

A FREE GUIDE FOR COASTAL HOMEOWNERS

Attic moisture problems and solutions

Ceiling stains. Sweating ducts. Musty smells.
Find out what may be happening above your head.

Understand the warning signs, your repair options and RGR’s coordinated conditioned-attic approach.

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rgrconstructionllc.com/contact/

PROBLEMS AND CAUSES

What is making it wet?

Different moisture problems can leave similar warning signs.



Illustration: ceiling staining near an air vent deserves investigation.

Roof leaks and water entry

Damaged roofing, flashing or penetrations can allow rain into the attic. Note whether stains appear after storms, but have the roof and surrounding materials inspected before assuming the cause.

Condensation and HVAC moisture

Humid air can condense on cold ducts, much like a cold glass of iced tea. Damaged duct insulation, air leaks or a condensate-drain problem may contribute to moisture around HVAC equipment.

Choose the repair that fits

The answer may be a roof repair, duct correction, air sealing or a coordinated attic improvement. Address the cause and damaged materials before adding insulation. Not every home needs a full attic conversion.

Stay out of unsafe attic areas. Wet wiring, sagging ceilings or significant moisture damage need qualified help. Never step on ceiling drywall.

A COORDINATED SOLUTION

Bring the attic inside

What if the attic was part of your home’s protected envelope instead of exposed to outdoor extremes?



Concept illustration, not a construction drawing or an RGR project photo.

A conditioned-attic design moves the thermal boundary from the ceiling to the roofline. Properly designed insulation and air sealing can place attic HVAC equipment and ducts in a more stable environment.

More than spray foam

RGR’s Conditioned Attic System brings the roof, insulation, HVAC and moisture control into one plan. We inspect first, address underlying problems and monitor performance after installation.

The right solution for the right home

A well-designed vented attic can work. Sometimes a targeted roof repair, duct correction or air-sealing project is enough. A full conversion should follow a home-specific design, not a one-size-fits-all recommendation.

THE RGR PROCESS | STEPS 1–3

Start with a sound roof



01 Diagnose before insulating

We review roof condition, existing moisture damage, ducts and decking to understand the source. Spray foam should never cover up an unresolved leak or wet materials.

02 Make sure the roof is ready

Closed-cell foam makes the underside of the roof deck harder to inspect later. If the roof is aging or due for replacement, planning the roof and attic work together may be the better approach.

03 Consider a FORTIFIED Roof

Where appropriate, a FORTIFIED roof scope can improve resistance to severe weather through qualifying roof-system improvements. It requires its own standards and verification; spray foam is not a substitute.

Ask about roof-strengthening programs. Eligible homeowners may qualify for NCIUA grants or insurance credits. Confirm current availability, amounts and eligibility directly. Roof funding should not be assumed to cover attic conversion.

THE RGR PROCESS | STEPS 4–6

Build one complete system

04 Plan the insulation transition

When the thermal boundary moves to the roofline, RGR’s scope includes removing old attic-floor insulation as appropriate to the design. This creates an opportunity to uncover air leaks, stains, pest activity and duct issues before they are hidden.

05 Create a continuous air barrier

In a properly designed unvented conversion, existing soffit, ridge and gable vent openings are addressed and air-sealed. Eaves and roof intersections need special attention. Do not close vents in a conventional vented attic without a complete redesign.

06 Install the specified closed-cell foam

RGR’s approach uses closed-cell foam for its vapor-control properties and insulation value per inch. Installation must follow the approved assembly, product instructions and local code. Foam does not replace sound decking, roof fasteners or required fire protection.



Representative installation illustration, not an RGR project photo.

THE RGR PROCESS | STEPS 7–8

Measure how it performs

07 Monitor temperature and humidity

RGR's system includes permanent monitoring so attic conditions can be checked over time. Where the design calls for it, a dedicated dehumidifier can help during humid stretches when the AC runs less often. The objective is a dry, controlled space, not simply a cooler attic.

08 Add optional roof monitoring

Optional annual drone-based thermal roof mapping can identify unusual temperature patterns that deserve a closer look. A year-to-year record can support maintenance decisions. Thermal imaging is a diagnostic aid, not proof of a leak or a guarantee every leak will be found.

The details that make it work

Before work begins, the design should address:

- Roof condition and moisture levels before foam is installed.
- A drying strategy for the roof assembly.
- HVAC operation, indoor ventilation and combustion safety.
- Required fire protection and access for maintenance.
- Who reviews monitoring data and responds to a concern.

Ask for these items in the written scope so you know what is included and what is optional.

VALUE AND TRADE-OFFS

Is it right for your home?

A conditioned attic is a premium improvement. Compare the entire scope with the cost of recurring problems and targeted alternatives.

Comfort and energy

Less extreme attic conditions may reduce duct energy losses and help upstairs comfort. Actual savings depend on the house, equipment, air leakage and installation. They are not guaranteed.

Moisture and maintenance

Addressing the cause of condensation can reduce repeated staining and damp insulation. Better moisture control may reduce conditions favorable to mold, but it does not replace remediation of existing damage.

Roof and equipment performance

A coordinated plan can reduce exposure to heat and moisture stress. Equipment lifespan and storm performance depend on more than attic insulation; no specific improvement should be assumed.

The honest trade-offs

Closed-cell foam typically costs more than conventional attic-floor insulation. It reduces inward drying of the roof deck and can hide some leaks from below. That is why roof readiness, a complete moisture-control design and ongoing maintenance matter.

Not every home needs the full system. If a targeted duct or roof repair addresses the cause, that may be the more practical choice.

LET’S FIND THE SOURCE

Stop guessing.
Start with a diagnosis.



Ready to understand what is happening in your attic?

Tell us about recurring stains, sweating ductwork, odors or an uncomfortable upstairs. Share photos taken safely and the age of your roof and HVAC equipment, if known.

Schedule your free attic diagnosis.

Call 910-408-6026

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Sources and program information

Building Science Corporation · DOE Building America
IBHS FORTIFIED Roof · NCIUA Coastal Roof Program
Strengthen Your Roof · NC Department of Insurance

Educational information, not a site-specific design. Grant terms and eligibility change. Confirm the project scope and expected performance for your home. Images illustrate concepts and are not RGR project photographs.