RISK COVERAGE HUB • QUICK CARD

Aerial Roof Score Quick Card: What Gets Scored & Policy Touchpoints

Pre-Renewal Field Advisory
Standard: AI Computer Vision Scoring
Audience: P&C Brokers & Homeowners

Current version — Nov 1, 2026. Update history: https://riskcoveragehub.com/aerial-property-scoring-broker-homeowner-explainer/

Direct Field Reference • No Advisory Credentials Required

1. THE UNDERWRITING BASELINE — WHAT GETS SCORED FROM THE AIR

Carriers industry-wide (e.g. Donegal Insurance Group with ZestyAI's Z-PROPERTY in late 2026) deploy automated computer vision models analyzing high-resolution aerial imagery (overhead ortho, angled oblique, and 3D views). Scores enter carrier underwriting files months before the policy renewal date.

Roof Scoring: 5 Condition Classes & 4 Anomaly Flags

Class / Rating	Physical Criteria Detected by Computer Vision
1. SOUND	Uniform surface, clean shingle lines, zero missing material or ponding.
2. GOOD	Minor surface weathering; normal granular aging; zero active leakage risks.
3. FAIR	Localized granular loss, visible curling, minor staining, early wear signs.
4. POOR	Substantial granule depletion, multiple displaced shingles, clear staining.
5. DEGRADED	Active failures: severe water ponding, widespread missing shingles, tarps.

4 Core Condition Flags: Staining (Algae/organic streaks) • Water Ponding (Low-slope/flat ponding) • Missing Shingles (Wind tear/voids) • Tarps (Lingering emergency covers)

Lot & Parcel Exposure Elements (Beyond The Roof)

Computer vision analyzes geometry and lot conditions that homeowners mistake for routine yardkeeping:

- **Roof Geometry:** Material type (asphalt, tile, metal), slope/pitch, and multi-facet complexity.
- **Overhanging Vegetation:** Tree limbs within striking or dropping distance of roof planes.
- **Parcel Debris & Brush:** Accumulated brush piles, yard refuse, or scrap read as wildfire/liability hazards.
- **Project Cars & Equipment:** Unregistered vehicles or machinery flagged as commercial or junk storage.
- **Secondary Structures:** Unpermitted sheds, barns, detached garages, or workshops.
- **Pools & Driveways:** Unfenced or non-compliant swimming pools, cracked/uneven driveways.

20-Year Timeline (Roof Age): Algorithms cross-reference municipal permit databases with 20+ years of historical aerial imagery to date replacements vs. snapshot claims.

2. POLICY IMPACT MAP — WHERE AERIAL SCORES TOUCH COVERAGE

Policy Surface	Carrier Algorithmic Mechanism	Direct Homeowner Financial Impact	Broker Action & Mitigation
Rating & Pricing Tiers	Computer vision feeds property score directly into automated rating engines to select tier bands.	Premium increases, loss of preferred tier discounts, or mandatory surcharges on property line.	Audit property condition score before annual rate filing; clean lot debris to avoid low-grade tier.
Deductible Changes	Carriers impose higher separate roof, wind, or hail deductibles (e.g. 1% to 5% or $2,500+) on Fair/Degraded roofs.	Dramatically higher out-of-pocket costs when hail, wind, or storm damage occurs.	Provide certified roof inspection to preserve standard fixed dollar deductible ($500/$1,000).
ACV Settlement Endorsements	Carriers convert roof loss settlement from Replacement Cost (RCV) to Actual Cash Value (ACV) schedule based on score/age.	Depreciation applied directly to roof payout; homeowner pays 30%–70% of replacement cost at claim.	Submit municipal permit and contractor invoice proving actual replacement date within eligible window.
Renewal Conditions & Demands	Automated renewal scans flag changes (new tarp, missing shingles, unmaintained trees) as underwriting conditions.	Homeowner receives a 30-day "Repair or Non-Renew" demand letter, causing crisis and rush contractor costs.	Request written carrier basis immediately; file for a 30–60 day cure period with repair contract.
Nonrenewal / Coverage Drops	Degraded classification or persistent uncorrected anomalies trigger automatic underwriter nonrenewal notices.	Forced migration to excess/surplus lines or state FAIR plans at double or triple the baseline premium.	Invoke 5-step evidence sequence; supply drone photos and licensed inspection; escalate to DOI if erroneous.

3. WHAT A HOMEOWNER CAN CORRECT — THE 5-STEP WRITTEN SEQUENCE

Consumer advocacy organizations (e.g. United Policyholders) document a continuous rise in automated aerial imagery errors. An aerial score is not final. Brokers and insureds must follow this strict written evidence sequence:

Step	Action Required	Specific Evidence & Documentation Needed	Underwriter Impact / Outcome
1. Ask for Basis	Formally request the exact aerial image, flight date, and algorithm findings.	Written carrier inquiry specifying: exact image file, capture timestamp, camera angle, and flagged anomaly coordinates.	Prevents blind disputes; identifies whether model relied on stale, cropped, or misidentified imagery.
2. Dated Proof	Assemble verifiable physical documentation refuting the algorithmic flag.	• Licensed roofer signed inspection report • Building permit completion record • Contractor paid-in-full invoice • Date-stamped high-res ground & drone photos	Replaces circumstantial aerial pixels with legally binding contractor verification and municipal proof.
3. Written Reconsideration	Transmit formal rebuttal package to underwriter with audit trail.	Certified mail / tracked electronic submission referencing policy number, photo exhibits, and itemized rebuttal points.	Verbal promises do not update automated underwriting databases; forces formal underwriter file review.
4. Cure Period Request	If defects are genuine, request reasonable repair extension window.	Signed contractor repair contract, deposit receipt, scheduled repair start date, and scope of work.	Prevents immediate cancellation or lapse; secures standard 30-to-60 day extension to complete repairs.
5. Insurance Dept Escalation	File consumer complaint if carrier refuses to review or correct error.	Copy of basis request, proof package, carrier denial/refusal letter, and timeline summary submitted to State DOI.	Triggers state regulatory inquiry; state insurance departments actively investigate unverified algorithmic drops.

4. COMMON AERIAL COMPUTER VISION FAILURE MODES

Technical Scoring Anomalies

- **Pre-Replacement Imagery Lag:** Carrier AI relies on aerial flights captured 12–24 months prior, ignoring recent permitted reroofing.
- **Shadow & Cloud Misclassification:** Dark tree branch shadows across roof planes misidentified as missing shingles, rot, or water pooling.
- **Algae vs. Structural Decay:** Harmless Gloeocapsa magma (algae) surface stains scored as severe surface degradation.

Parcel & Historical Traps

- **Neighbor Parcel Contamination:** Blurry GIS lot boundaries assign neighbor's junk, tarp, or dead trees to client's record.
- **Stale Tarp Artifacts:** A blue tarp used temporarily during a past, fully settled and repaired hail claim retained as active damage.
- **Secondary Structure Confusion:** An old decorative shed miscategorized as a dilapidated primary residence extension.

5. THE PRE-RENEWAL CONVERSATION: 3 ACTION PRIORITIES FOR BROKERS

1. What Carrier Sees

Educate clients at the 90-day pre-renewal mark that cameras and computer vision inspect the parcel continuously. Explain that cleanliness and physical roof state are actively scored.

2. Low-Cost Fixes First

Advise simple physical cleanups before aerial pass: clear brush piles, trim overhang within 10 ft of roof, remove tarps, park project cars inside, and soft-wash roof algae.

3. What Proof To Keep

Instruct clients to maintain a digital property vault: final contractor invoices, closed municipal permits, warranty papers, and annual dated date-stamped photos of all roof slopes.

Broker Notice: Regulatory notice requirements and underwriting disclosure mandates vary by state jurisdiction. Keep client guidance procedural rather than legal counsel, or cross-reference specific Department of Insurance administrative guidelines.