The Anomalously Large 2018 Hail Season of Eastern Colorado:
A Local Perspective on a National Trend

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2018 IN PERSPECTIVE

2018 TOTALS

- 1" reports: 328
- 2" reports: 66
- 3" reports: 10**

- 1" days: 49
- 2" days: 13
- 3" days: 7**

**state record

Severe Hail Reports and 3" severe hail reports and 3" severe hail days

NOTABLE EVENTS

June 13 Colorado Springs
Overnight Event

Splitting supercell leads to the first instance in state history of two 3" hail reports between midnight and 9am local time on the same day, and only the third and fourth times overall that hail this large has fallen between those hours (last time was in 1982)

June 19 Park County
Mountainous Hail Storm

2.75" hail reported at 13-Mile Canyon Reservoir at 8,500 feet elevation is only the third time that 2.75" hail or larger has been recorded that far west in the state

August 6 Cheyenne Mountain Zoo Destruction

At least ten human injuries, five animal fatalities, and hundreds of vehicles destroyed; unofficial report of 4.5" hail stone would tie state record

July 29 Large Hail Outbreak

Series of training supercells lead to seventeen 2" reports across NE Colorado, tying the state record for most 2" reports on one day

ATTRACTION

500-mb Heights & Winds
July 2018 Average

500-mb Heights & Winds
29 July 2018

- Large ridge over the East Pacific puts the High Plains under strong mid-level northwesterly flow -> wind shear enhanced when flow is uplope
- Moisture increases as summer progresses due to Southwest Monsoon
- Many big hail days in CO characterized by High pressure southwest of state, promoting northwesterly flow and southeastward-moving supercells

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2018 TOT ALS

Colorado 2"+ Hail Reports in 2018

Proportion of 2"+ Reports: 10.55%

Proportion of 3"+ Reports: 1.49%

**new US record**

National Analysis

2018 TOT ALS

U.S. 2"+ Hail Reports in 2018 (as of 10/1)

**new US record**

**Figure taken from my article in The Conversation, 20 September 2018**