#### 40 Years of Flooding, and Counting:

Experiences and Impacts on a Lifelong Resident



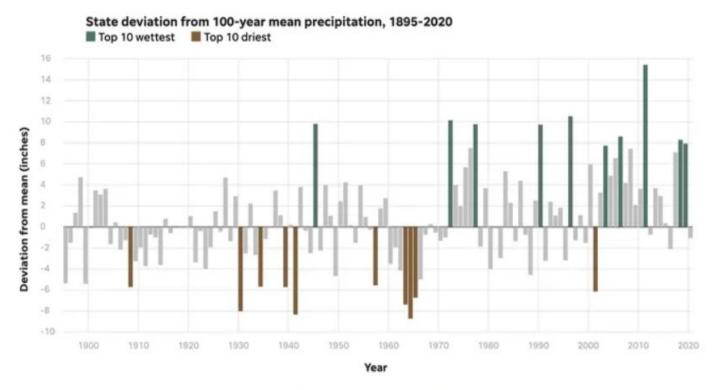


#### Do you Know Your Vulnerability?

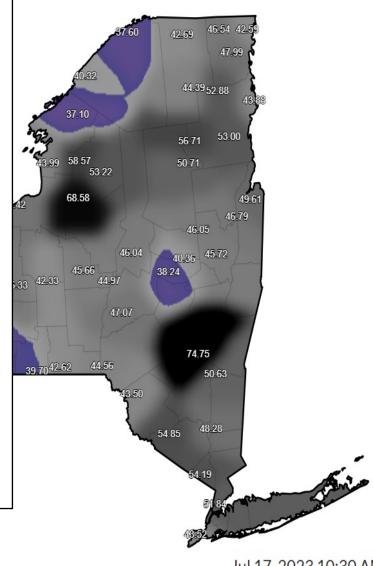
- How many of you moved to / lived in the region since 2020?
- How many between 2010-2020?
- Pre-2010; Pre- 2000?
- Who lives in a floodplain?
- Who lives on a road that has one of these words in its name: "Hollow", "Clove", "Valley"
- What about a road with "Kill", "River", "Creek", or "Brook"

It is up to YOU to learn about it, to understand it, and be ready to do something about it

**ONE GRAPHIC SHOWS THE PROBLEM:** From USA TODAY's gripping project called <u>Downpour</u>, this single chart shows how much our state has seen above-normal precipitation since 1895:



Precipitation for New York State is shown since 1895 as deviation from the 100-year mean. In the last three decades leading up to 2020, the deviation chart shows how much higher precipitation has been. The Top 10 wettest years in the whole 125-year period are shown in green. USA TODAY / Downpour Project



365-day Precipitation

10 12 14 16 18 20 22 24 26 28 30

Jul 17, 2023 10:30 AM EDT

2011	NFIP Claims \$	FEMA Public Assistance (PA) \$
All of Ulster County	\$17,228,147	\$21,719,569
Shandaken, Olive, Woodstock	\$6,487,581	>\$10M

Community Name (Number)  ANDES, TOWN OF (360188)  ANDES, VILLAGE OF (360189)  DELAWARE COUNTY  DAVENPORT, TOWN OF (360192)  DELAWARE COUNTY  DELHI, TOWN OF (360193)  DELAWARE COUNTY  DELHI, VILLAGE OF (361572)  DELAWARE COUNTY  DELAWARE COUNTY  DELAWARE COUNTY  DELAWARE COUNTY  23 \$  FLEISCHMANNS, VILLAGE OF (360197)  DELAWARE COUNTY	123,688 109,729 122,395 119,231 107,040 747,358 76,008 4,940,992 1,292,564
ANDES, TOWN OF (360188)  DELAWARE COUNTY  10 \$  ANDES, VILLAGE OF (360189)  DELAWARE COUNTY  16 \$  DAVENPORT, TOWN OF (360192)  DELAWARE COUNTY  10 \$  DELHI, TOWN OF (360193)  DELAWARE COUNTY  10 \$  DELHI, VILLAGE OF (361572)  DELAWARE COUNTY  23 \$  FLEISCHMANNS, VILLAGE OF (360197)  DELAWARE COUNTY  29 \$  HAMDEN, TOWN OF (360200)  DELAWARE COUNTY  10 \$  MARGARETVILLE, VILLAGE OF (360208)  DELAWARE COUNTY  126 \$  MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  4 \$  ROXBURY, TOWN OF (361036)  DELAWARE COUNTY  14 \$	109,729 122,395 119,231 107,040 747,358 76,008 4,940,992
ANDES, VILLAGE OF (360189)  DELAWARE COUNTY  DELHI, TOWN OF (360193)  DELAWARE COUNTY  DELHI, VILLAGE OF (361572)  DELAWARE COUNTY  DELAWARE COUNTY  DELAWARE COUNTY  23 \$  FLEISCHMANNS, VILLAGE OF (360197)  DELAWARE COUNTY  29 \$  HAMDEN, TOWN OF (360200)  DELAWARE COUNTY  10 \$  MARGARETVILLE, VILLAGE OF (360208)  DELAWARE COUNTY  126 \$  MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  4 \$  ROXBURY, TOWN OF (361036)  DELAWARE COUNTY  14 \$	109,729 122,395 119,231 107,040 747,358 76,008 4,940,992
DAVENPORT, TOWN OF (360192)  DELAWARE COUNTY  DELHI, TOWN OF (360193)  DELAWARE COUNTY  DELHI, VILLAGE OF (361572)  DELAWARE COUNTY  23 \$  FLEISCHMANNS, VILLAGE OF (360197)  DELAWARE COUNTY  PARGARETVILLE, VILLAGE OF (360208)  DELAWARE COUNTY  MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  DELAWARE COUNTY  126 \$  MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  14 \$	122,395 119,231 107,040 747,358 76,008 4,940,992
DELHI, TOWN OF (360193)  DELAWARE COUNTY  DELHI, VILLAGE OF (361572)  DELAWARE COUNTY  23 \$  FLEISCHMANNS, VILLAGE OF (360197)  DELAWARE COUNTY  10 \$  MARGARETVILLE, VILLAGE OF (360208)  DELAWARE COUNTY  126 \$  MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  64 \$  ROXBURY, TOWN OF (361036)  DELAWARE COUNTY  14 \$	119,231 107,040 747,358 76,008 4,940,992
DELHI, VILLAGE OF (361572)  DELAWARE COUNTY  PLEISCHMANNS, VILLAGE OF (360197)  DELAWARE COUNTY  DELAWARE COUNTY  DELAWARE COUNTY  DELAWARE COUNTY  MARGARETVILLE, VILLAGE OF (360208)  DELAWARE COUNTY  MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  DELAWARE COUNTY  DELAWARE COUNTY  MIDDLETOWN, TOWN OF (361036)  DELAWARE COUNTY  DELAWARE COUNTY  DELAWARE COUNTY  14	107,040 747,358 76,008 4,940,992
FLEISCHMANNS, VILLAGE OF (360197)  HAMDEN, TOWN OF (360200)  MARGARETVILLE, VILLAGE OF (360208)  MIDDLETOWN, TOWN OF (360209)  ROXBURY, TOWN OF (361036)  DELAWARE COUNTY  126  \$  COUNTY  COU	747,358 76,008 <mark>4,940,992</mark>
HAMDEN, TOWN OF (360200)  MARGARETVILLE, VILLAGE OF (360208)  MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  10 \$  126 \$  MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  14 \$	76,008 <mark>4,940,992</mark>
MARGARETVILLE, VILLAGE OF (360208) DELAWARE COUNTY 126 \$ MIDDLETOWN, TOWN OF (360209) DELAWARE COUNTY 64 \$ ROXBURY, TOWN OF (361036) DELAWARE COUNTY 14 \$	4,940,992
MIDDLETOWN, TOWN OF (360209)  DELAWARE COUNTY  64 \$  ROXBURY, TOWN OF (361036)  DELAWARE COUNTY  14 \$	
ROXBURY, TOWN OF (361036) DELAWARE COUNTY 14 \$	1,292,564
, , ,	
STAMEORD TOWN OF (360212) DELAWARE COLINITY 1 \$	88,678
JIAIVII OND, TO WIN OT (300212) DELAWAINE COUNTY	12,232
STAMFORD, VILLAGE OF (360213) DELAWARE COUNTY 1 \$	1,213
WALTON, TOWN OF (360215) DELAWARE COUNTY 38 \$	979,354
WALTON, VILLAGE OF (360216) DELAWARE COUNTY 183 \$	7,291,857
ASHLAND, TOWN OF (360284) GREENE COUNTY 11 \$	345,412
HUNTER, TOWN OF (360292) GREENE COUNTY 21 \$	230,307
HUNTER, VILLAGE OF (360293) GREENE COUNTY 25 \$	285,872
JEWETT, TOWN OF (361114) GREENE COUNTY 28 \$	365,020
LEXINGTON, TOWN OF (360294) GREENE COUNTY 45 \$	1,062,650
MIDDLETOWN, TOWN OF (360209) GREENE COUNTY 1 \$	50,269
PRATTSVILLE, TOWN OF (360296) GREENE COUNTY 95 \$	4,283,154
TANNERSVILLE, VILLAGE OF (360297) GREENE COUNTY 18 \$	220,578
WINDHAM, TOWN OF (361401) GREENE COUNTY 47 \$	2,737,659
CONESVILLE, TOWN OF (361606) SCHOHARIE COUNTY 4 \$	55,015
GILBOA, TOWN OF (361433) SCHOHARIE COUNTY 8 \$	101,031
NEVERSINK, TOWN OF (360828) SULLIVAN COUNTY 16 \$	366,320
OLIVE, TOWN OF (360860) ULSTER COUNTY 36 \$	1,836,527
SHANDAKEN, TOWN OF (360864) ULSTER COUNTY 257 \$	5,648,211
WAWARSING, TOWN OF (360867) ULSTER COUNTY 89 \$	2,272,232
WOODSTOCK, TOWN OF (360868) ULSTER COUNTY 69 \$	450,950



## March 22, 1980

approximately a 25-year event at Allaben gage





# April 4, 1987

approximately a 25-year event at Allaben gage

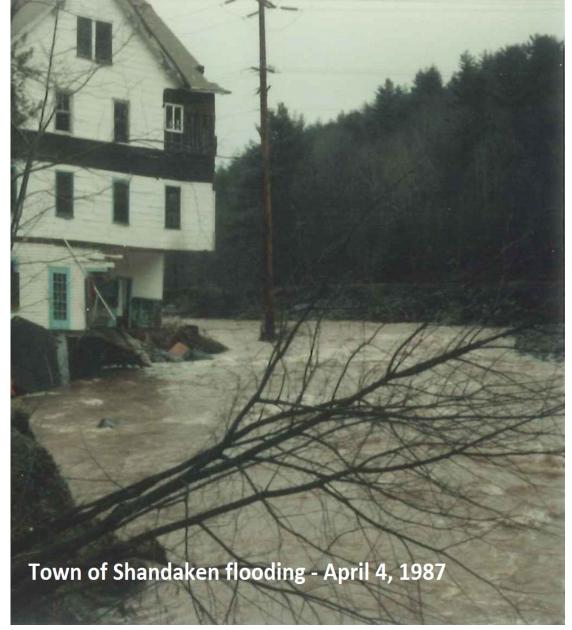














#### January 20, 1996

approximately a 25-year event at Allaben gage





## April 2, 2005

approximately a 50-year event at Allaben gage











### October 1 and December 1, 2010

approximately a 10-year followed by a 5-year event





### August 28, 2011

approximately a 150-year event (upper Esopus), 70-year @ Boiceville



























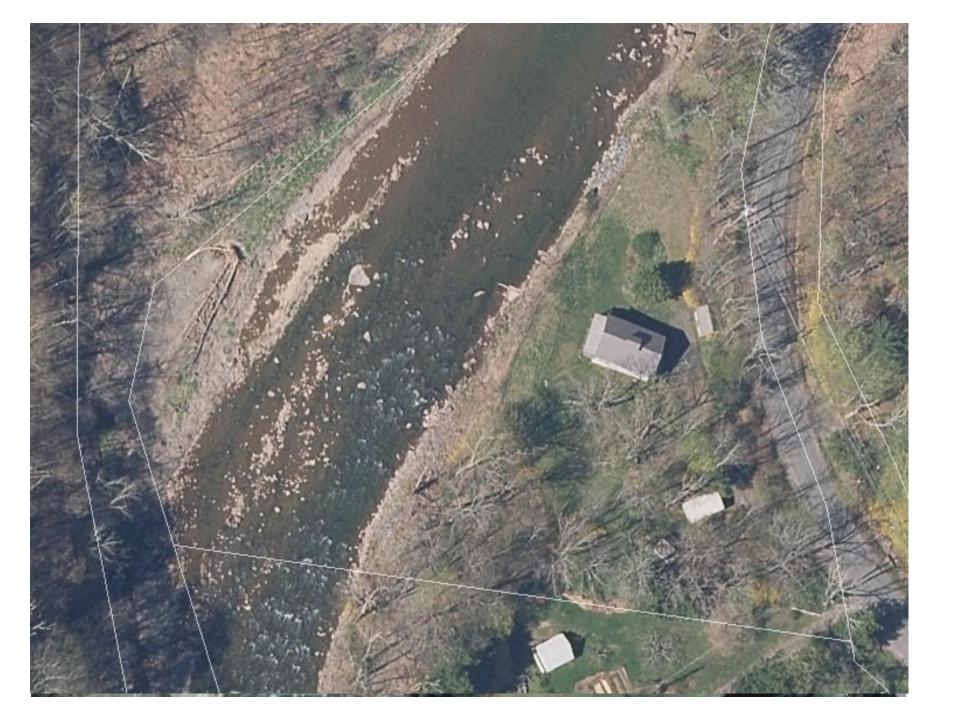


# December 25, 2020

approximately a 7-year event at Allaben gage







Streams are dynamic (they move)

And sometimes houses will need to as well

#### Esopus Creek flooding: Peak Flows....

- 3/22/80 [after sunset]
- 4/4/87 8:30pm [after sunset]
- 1/20/96 5:45pm [after sunset]
- 4/2/05 11pm [after sunset]
- 10/1/10 5:15am [before sunrise]
- 12/1/10 5:15pm [after sunset]
- 8/28/11 9:15am
- 9/18/12 7pm [sunset]
- 12/25/2020 4am [before sunrise]



- YOU live HERE now. YOU have to be smart, pro-active and YOU have to stay informed.
  - Much easier now w/prediction centers, the AWSMP, etc.
- YOU have to know your Valley, Clove, Hollow.
  - How many and where are the road/stream crossings?
  - Is there a place where the stream seems like it moves closer to road each year?
  - What are potential detours if washed out or tree is down?
- The Catskills are a large region and onesize (forecast) doesn't fit all.
  - April 2005 (Esopus 50yr) & June 2006 (EB & WB Delaware in Margaretville & Walton >100yr)
- Don't wait until its too late. Putting first responders at risk is plain stupid and reckless.
  - Don't jeopardize their families b/c of your actions

- If you are going to do flood mitigation measures on your home or business, don't only do the minimum. Over time your investment WILL pay off (cheaper insurance, fewer damages).
- Get flood insurance even if you are not required to have it.
- Stay tuned in to local funding programs through the AWSMP or the CWC.

I can promise you - the next big flood is always getting one day closer

It is up to YOU to learn, understand, and then take actions pre-flood, during the event, and post-flood that not only benefit your family, but your community neighbors as well.

