

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR
April 2014

TO: Hydrologic Information Center, W/OS31
NOAA's National Weather Service
1325 East West Highway
Silver Spring, MD 20910-3283

SIGNATURE
/s/ Gregory A. Hanson, SH WFO BTW

DATE
05/14/2014

When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).

An X inside this box indicates that no flooding occurred within this hydrologic service area.

April began on the heels of a record or near record cold March. As a result, rivers retained most of their ice cover, and region was blanketed in a deep, water laden snowpack (Figures 1 & 2). After a delayed start to the spring freshet, snowmelt and rainfall created flooding through mid-month across the Hydrologic Service Area. Flooding subsided quickly and rivers were in recession for the last half of the month.

The first week of April was characterized by moderating temperatures and light amounts of precipitation in the form of rain or a wintry mix. Runoff was limited however as the ripening snowpack absorbed the majority of the rainfall.

Rainfall on April 7 produced an inch of rain over Saint Lawrence County NY, and a quarter to half inch of rain elsewhere. Runoff from this rainfall along with temperatures in the 50s produced rises on rivers on April 8 and 9 that were sufficient to break up river ice. Ice movement was noted mainly on northern rivers including the Great Chazy in northern New York, and the Missisquoi and Lamoille in Vermont. The Great Chazy at Perry Mills went above flood stage due to an ice jam and a flood warning was issued, with minor impacts to local roads and additional ice jam flooding downstream in Champlain Village. The Barton River at Coventry also went into flood due to runoff from snowmelt and rainfall.

On April 9 and 10 the rainfall and snowmelt runoff caught up with the slow responding rivers in St. Lawrence County NY, with reports of flooding mainly along the Oswegatchie, Grass, and St. Regis Rivers. Some of the flooding was ice and local runoff related, and a flood advisory was issued for St. Lawrence County.

Very warm temperatures returned April 10-15, with highs in the 60s and 70s and overnight lows well above freezing. A flood watch was posted on Friday April 11 for flooding expected early the following week. Snowmelt began in earnest through the weekend, and runoff unabated by freezing temperatures pushed rivers to bankfull or minor flood levels in the days before rain arrived. Figure 3 depicts the modeled loss of Snow Water Equivalent (SWE), which indicates a majority of SWE released from the snowpack in a one week period. Rain moved west to east late Tuesday into Wednesday, with a swath of one to two inches from Essex County NY, and northern Vermont. Other areas received 1/2 inch or less (Figure 4). The rainfall coincided with peak discharge from melting snow, and forced many rivers into flood.

Widespread minor to moderate flooding resulted. Most of the flooding was along mainstem gaged rivers. The Missisquoi, Lamoille, Passumpsic, Winooski, and Ausable rivers and their tributaries flooded, as well as Otter Creek. Flood impacts were mainly relegated to widespread field flooding and

road closures. Flooding along the Passumpsic from Lyndonville through Passumpsic rose to major levels, threatening homes and businesses as well as main thoroughfares. The Lamoille at Jeffersonville also rose to major levels, isolating some homes and cutting off highways.

It is interesting to note that in the Winooski basin, the majority of the rain fell in the lower portion of the basin that fed the Essex Junction gage. Upstream, the portion of the Winooski basin that drained through Montpelier and Waterbury VT, including the Mad and Dog Rivers, received lesser amounts of rainfall. Although field flooding was noted, the ½ inch of rainfall in the upper part of the basin likely spared Montpelier and Waterbury from flooding that could have been equal to that of April 2011.

Rivers were in recession for the rest of the month. Any remaining snowpack had a dwindling impact on runoff, and periodic light rainfall events produced small 1 to 2 foot rises that only briefly interrupted the rivers' fall.

Lake Champlain rose above flood stage of 100 feet on April 17, crested at 100.54 feet on April 21, and remained above flood stage for the remainder of the month (Figure 5). The lake eventually fell below flood stage on May 10.

**Significant River Crests
July 2011
WFO Burlington VT**

All times given in GMT.

FLD	STG	ABOVE FLOOD	- BELOW FLOOD	CREST	TIME
EAST BRANCH AUSABLE RIVER at AUSABLE FORKS, NY (ASFN6)					
7.0		14 Apr 21:40	- 16 Apr 06:09	9.37	16 Apr 00:45
GREAT CHAZY RIVER at PERRY MILLS, NY (CZRN6)					
9.0		08 Apr 20:24	- 09 Apr 14:23	10.73	09 Apr 09:00 (ice)
SARANAC RIVER at PLATTSBURGH, NY (PBGN6)					
9.0		N/A		8.89	16 Apr 03:15
LAMOILLE RIVER at JOHNSON, VT (JONV1)					
13.0		15 Apr 21:55	- 16 Apr 13:17	14.16	16 Apr 07:15
LAMOILLE RIVER at JEFFERSONVILLE, VT (JVLV1)					
450.0		15 Apr 06:12	- 17 Apr 00:	453.18	16 Apr 03:30
LAMOILLE RIVER at EAST GEORGIA, VT (GEOV1)					
N/A				12.28	16 Apr 11:45 - 12:45
MAD RIVER at MORETOWN, VT (MOOV1)					
9.0		15 Apr 21:13	- 16 Apr 02:36	10.02	16 Apr 00:15
MISSISQUOI RIVER at NORTH TROY, VT (NTYV1)					
9.0		14 Apr 21:24	- 16 Apr 14:51	11.95	16 Apr 03:15
MISSISQUOI RIVER at EAST BERKSHIRE, VT (EBKV1)					
13.0		15 Apr 18:00	- 17 Apr 04:35	15.64	16 Apr 02:15
MISSISQUOI RIVER at SWANTON, VT (SWAV1)					
8.0		16 Apr 13:45	- 16 Apr 13:45	7.99	16 Apr 13:45
OTTER CREEK at CENTER RUTLAND, VT (CENV1)					
8.0		15 Apr 21:15	- 16 Apr 22:25	9.67	16 Apr 04:30
OTTER CREEK at MIDDLEBURY, VT (MDBV1)					
N/A				6.83	18 Apr 21:00 - 19 Apr 07:00
PUTNAM CREEK at CROWN POINT, NY (PTCN6)					
6.5		15 Apr 18:51	- 17 Apr 01:15	7.15	16 Apr 04:45
WINOOSKI RIVER at ESSEX JUNCTION, VT (ESSV1)					
12.0		15 Apr 20:18	- 17 Apr 00:53	16.54	16 Apr 12:15
WINOOSKI RIVER at WATERBURY, VT (WATV1)					
419.0		N/A		417.95	16 Apr 02:00

WINOOSKI RIVER at MONTPELIER, VT (MONV1)			
15.0	N/A	10.80	16 Apr 02:30
EAST BR. PASSUMPSIC at EAST HAVEN, VT (EHVV1)			
6.5	15 Apr 17:50 - 16 Apr 07:40	8.93	16 Apr 01:45
PASSUMPSIC RIVER at PASSUMPSIC, VT (PASV1)			
14.0	15 Apr 20:57 - 16 Apr 21:45	19.24	16 Apr 07:45
WELLS RIVER at WELLS RIVER, VT (WLRV1)			
6.0	16 Apr 00:48 - 16 Apr 12:51	7.54	16 Apr 04:30
WHITE RIVER at WEST HARTFORD, VT (WEHV1)			
18.0	N/A	14.11	16 Apr 05:30 - 06:15
BARTON RIVER at COVENTRY, VT (COVV1)			
8.0	08 Apr 21:30 - 10 Apr 20:00	9.06	09 Apr 11:45
8.0	11 Apr 11:45 - 18 Apr 11:30	9.39	16 Apr 07:15
LAKE CHAMPLAIN at ROUSES POINT, NY (ROUN6)			
100.0	17 Apr 05:30 - 10 May 06:30	100.54	21 Apr 09:00
OSWEGATCHIE at HEUVELTON, NY (HEUN6)			
N/A		8.70	10 Apr 21:30 (ice)
N/A		8.45	18 Apr 14:40 - 20:30
ST. REGIS at BRASHER CENTER, NY (BRAN6)			
N/A		12.25	15 Apr 23:30 - 16 Apr 04:15
WEST BRANCH ST. REGIS at PARISHVILLE, NY (PARN6)			
N/A		7.12	15 Apr 23:45 - 16 Apr 01:30
GRASS RIVER at CHASE MILLS, NY (CHAN6)			
N/A		8.16	09 Apr 16:30
LITTLE SALMON at SOUTH BOMBAY, NY (BOMN6)			
N/A		11.21	09 Apr 05:15-07:01
N/A		10.35	16 Apr 06:45-07:30

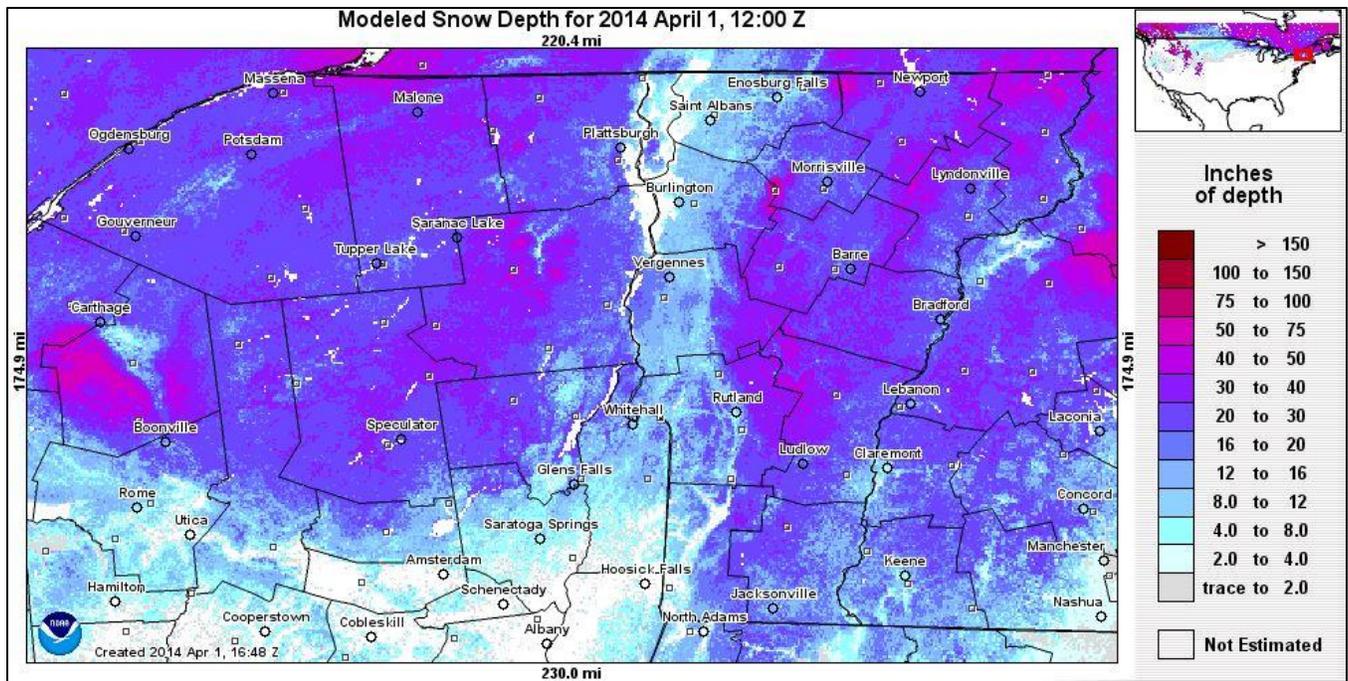


Figure 1, Snow Depth April 1 2014

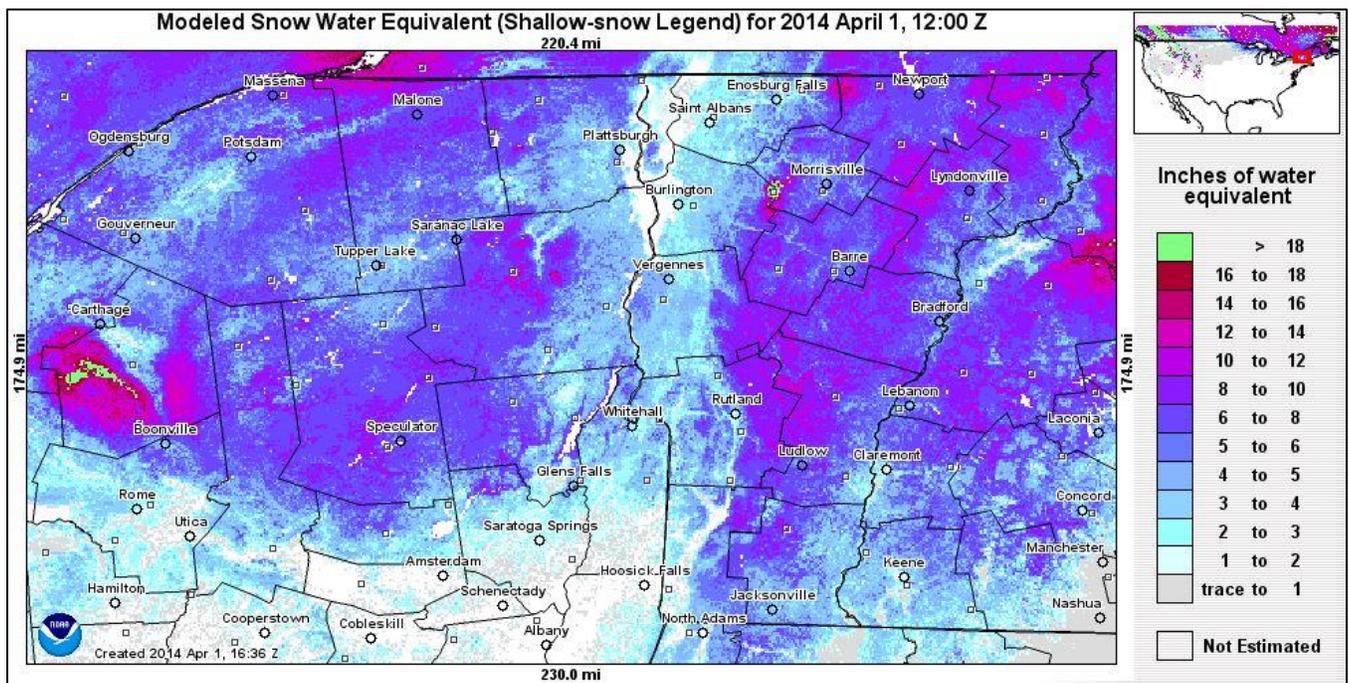


Figure 2, Snow Water Equivalent April 1 2014

North Country Snow Water Equivalent Loss Tuesday April 8th - Tuesday April 15th, 2014

Source: National Operational Hydrologic
Remote Sensing Center
Created by: The NWS Forecast Office
Burlington, Vermont

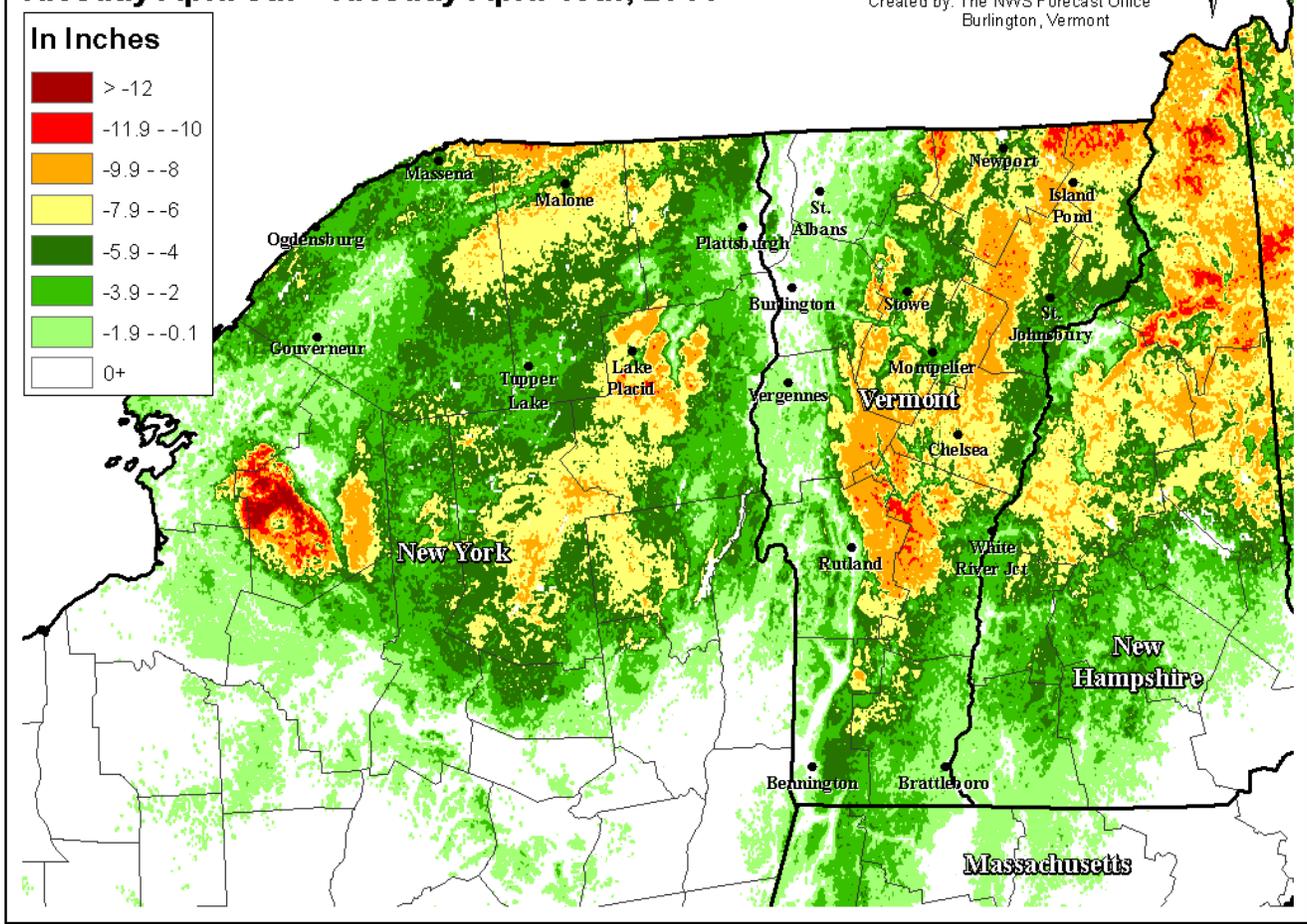
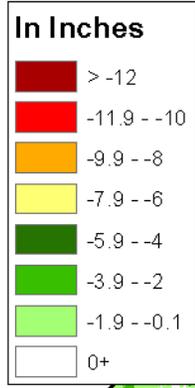


Figure 3, Snow Water Equivalent loss, April 8-15

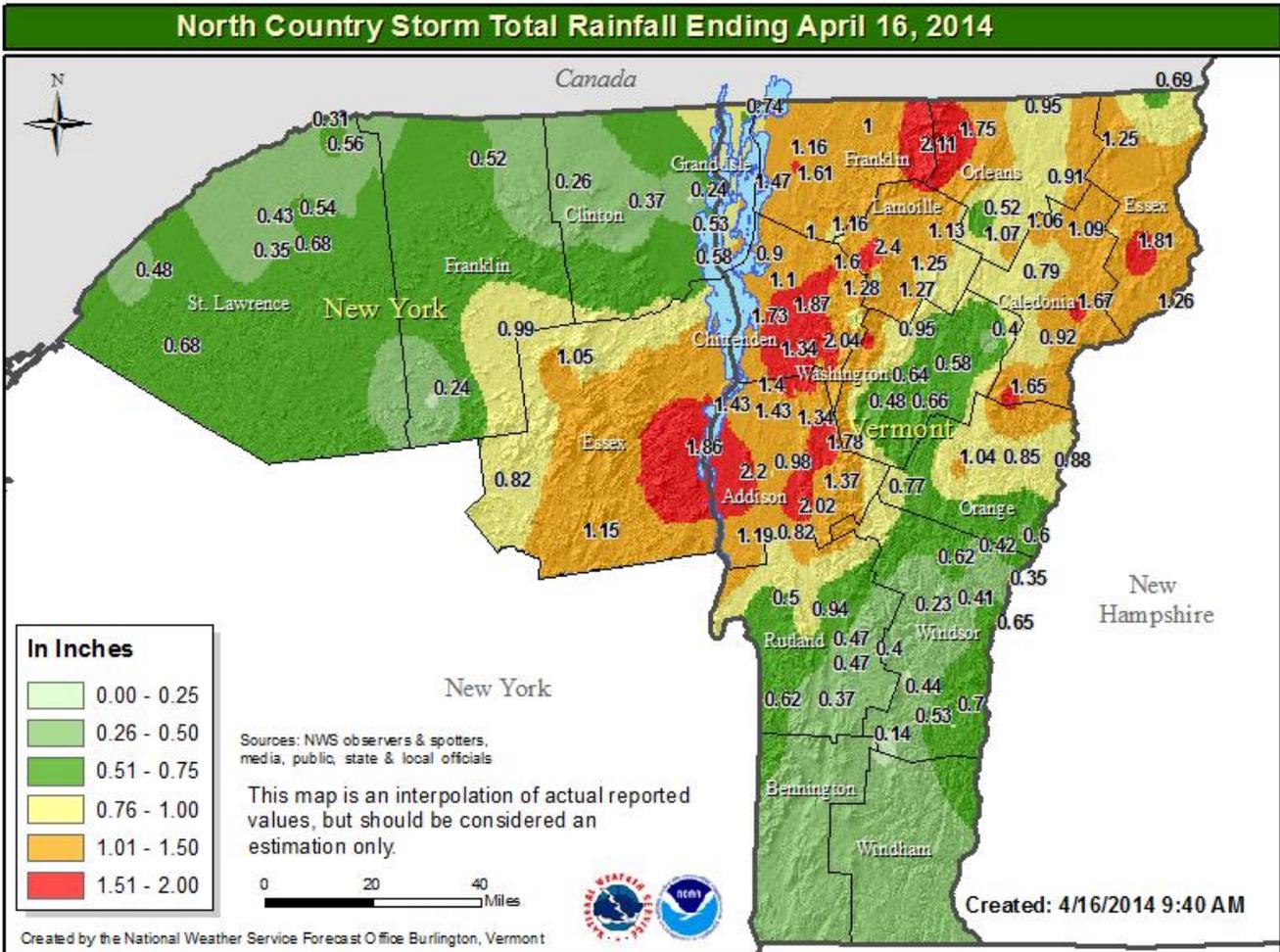


Figure 4, Storm Total Rainfall ending April 16



USGS 04295000 RICHELIEU R (L CHAMPLAIN) AT ROUSES POINT NY

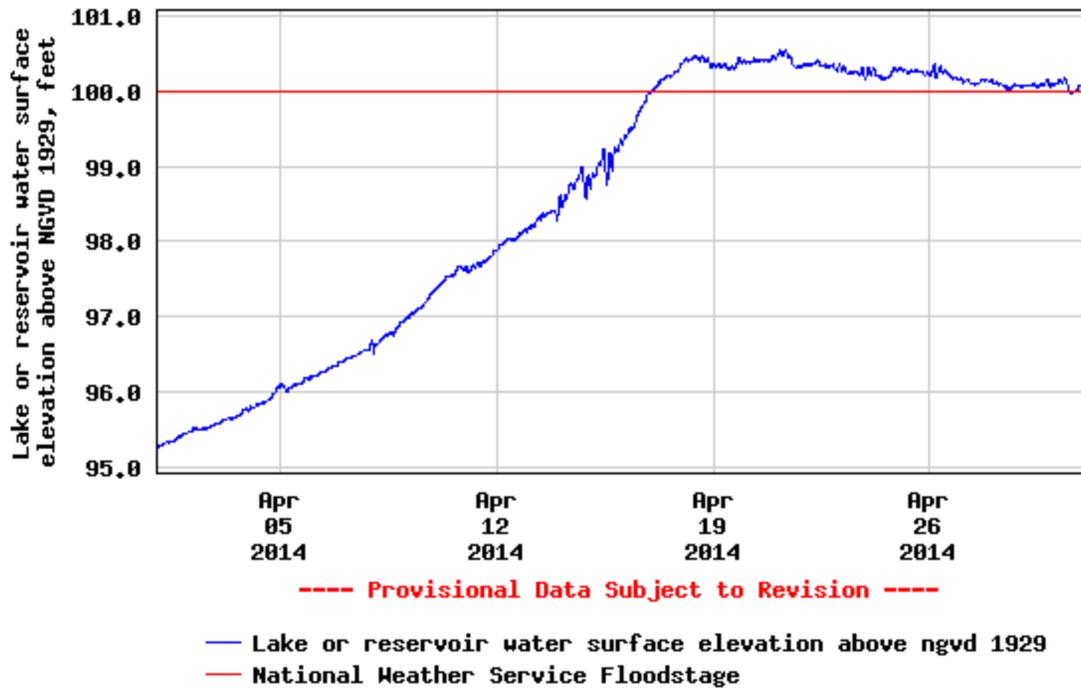


Figure 5, Lake Champlain at Rouses Point