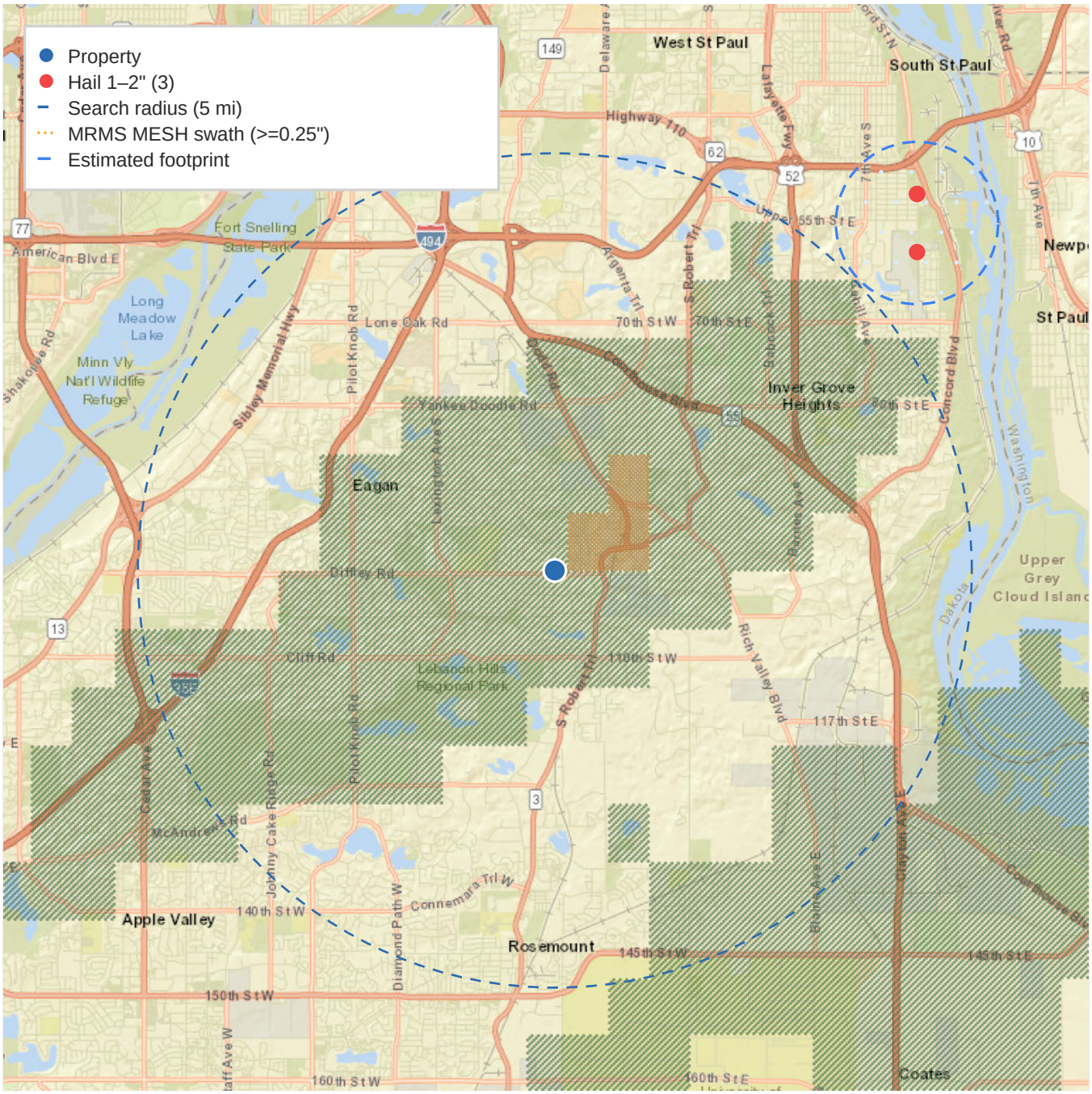
# Contractorfy Hail Event Report

Generated: 2026-03-27 15:55 UTC
Workspace: aa240501-a2fa-4188-8cff-ee3e1a60bdc6
Group: 4df0d4c6-faa2-40ce-8452-2ff51b1309f3
Job: undefined
Address: 659 Lexie Ct, Eagan, MN 55123
Coordinates: 44.8052, -93.1180
Period: 2024-03-27T15:55Z -> 2026-03-27T15:55Z
Search radius: 8 km
Events retrieved: 3




**Event Overview**

| Event | Hail (in) | Max Wind (mph) | Distance (mi) |
|---|---|---|---|
| 1. 2025-09-22 01:10Z - 1 NE Inver Grove Height, MN | 1 | 5.4 | 5.7 |
| 2. 2025-09-22 01:06Z - 1 NNE Inver Grove Heigh, MN | 1 | 5.4 | 6.2 |
| 3. 2025-09-22 01:07Z - 1 SSE South St. Paul, MN | 1.75 | 5.4 | 6.2 |

**Data Sources and Verification Record**

This report is compiled from public, authoritative weather datasets and includes exact references used at generation time.
Hail event records are National Weather Service Local Storm Reports (LSR) retrieved via Iowa State IEM query endpoints.
Date-level corroboration is provided using NOAA Storm Prediction Center (SPC) daily report archives.
Radar and swath overlays are supplemental visual layers and are documented below with source endpoint, request reference, and UTC timing.
Independent reviewers can reproduce the underlying record set using the exact links listed in this section.

LSR time window (UTC): 2024-03-27T15:55Z -> 2026-03-27T15:55Z
LSR bounding box: north=44.877519, south=44.732819, east=-93.016688, west=-93.219265
Report location: 44.805169, -93.117977

IEM LSR query (exact request): https://mesonet.agron.iastate.edu/cgi-bin/request/gis/lsr.py?type=HAIL&sts=2024-03-27T15%3A55Z&ets=2026-03-27T15%3A55Z&north=44.877519&south=44.732819&east=-93.016688&west=-93.219265&fmt=csv&justcsv=1
NOAA/SPC storm reports archive: https://www.spc.noaa.gov/climo/reports/
SPC daily reports CSV: https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
NEXRAD WMS source: https://mesonet.agron.iastate.edu/cgi-bin/wms/nexrad/n0q-t.cgi
NOAA MRMS public dataset (AWS): https://noaa-mrms-pds.s3.amazonaws.com
MRMS product prefix used: https://noaa-mrms-pds.s3.amazonaws.com/CONUS/MESH_Max_60min_00.50/

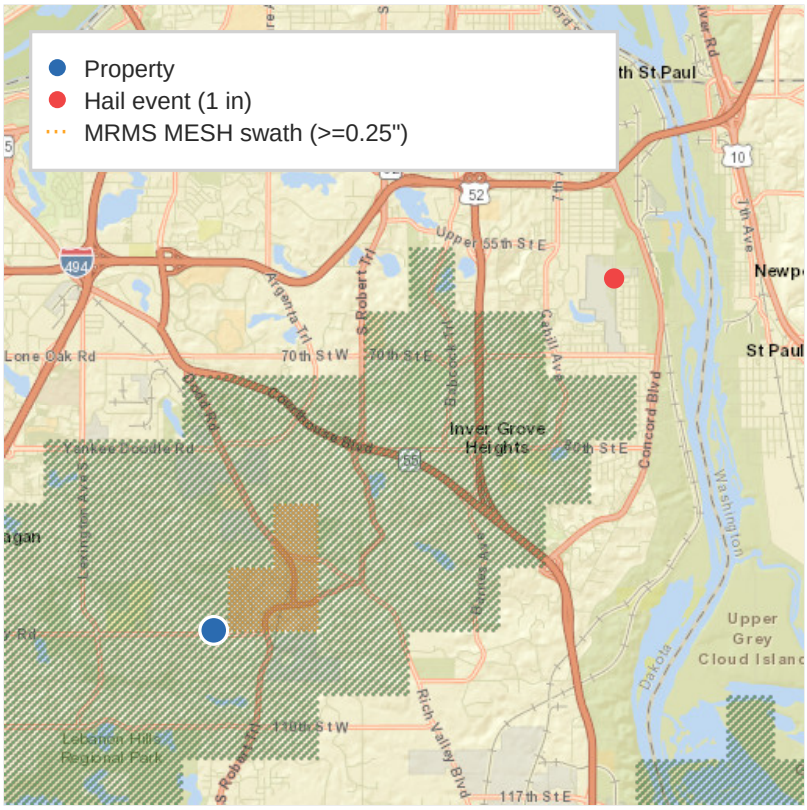
**Overlay Provenance**

MRMS overlay used: yes
MRMS product: 60min
MRMS time (UTC): 2025-09-22T01:05:00.000Z
MRMS key reference:
CONUS/MESH_Max_60min_00.50/20250922/MRMS_MESH_Max_60min_00.50_20250922-010400.grib2.gz
NEXRAD overlay used: no
NEXRAD time (UTC): N/A
NEXRAD request reference: N/A

**Event Reference Index**

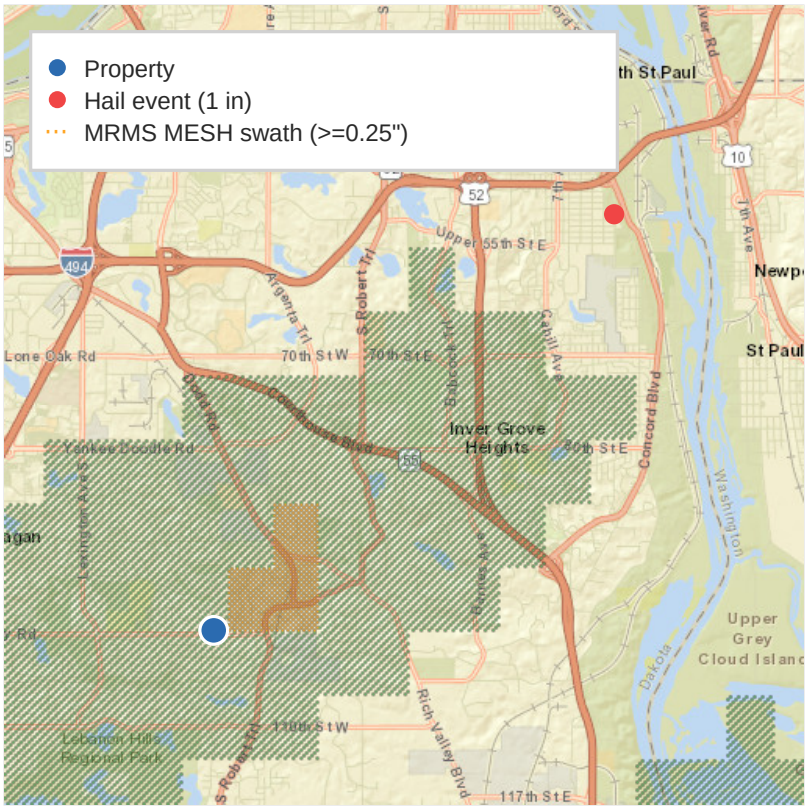
1. 2025-09-22T01:10Z | 1 NE Inver Grove Height, MN | hail=1 in | source=Public | product_id=N/A | verify_url=https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
2. 2025-09-22T01:06Z | 1 NNE Inver Grove Heigh, MN | hail=1 in | source=Trained Spotter | product_id=N/A | verify_url=https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
3. 2025-09-22T01:07Z | 1 SSE South St. Paul, MN | hail=1.75 in | source=Trained Spotter | product_id=N/A | verify_url=https://www.spc.noaa.gov/climo/reports/250922_rpts.csv

# Event 1



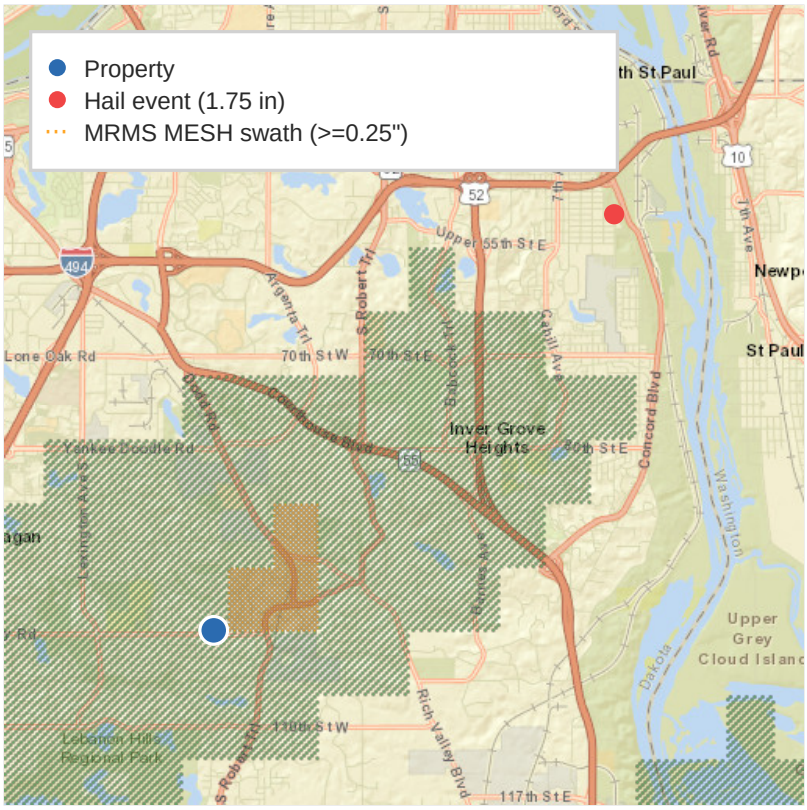

Time (UTC): 2025-09-22T01:10Z
Location: 1 NE Inver Grove Height, Dakota, MN
Lat/Lon: 44.86, -93.03
Distance (mi): 5.7
Reported hail size (in): 1
Source: Public
LSR product ID: N/A
LSR product URL: N/A
SPC daily archive URL: https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
Verification URL: https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
Remark: Picture sent via X.

## Event 2




Time (UTC): 2025-09-22T01:06Z
Location: 1 NNE Inver Grove Heigh, Dakota, MN
Lat/Lon: 44.87, -93.03
Distance (mi): 6.2
Reported hail size (in): 1
Source: Trained Spotter
LSR product ID: N/A
LSR product URL: N/A
SPC daily archive URL: https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
Verification URL: https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
Remark:

# Event 3




Time (UTC): 2025-09-22T01:07Z
Location: 1 SSE South St. Paul, Dakota, MN
Lat/Lon: 44.87, -93.03
Distance (mi): 6.2
Reported hail size (in): 1.75
Source: Trained Spotter
LSR product ID: N/A
LSR product URL: N/A
SPC daily archive URL: https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
Verification URL: https://www.spc.noaa.gov/climo/reports/250922_rpts.csv
Remark:

# Research Addendum

Industry hail maps blend point reports with radar-derived swaths, apply colour gradients to indicate hail size or probability, and embed callouts for city names and interstates. Leading services (HailTrace, Interactive Hail Maps, RadarOmega, DTN WeatherOps) publish next-day static swaths backed by MRMS/dual-pol radar data and pair them with individual Local Storm Reports (LSRs). The SPC Local Storm Reports archive remains the authoritative source for individual hail points.

### Mapping Principles

- Combine point markers with translucent polygons
  HailTrace and Interactive Hail Maps layer LSR points atop radar-estimated swaths that use semi-transparent fills. Pins remain visible, while polygons communicate the approximate affected footprint.

- Use consistent colour ramps tied to hail size
  SPC historical graphics illustrate hail magnitude via graduated symbol sizes and colours. Private vendors extend this by shading swaths (e.g., light blue for 1-inch hail, magenta for 2-inch+). Providing a legend is considered best practice.

- Annotate context (cities, highways, counties)
  Most commercial products place labels near the swath boundaries and optionally embed report details (time, source) in an inset. SPC's printable reports include county/state names alongside each point.

- Derive swaths from observational point clouds
  Where radar swath data are not available, vendors build storm footprints by computing concave hulls across hail point clouds and buffering them slightly to capture likely coverage. NOAA's MRMS hail swath product is a common reference for validating these polygons.

### Media Sourcing References

- mPING API documentation
  mPING reports can be queried by bounding box and time. Image attachments are referenced via 'attachments' keys for authenticated clients; public access requires API registration. Remarks citing mPING should therefore trigger an API lookup for nearby observations.
  https://mping.ou.edu/api/

- NOAA SPC storm reports archive
  The SPC publishes daily GIF/CSV products that highlight hail points with size-dependent markers. These assets are ideal reference imagery when proprietary tiles are not available.
  https://www.spc.noaa.gov/climo/reports/

- NOAA MRMS hail swath guidance
  The Multi-Radar Multi-Sensor (MRMS) Quarter/Half-inch hail swath grids provide objective footprints of hail coverage. When accessible, they can be blended with concave hulls derived from Local Storm Reports to refine storm polygons.
  https://www.nssl.noaa.gov/projects/mrms/

- X (formerly Twitter) severe weather feeds
  Many LSR remarks cite images posted to X. Accessing the media requires Elevated or Enterprise API tiers or a third-party aggregation service. Without credentials, the workflow should log a manual follow-up requirement.
  https://twitter.com/NWSStormReports

- Facebook/Instagram Graph API guidance
  When remarks reference Facebook or Instagram, retrieval necessitates Business App tokens and permission to read user-generated content. Implementations must respect terms of service and may need client approval.
  https://developers.facebook.com/docs/graph-api/