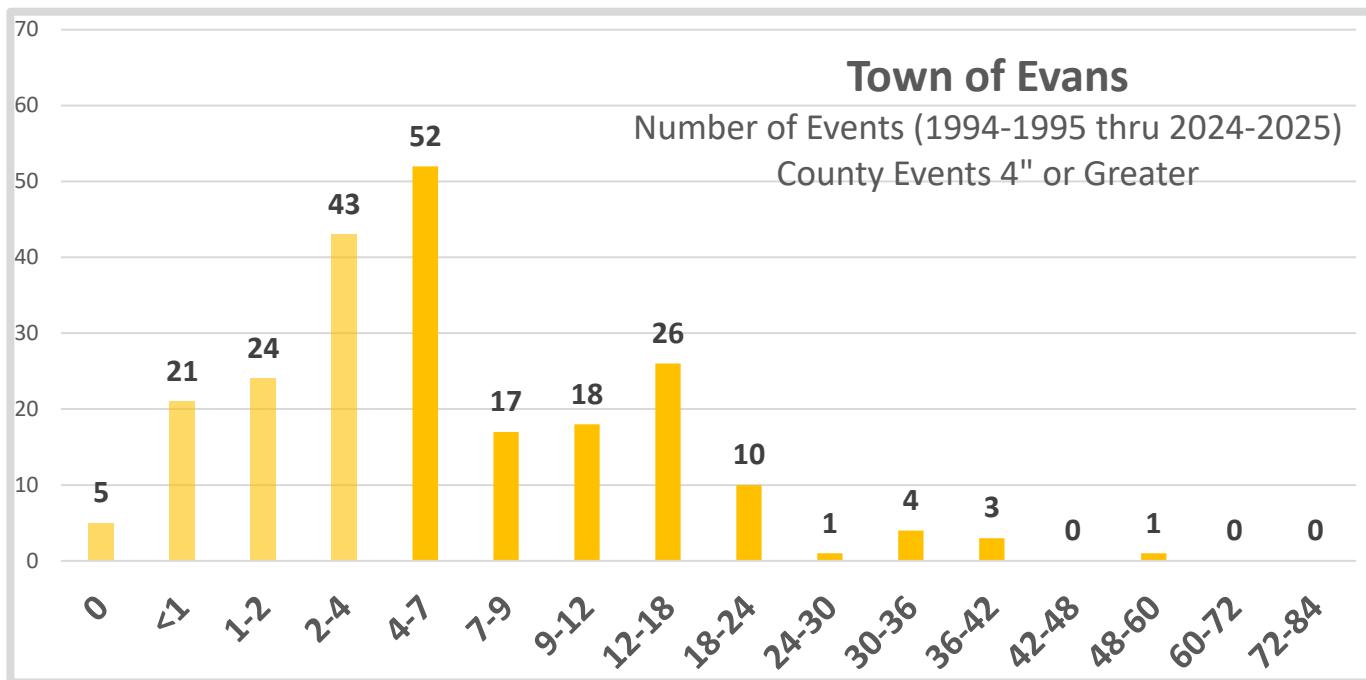
11/17/2022-11/20/2022 48-60"

12/11/2024-12/13/2024 36-42"

01/13/2024-01/15/2024 36-42"

12/24/2001-01/01/2002 36-42"

11/29/2024-12/02/2024 30-36" (latest of several)



## Data Sheet – Eden

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 4.9

Greatest: 10 (2006-07)

Least: 2 (1994-95, 1997-98, 1999-2000, 2019-20)

First Event of the season:

Average Start Date: December 6

Earliest Start Date: October 12 (2006)

Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 1

Earliest Start Date: December 5 (1997)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

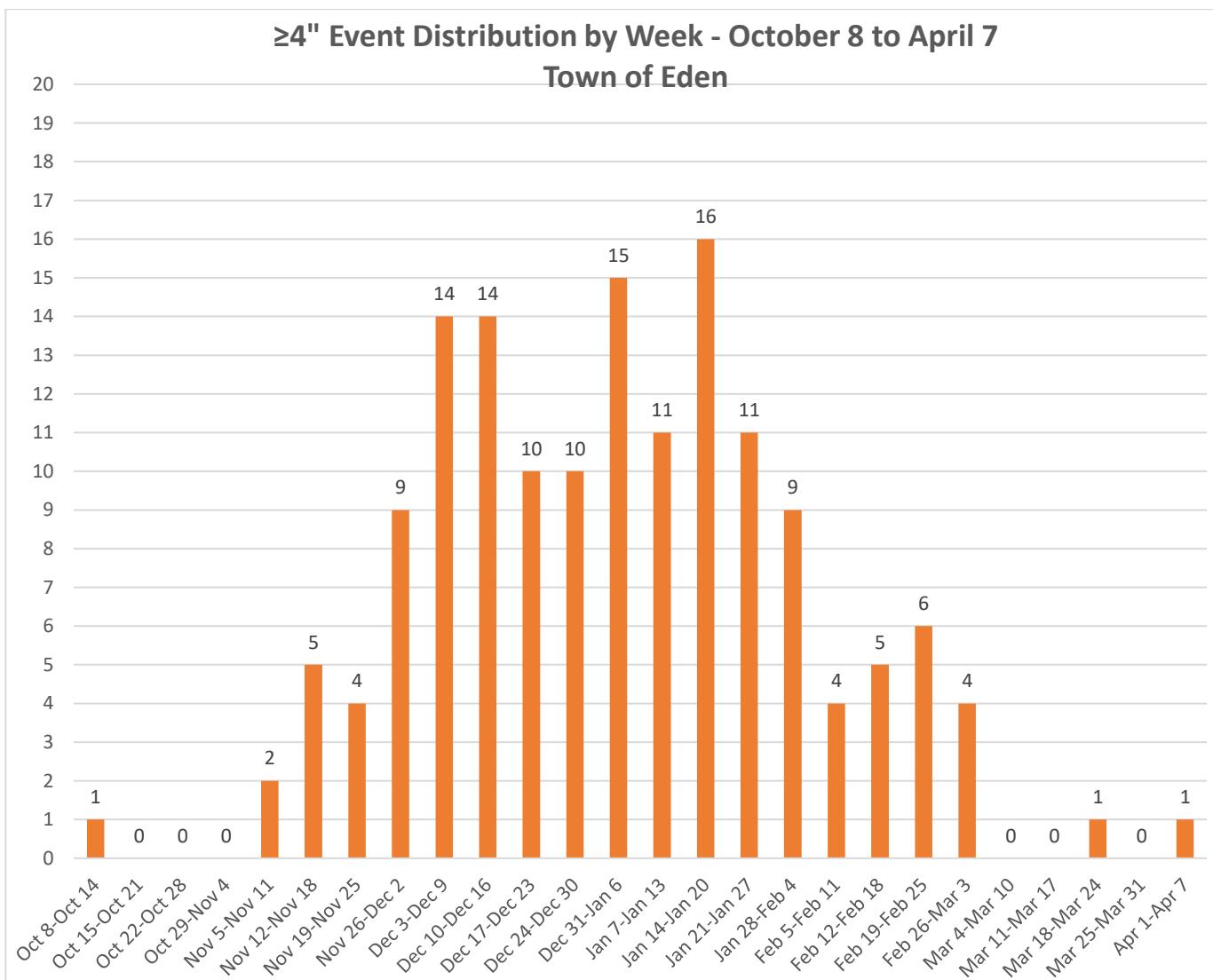
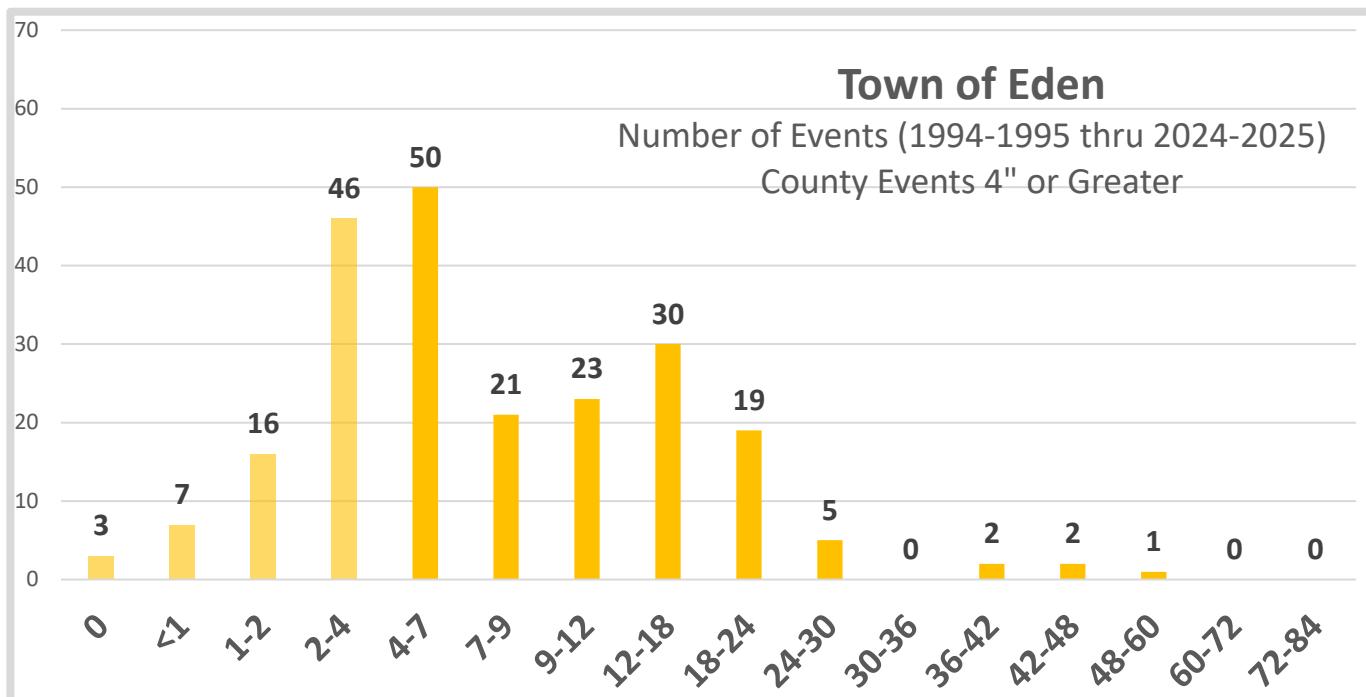
11/17/2022-11/20/2022 48-60"

11/19/2014-11/21/2014 42-48"

12/24/2001-01/01/2002 42-48"

12/11/2024-12/13/2024 36-42" (latest of several)

01/13/2024-01/15/2024 36-42" (latest of several)



## Data Sheet – Boston

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.4

Greatest: 9 (2006-07)

Least: 2 (1994-95, 1997-98, 2021-22)

First Event of the season:

Average Start Date: December 7

Earliest Start Date: November 6 (2007)

Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 5

Earliest Start Date: December 5 (1997)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

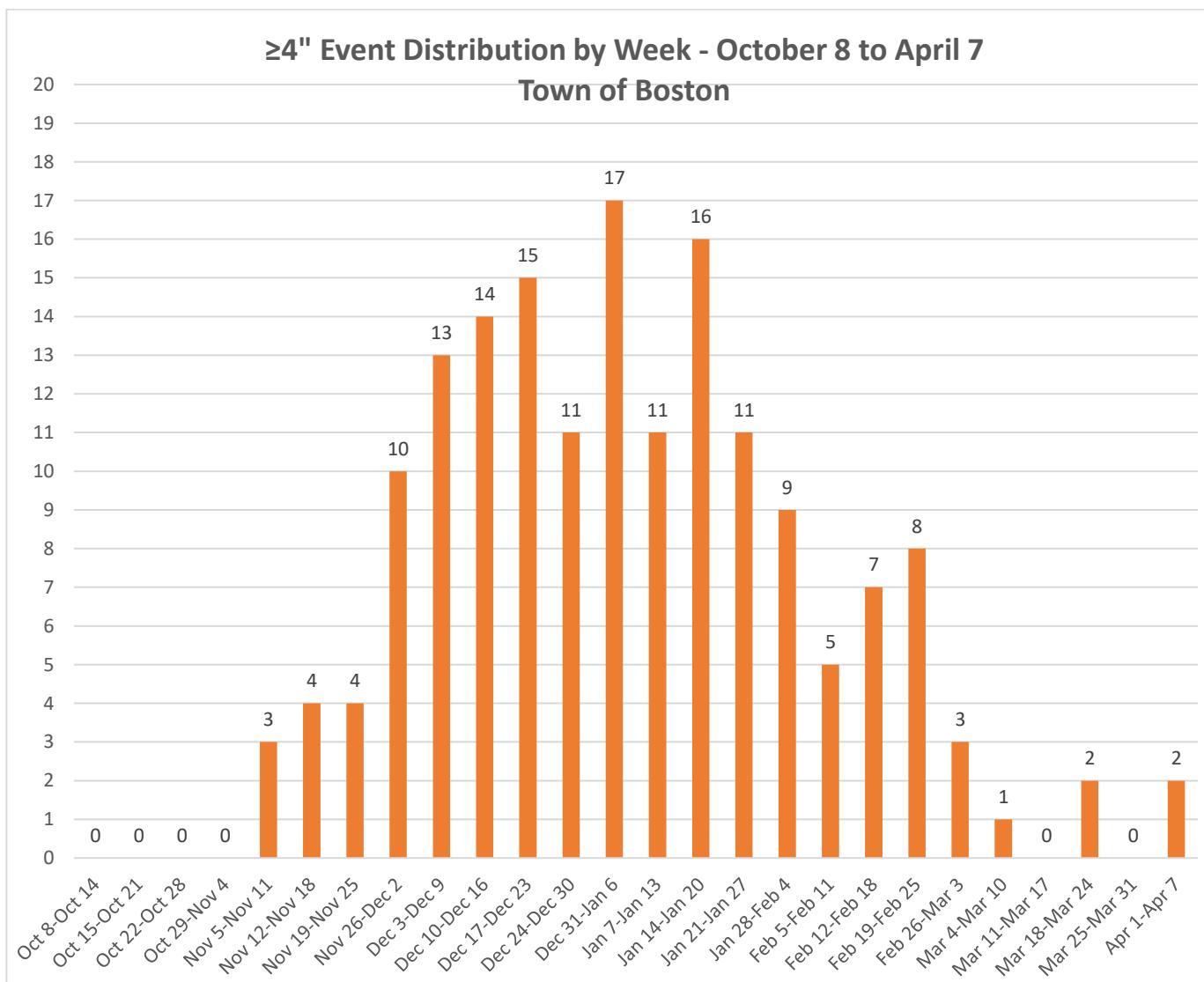
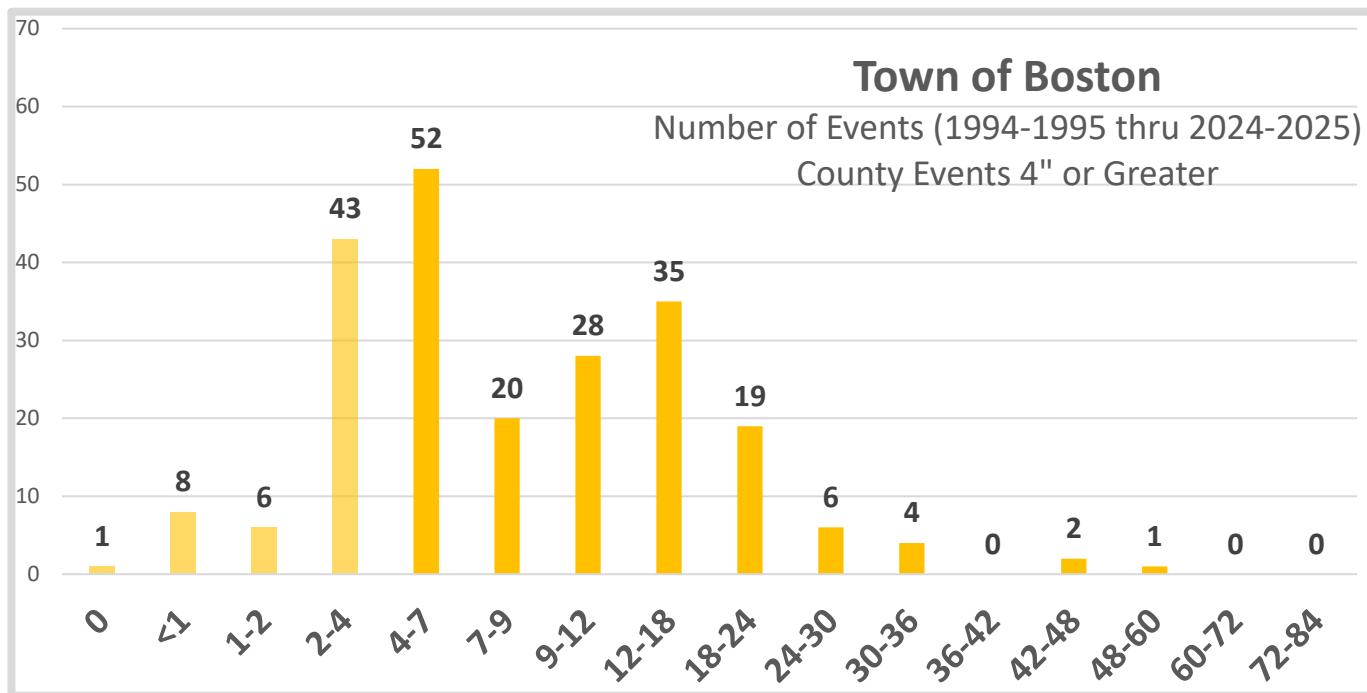
11/17/2022-11/20/2022 48-60"

11/19/2014-11/21/2014 42-48"

12/24/2001-01/01/2002 42-48"

02/19/2021-02/20/2021 30-36" (latest of several)

12/10/2013-12/12/2013 30-36" (latest of several)



## Data Sheet – Colden

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.7

Greatest: 11 (2018-19)

Least: 2 (1994-95, 1997-98, 2021-22)

First Event of the season:

Average Start Date: December 5

Earliest Start Date: November 9 (2018)

Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 8

Earliest Start Date: December 5 (1997)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

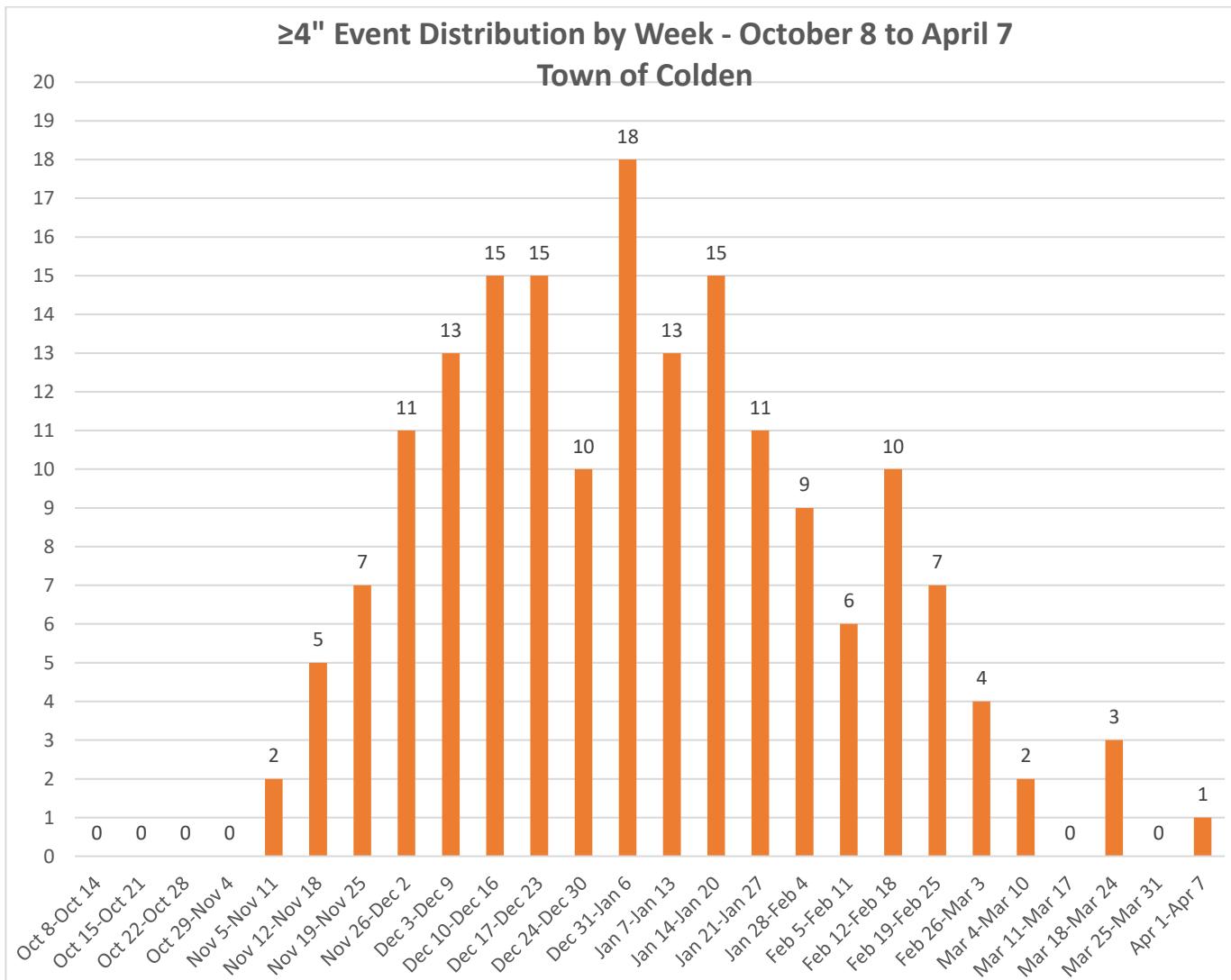
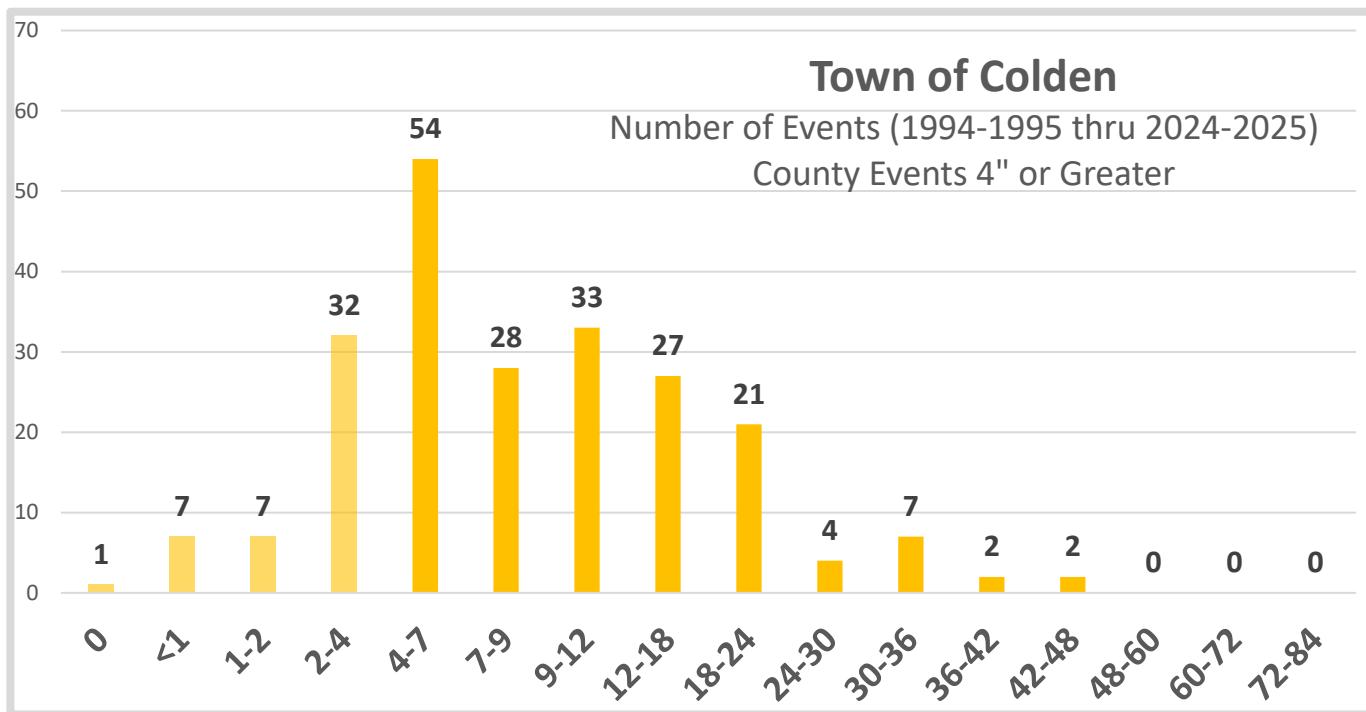
11/17/2022-11/20/2022 42-48"

01/04/2017-01/08/2017 42-48"

11/19/2014-11/21/2014 36-42"

01/02/1995-01/05/1995 36-42"

11/29/2024-12/02/2024 30-36" (latest of several)



## Data Sheet – Holland

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.5

Greatest: 10 (2018-19)

Least: 2 (1994-95, 1997-98, 2021-22)

First Event of the season:

Average Start Date: December 4

Earliest Start Date: November 9 (2018)

Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 5

Earliest Start Date: November 15 (1997)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

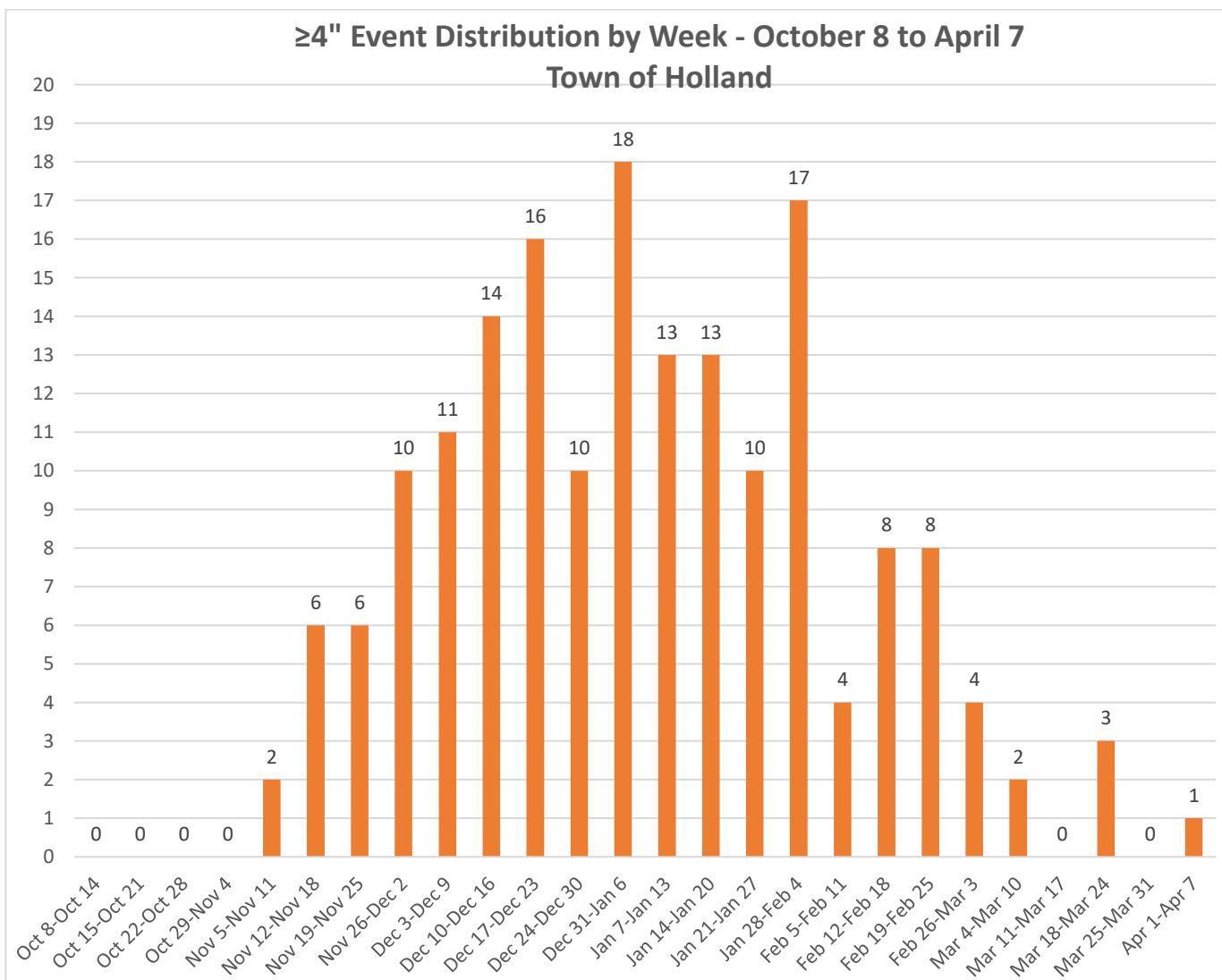
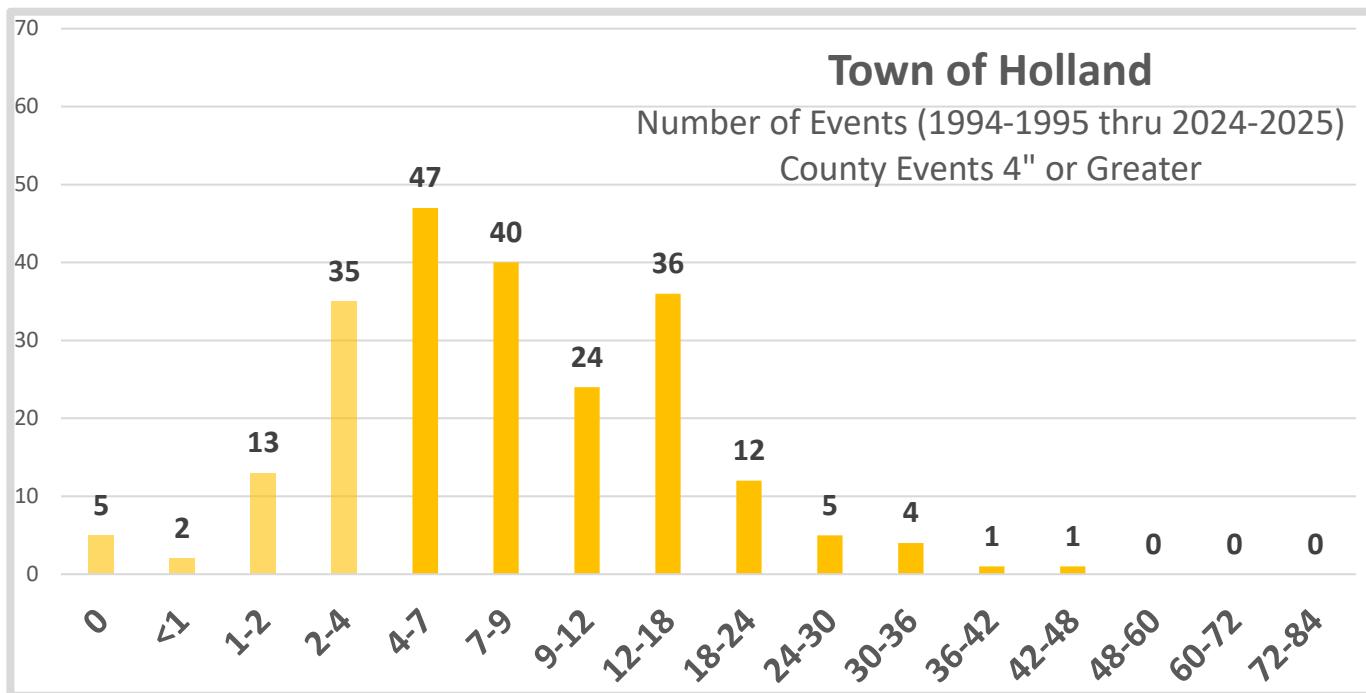
12/24/2001-01/01/2002 42-48"

01/04/2017-01/08/2017 36-42"

11/17/2022-11/20/2022 30-36" (latest of several)

12/10/2013-12/12/2013 30-36" (latest of several)

02/03/2007-02/12/2007 30-36" (latest of several)



## Data Sheet – Brant

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 4.6  
 Greatest: 10 (2006-07)  
 Least: 1 (1994-95)

First Event of the season:

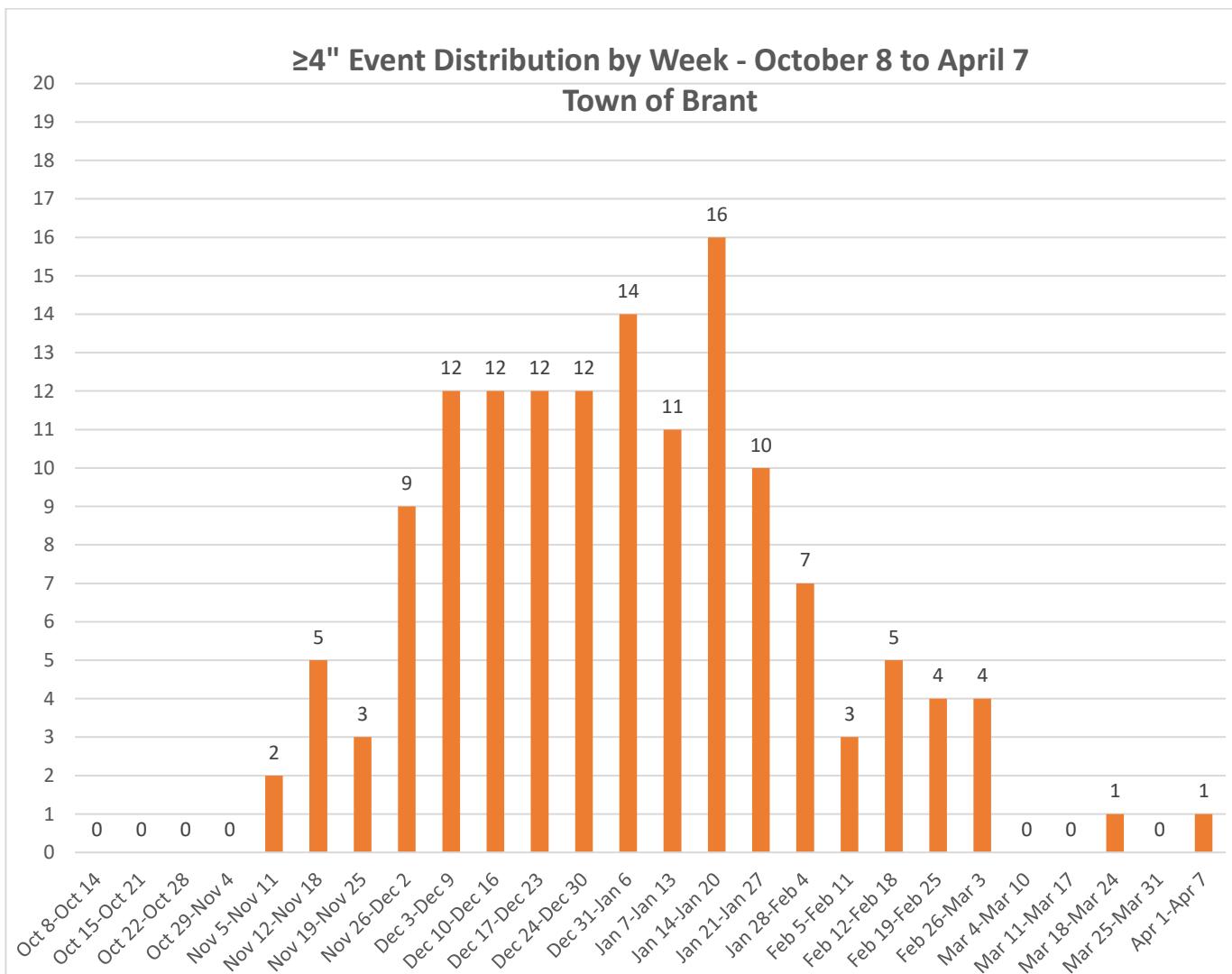
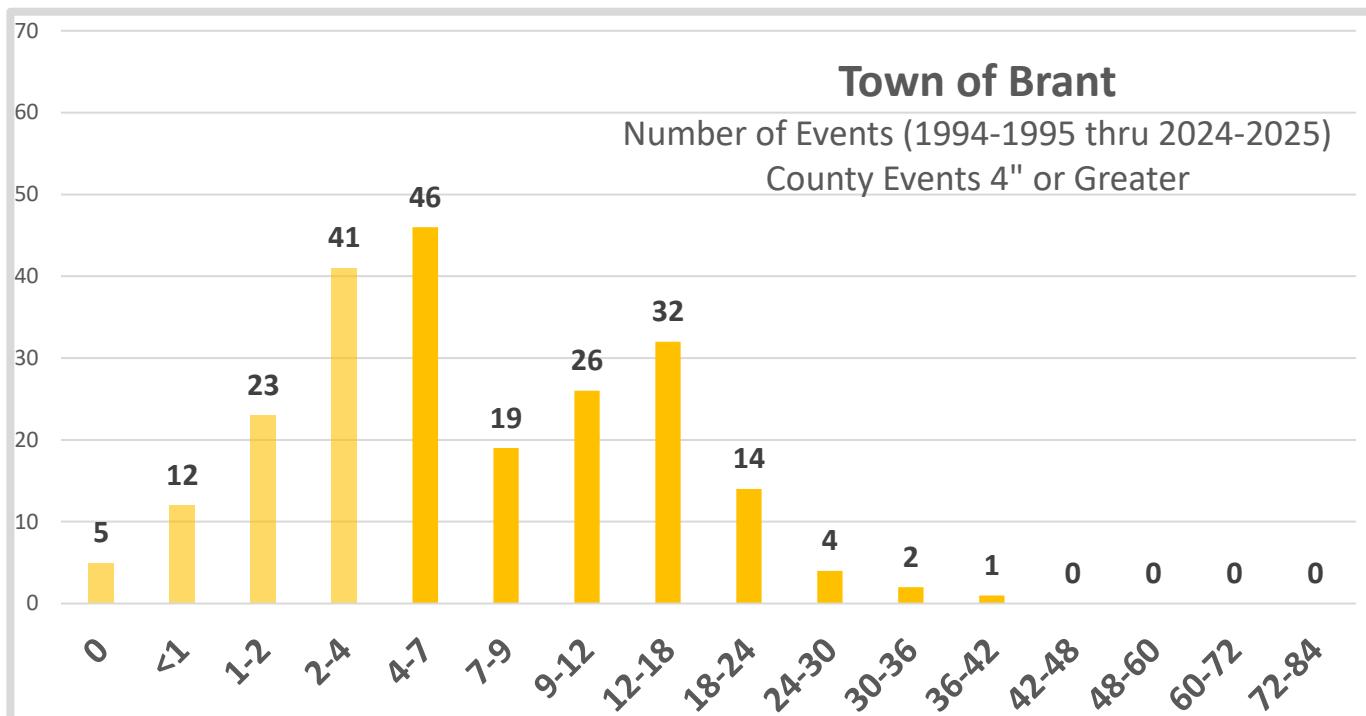
Average Start Date: December 8  
 Earliest Start Date: November 9 (2018)  
 Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: January 31  
 Earliest Start Date: December 21 (1999)  
 Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

11/17/2022-11/20/2022	36-42"
11/29/2024-12/02/2024	30-36"
12/24/2001-01/01/2002	30-36"
11/19/2024-11/21/2024	24-30" (latest of several)
12/23/2022-12/27/2022	24-30" (latest of several)



## Data Sheet – North Collins

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.5  
Greatest: 10 (2006-07)  
Least: 2 (1994-95, 2021-22)

First Event of the season:

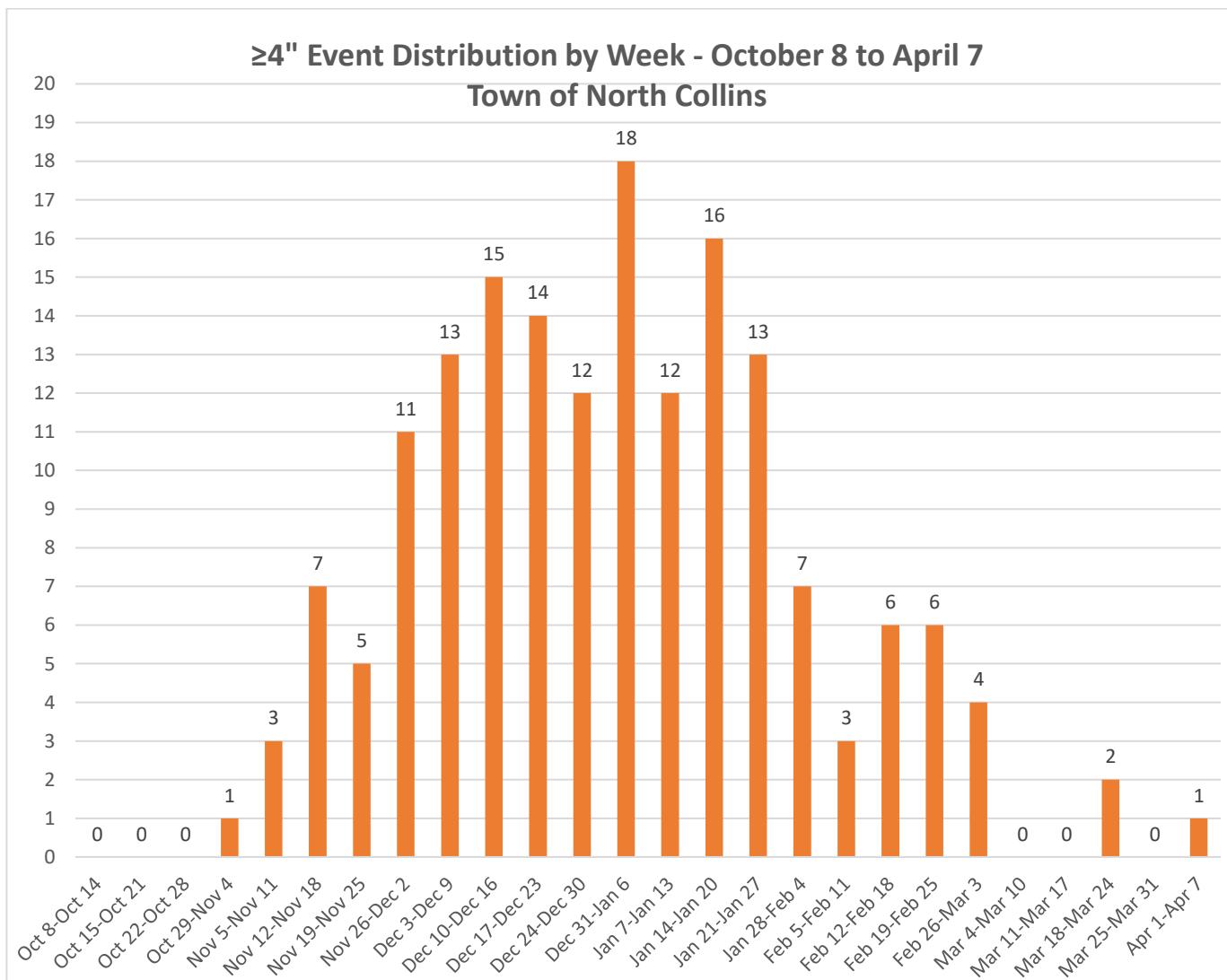
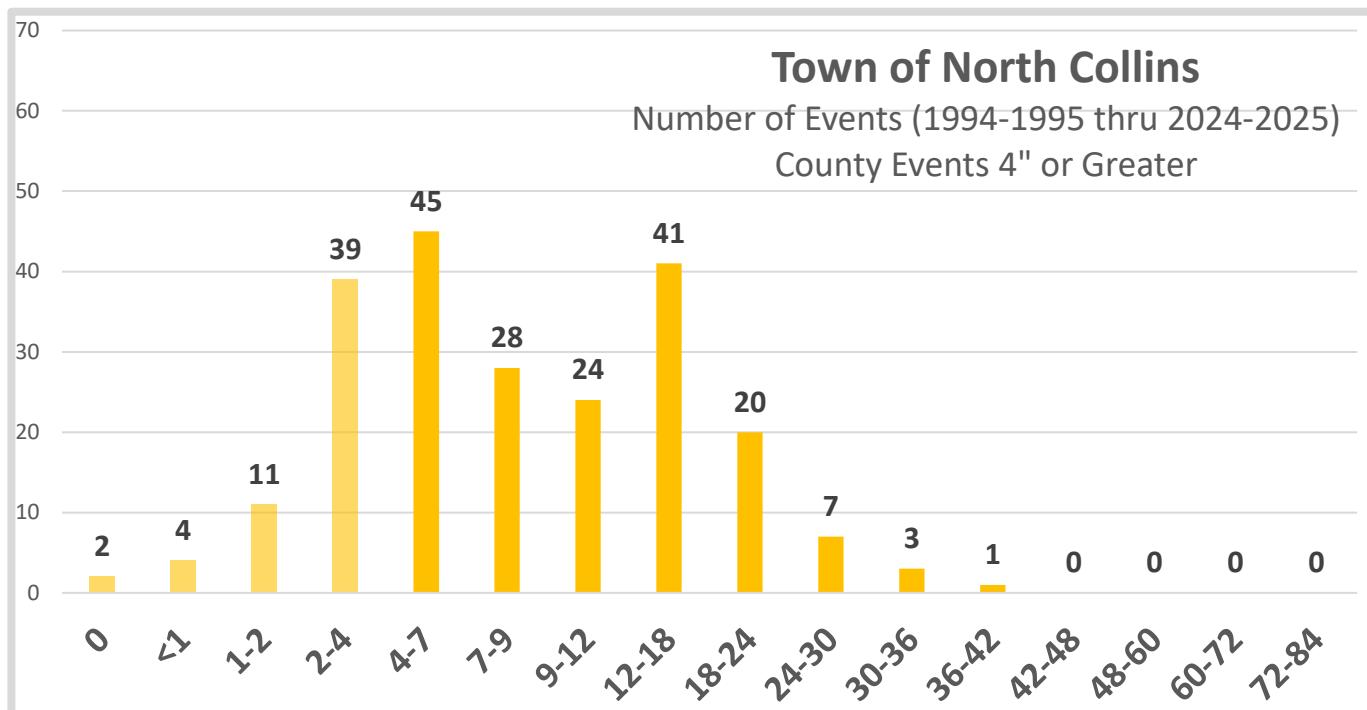
Average Start Date: December 3  
Earliest Start Date: November 3 (1999)  
Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 4  
Earliest Start Date: December 23 (2022)  
Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

11/17/2022-11/20/2022	36-42"
11/29/2024-12/02/2024	30-36"
02/03/2007-02/12/2007	30-36"
12/24/2001-01/01/2002	30-36"
11/17/2021-11/20/2021	24-30" (latest of several)



## Data Sheet – Concord

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.8  
Greatest: 10 (2006-07)  
Least: 2 (1994-95, 2021-22)

First Event of the season:

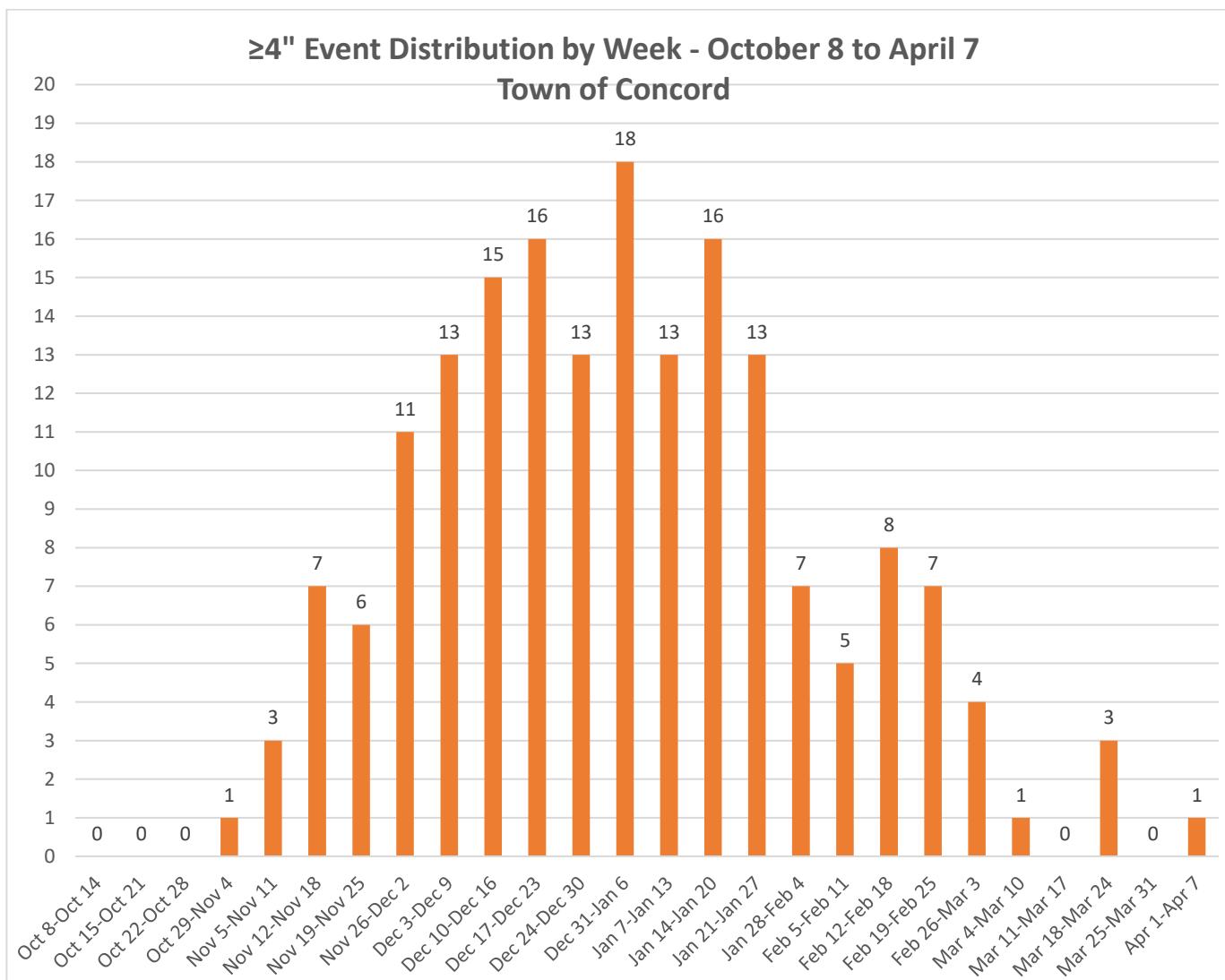
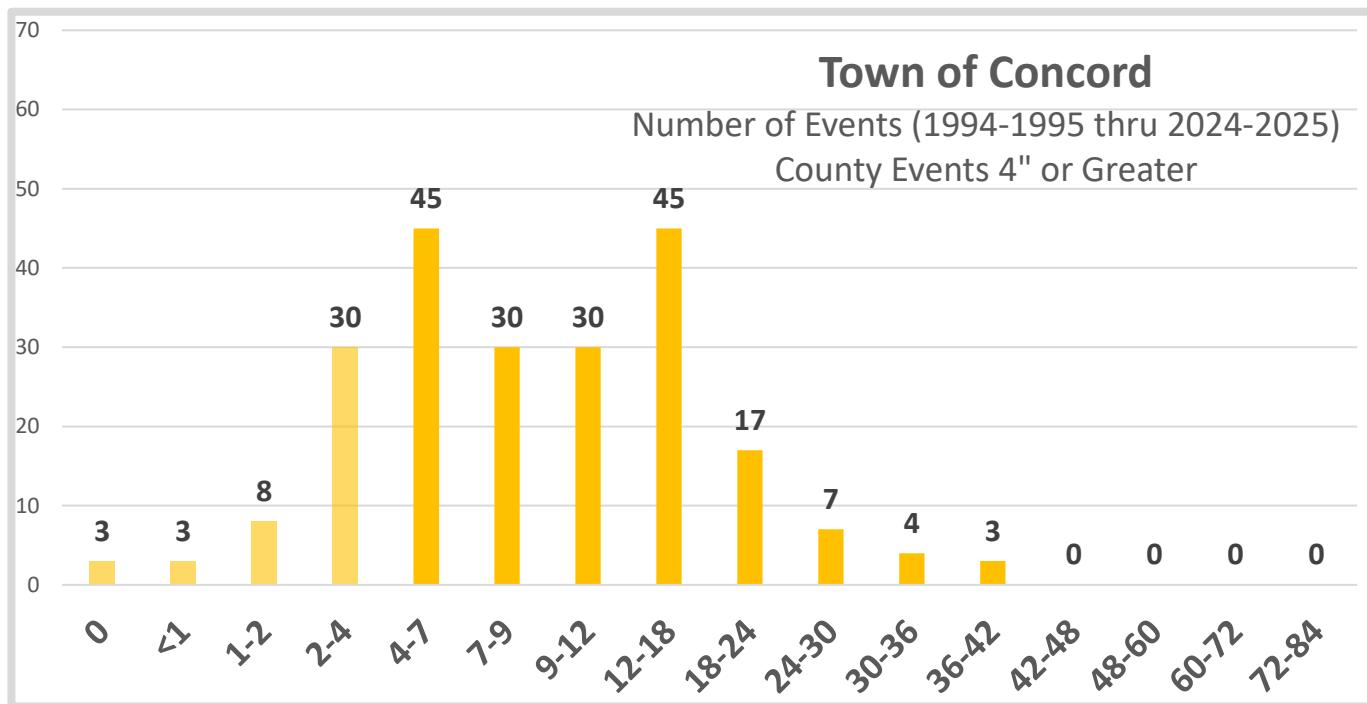
Average Start Date: December 2  
Earliest Start Date: November 3 (1999)  
Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 9  
Earliest Start Date: December 24 (2000)  
Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

11/17/2022-11/20/2022	36-42"
12/08/2016-12/11/2016	36-42"
12/24/2001-01/01/2002	36-42"
11/29/2024-12/02/2024	30-36" (latest of several)
01/17/2021-01/20/2021	30-36" (latest of several)



## Data Sheet – Sardinia

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.7

Greatest: 10 (2024-25)

Least: 2 (1994-95, 1997-98, 2021-22)

First Event of the season:

Average Start Date: December 3

Earliest Start Date: November 3 (1999)

Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 9

Earliest Start Date: December 5 (1997)

Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

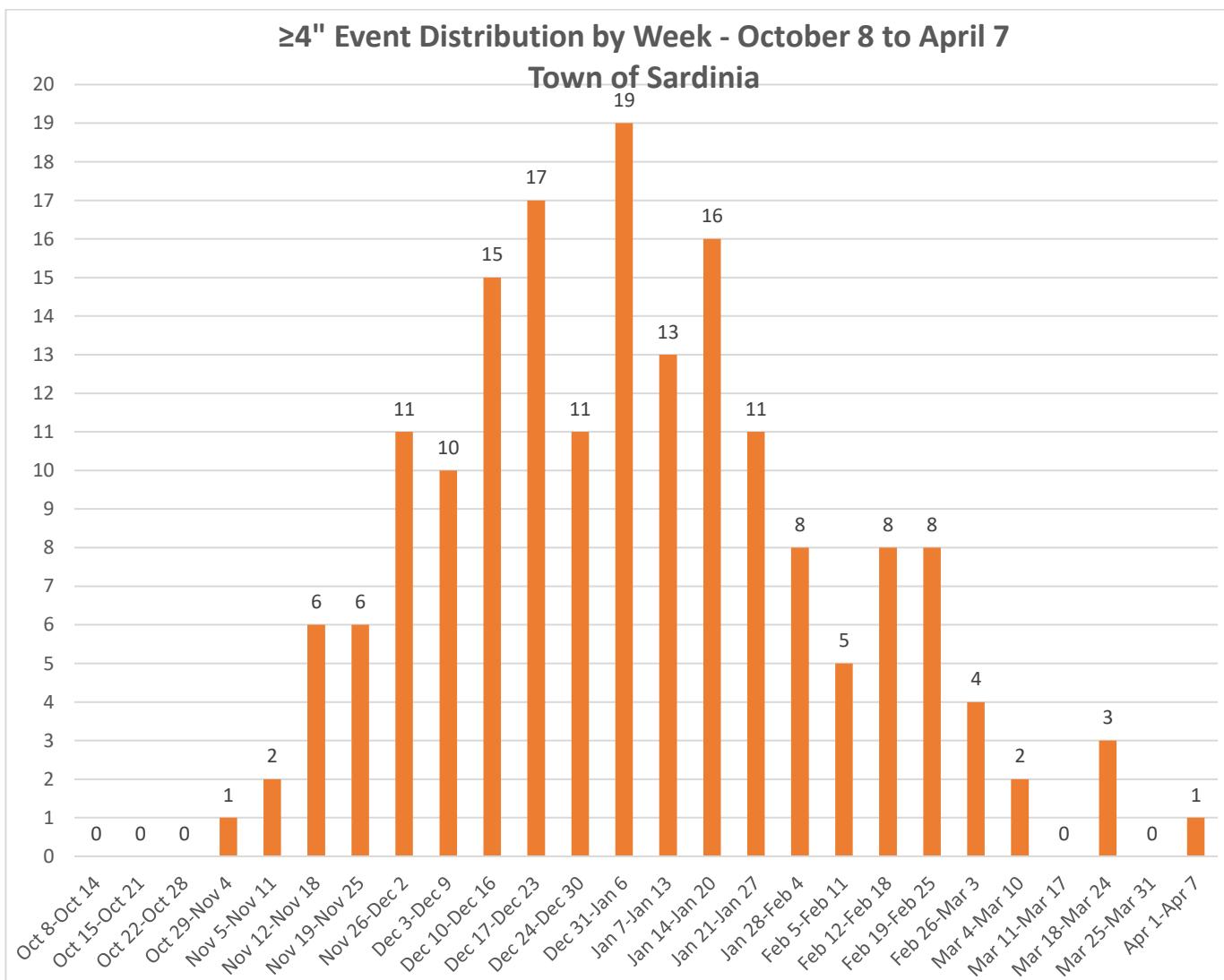
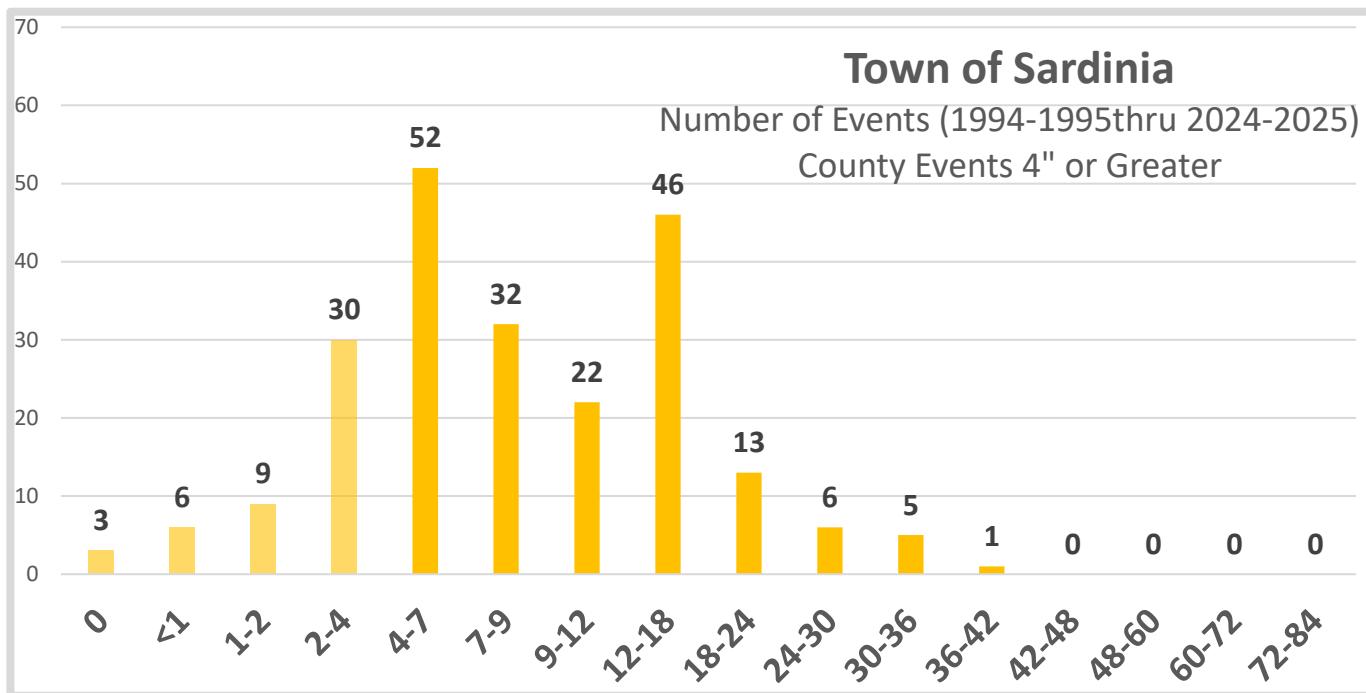
12/24/2001-01/01/2002 36-42"

11/29/2024-12/02/2024 30-36" (latest of several)

11/17/2022-11/20/2022 30-36" (latest of several)

12/24/2017-12/27/2017 30-36" (latest of several)

12/10/2013-12/12/2013 30-36" (latest of several)



## Data Sheet – Cattaraugus Reservation

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.3  
Greatest: 10 (2006-07)  
Least: 1 (1994-95)

First Event of the season:

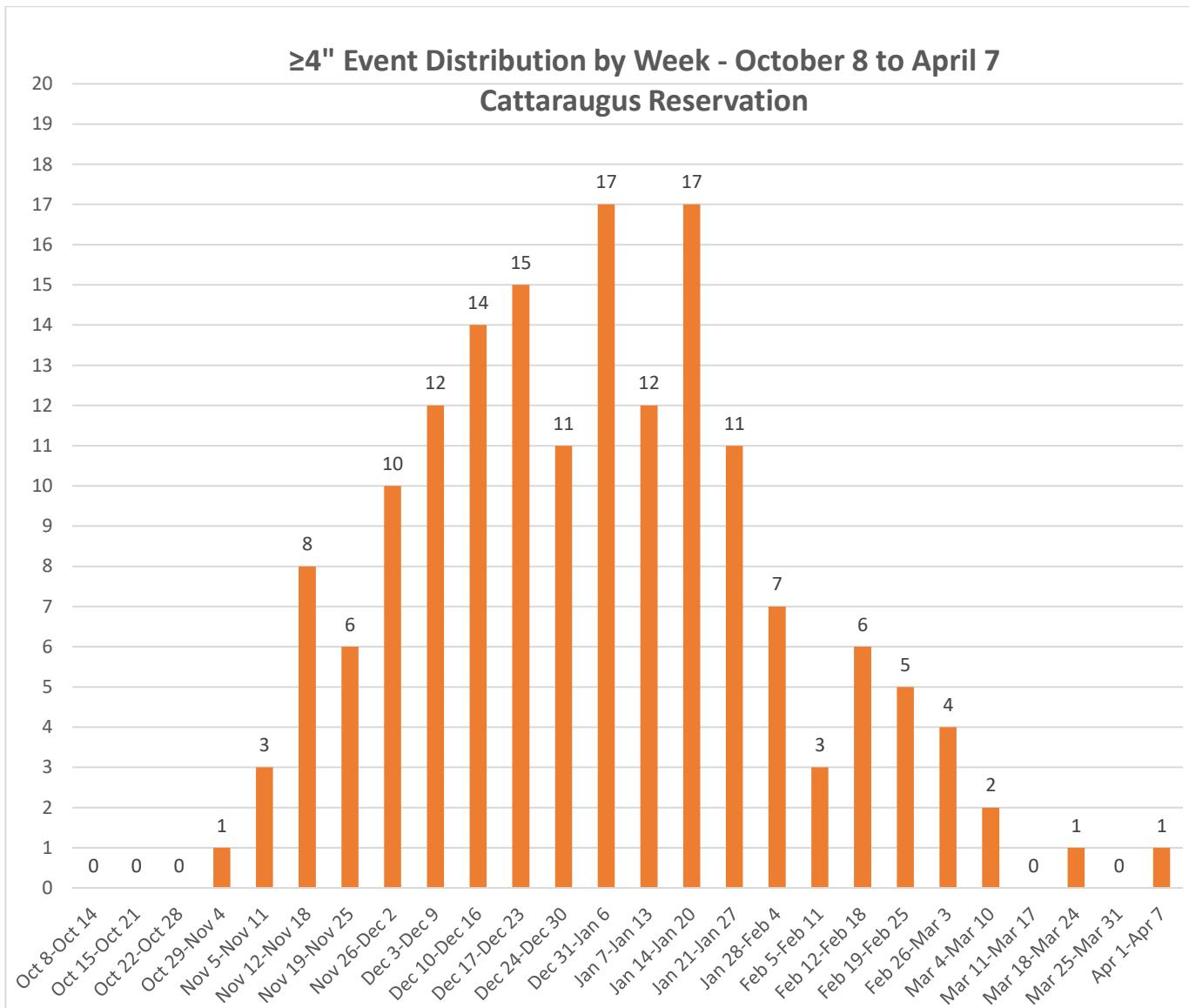
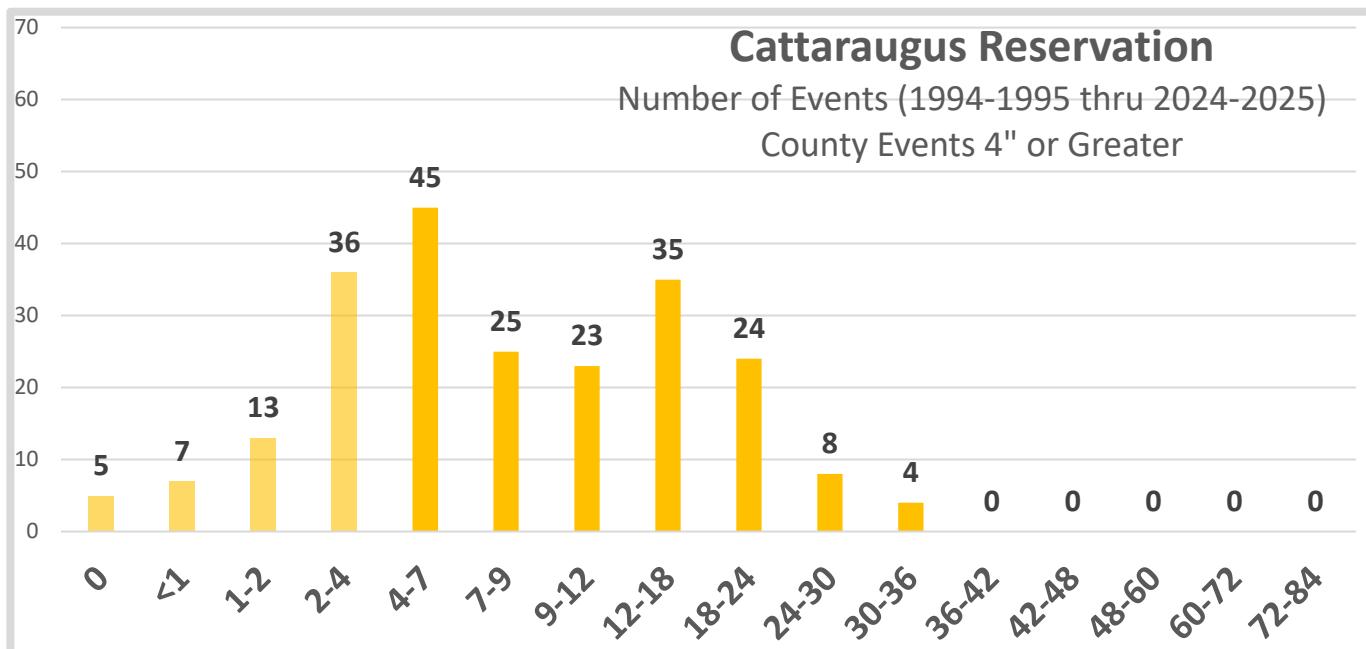
Average Start Date: December 3  
Earliest Start Date: November 3 (1999)  
Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 3  
Earliest Start Date: December 21 (1999)  
Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

11/29/2024-12/02/2024	36-42"
11/17/2022-11/20/2022	36-42"
12/24/2017-12/27/2017	36-42"
12/24/2001-01/01/2002	36-42"
12/08/2016-12/11/2016	30-36" (latest of several)



## Data Sheet – Collins

*Lake Effect Event defined as one in which four or more inches of snow fell. The study used snowfall amounts/totals for the analysis. It did not consider seasonality, day of the week, time of day, type of snow, etc., all of which can affect the potential impacts of a storm. NWS 1994-95 through 2024-25 winter season maps archive analyzed <https://www.weather.gov/buf/lesEventArchive>*

Number of events per season:

Average: 5.7  
 Greatest: 10 (2006-07, 2008-09)  
 Least: 2 (1994-95)

First Event of the season:

Average Start Date: December 1  
 Earliest Start Date: November 3 (1999)  
 Latest Start Date: January 20 (2013)

Last Event of the season:

Average Start Date: February 7  
 Earliest Start Date: December 23 (2022)  
 Latest Start Date: April 4 (2007)

Top five lake effect events (based on range of maximum snowfall):

12/24/2017-12/27/2017	36-42"
12/08/2016-12/11/2016	36-42"
11/29/2024-12/02/2024	30-36"
12/24/2001-01/01/2002	30-36"
11/17/2022-11/20/2022	24-30" (latest of several)

