
















NWS Hail Size Chart

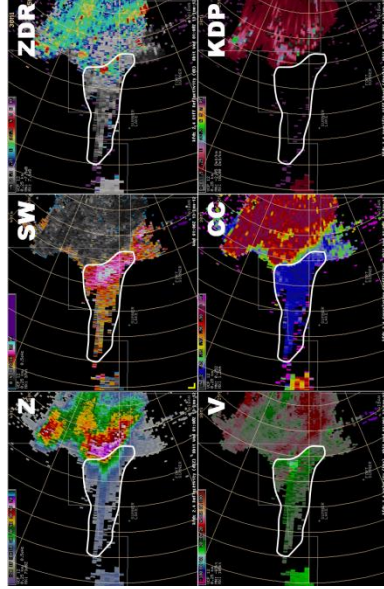
Description	Diameter	Updraft Speed
BB 	< ¼"	< 24 mph
Pea 	¼"	24 mph
Marble / Plain M&M 	½"	35 mph
Dime 	7/10"	38 mph
Penny 	¾"	40 mph
Nickel 	7/8"	46 mph
Quarter 	(Severe) 1"	49 mph
Half Dollar 	1 ¼"	54 mph
Walnut / Ping-Pong Ball 	1 ½"	60 mph
Golf Ball 	1 ¾"	64 mph
Hen Egg / Lime 	(Significant) 2"	69 mph
Tennis Ball 	2 ½"	77 mph
Baseball 	2 ¾"	81 mph
Teacup / Large Apple 	3"	84 mph
Grapefruit 	4"	98 mph
Softball 	4 ½"	103 mph
CD / DVD 	4 ¾"	105 mph

Radar Estimated Hail Type/Size

Storm-Top Divergence

Peak ΔV(kts)	Max Hail Size (in.)
70-102	Quarter (1")
103-134	Ping Pong (1 1/2")
115-147	Golf ball (1 3/4")
130-162	Hen Egg/Lime (2")
159-192	Tennis Ball (2 1/2")
174-207	Baseball (2 3/4")
233-267	Grapefruit (4")

TBSS \geq 0.8" Hail*



*Valid for S-band radar only

DUAL-POL RADAR HAIL SIGNATURES

Hail Event Type	Signature	Z:	ZDR:
Severe Hail (with little rain)	Z > 55 dBZ	45-59 dBZ = Hail poss ≥60 dBZ = Hail likely	-0.3 to 1 dB ≈ Dry or large hail > 1 dB ≈ More liquid
	CC ≈ 0.95-0.97	CC: 0.93 - 0.97 ≈ 1-2" hail 0.70 - 0.90 ≈ ≥2" hail	KDP: <1°/km ≈ Mostly dry hail >3°/km ≈ Rain/hail combo or melting hail
Severe Hail Mixed w/Rain	Z > 55 dBZ	Z > 55 dBZ	ZDR ≈ 1-2 dB
Sub-Severe Dry Hail	CC ~0.93-0.96	CC ~0.93-0.96	KDP > 0.5°/km
	CC > 0.98	Z ≈ 45-55 dBZ	ZDR ≈ 0 dB
Sub-Severe Melting Hail	Z > 55 dBZ	Z > 55 dBZ	KDP ≈ 0°/km
	CC ≈ 0.92-0.96	CC ≈ 0.92-0.96	ZDR > 2 dB
Significant (≥2") Hail	Z > 55 dBZ (>45 dBZ)	Z > 55 dBZ (>45 dBZ)	KDP > 4-5°/km
	CC < 0.9 (possibly 0.7)	CC < 0.9 (possibly 0.7)	ZDR ≈ 0 dB or lower KDP not displayed