Winter 2020

CAPNY AFR

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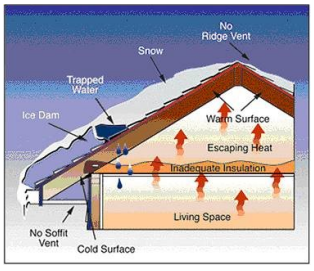
PREPARING YOUR PROPERTY FOR A NORTHEAST WINTER

Upstate winters can take a toll on cultural properties. Plan now to avoid headaches!

Managing an historic property's staff, structures, contents, and records is a tremendous responsibility. The challenges associated with a COVID environment bring additional impacts to programming, attendance, and finances. As winter approaches, consider steps you can take to avoid or reduce the risk of harm to people, structures, and collections, decrease downtime, and even help lower operating costs.

Water, Water, Everywhere…



Water in all its forms---liquid, ice and vapor---is the most pervasive enemy of historic properties, libraries, museums, and the collections and records they contain. Of the 18 hazards tracked by the 2019 New York State Hazard Mitigation Plan, hurricane and flooding top the list with $166.7 and $130.0 million in annualized damages, respectively. Taken together, the other 16 hazards result in only *one-fifth* the annualized damages of these two water hazards combined.

You want every water drop to stay outside your building until it hits the ground and is diverted away from the foundation and all structural supports. Imagine you are that water drop: where are the building's weak spots, and how can you get in?

- Are roof surfaces and flashings in good repair? Pay special attention to valleys, the places where two slopes meet. They channel water, and flashings at these locations can take a beating, particularly on slate roofs. Also be sure that flashings at chimneys, vents, cupolas, and other roof penetrations are properly overlapped and secure. If you're that water drop, will the flashing thwart your entry?
- Are gutters securely attached and operating? Are there low spots that collect water and prevent proper functioning? Have they been cleaned of leaves, twigs, and nests? Are leaders securely connected, and do they extend fully to the ground and direct water away from the foundation and other structural elements like porch supports?
- Are attic windows repaired and closed for the season? Consider caulking if they are not needed for summer ventilation. Inspect attics and top-floor spaces for evidence of *recent* leaks just after a significant rainfall and take steps to tighten the building envelope.
- Are foundations in good repair, or do mortar joints need

repointing? Does the earth slope away from your building and all structural elements, or are there low spots where water might collect and freeze, causing damage? Does water flow away from paths and drives to avoid slip hazards for patrons and staff?
- Consider using dehumidifiers in summer and humidifiers in winter to control moisture

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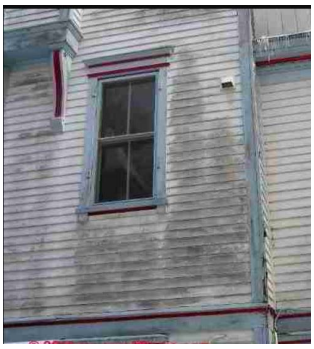
Keeping the Heat In and the Cold Out



Heat gain and loss through windows is responsible for 25%–30% of residential heating and cooling energy use. This occurs in two ways:

- *Infiltration* around windows (and doors, walls, and foundations) due to faulty weather stripping, ill-fitting frames, or poorly installed units. You can address this by:
    - Repairing and replacing broken and missing glass and putty, making sure units fit tightly, and all hardware works. Likewise, ensure that doors and basement access points are secure and tight, with winter improvements (e.g., storm doors or panels) installed.
    - Caulking or sealing gaps at joints between different materials (e.g., where the sill and framing sit on the foundation) and installing or replacing weather stripping.
    - Installing storm windows and doors, which create a second barrier against the wind, (as well as an air space which helps to insulate).

- *Convection* when heat passes through glass (like summer sun through a windshield).
    - Consider installing storm windows.
    - Bubble wrap makes an inexpensive insulator. It can be placed against windows in basements and areas where it won't affect the building's exterior or architectural character.

Buildings also lose heat through *conduction,* or the transfer of heat through a material (think copper-bottomed pans). Air spaces help slow heat transfer, which is why storm windows and doors can reduce energy costs. They deter infiltrating drafts, too.

- Consider insulating whenever you open an exterior wall or add on. Insulation works because it is a collection of discrete air pockets contained in all that fiberglass, cellulose, or spray foam, slowing the passage of heat from warm spaces to the outside. Heat will always travel through a wall despite our best efforts. The goal is to simply slow its passage.
- Water vapor is created by human activity---breathing, cooking and showering---and keeping it out of the wall cavity is key. Moisture traveling through the wall with escaping heat reaches dew point and condenses somewhere between the warm interior and cold exterior. Wet insulation doesn't insulate and may actually conduct heat (air spaces aren't efficient insulators when they're filled with water). Moreover, it can rot sills and framing, promote mildew, damage plaster, and cause exterior paint to peel. For this reason, you should always specify a "vapor barrier" for the "warm-in-winter side" of any insulation.

Facilities and Procedures Need Annual Check-ups, Too

Don't postpone routine maintenance (and don't be afraid to delegate!). Here's a checklist.

- Move all records and items of value out of basements and wet areas.
- Confirm that insurance is adequate and current. Consider flood insurance if your building is in the 100-year floodplain (check with your code inspector) or has been flooded in the past.
- Clean furnaces, chimneys and vents. Confirm whether fuel deliveries are automatic or made on a will-call basis.
- Locate and mark all utility shut-offs (e.g., gas, electric, water). Clearly label circuit breakers and fuses for quick reference.
- Test smoke detectors and install new batteries if not hardwired.
- Update phone lists and communications procedures. Include internal and external contacts for

emergencies, continuity of service, and recovery activities.

- Store info in your smart phone; keep a printed copy in your home and car, and an e-copy loaded on the desktop of your laptop or tablet to be accessed even without connectivity.
- Use a log to track routine and major repairs. Knowing when furnaces were cleaned and roof shingles were installed (with receipts) helps you plan and budget maintenance and repairs and make warranty claims.
- Have you moved your records out of the basement yet?

And Finally...

On our website you'll find a list of activities that aren't specific to winter in the northeast, as well as a directory of resources for repairing, maintaining and upgrading cultural institutions and historic properties. AFR members can also offer informal guidance for achieving these goals without compromising historic and architectural character. Remember, the axiom that "*an ounce of prevention is worth a pound of cure*" is as true today as it was when Ben Franklin cautioned Philadelphians about fire safety in 1736.

Advocacy, Education, Networking, Real-Time Emergency Assistance

Capital NY Alliance for Response

Additional resources on disaster preparation and response are available on our website

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