

Water-Resistant Insulation

Overview

- Water-resistant insulation can be installed to replace current insulation to help protect structures from flood damage.
- Water-resistant insulation does not absorb water like other types of insulation, but instead resists absorption and reduces the potential for unhealthy or toxic mold growth.
- Water-resistant insulation may be more efficient than other types of insulation and can reduce energy consumption in the home.
- Water-resistant insulation often has a lifetime warranty.
- Water-resistant insulation is easy to install as the strong, lightweight panels do not require specialized installation tools.
- Installing water-resistant insulation is often a wet floodproofing technique. Wet floodproofing involves removing non-water-resistant materials and replacing them with water-resistant materials to reduce repair costs and recovery time in addition to elevating utility equipment. Water is allowed to enter the structure during flood events.
- This adaptation strategy will be more effective if other wet floodproofing techniques are also used. Other wet floodproofing techniques include:
 - Elevating utilities including electrical sockets and wiring
 - Using other water-resistant materials (e.g. installing preservative treated lumber, water-resistant flooring, water-resistant wallboard, etc.)
- This strategy will not protect the property from flooding, it will only reduce the cost of flood damages as the insulation will not need to be replaced after each flooding event.

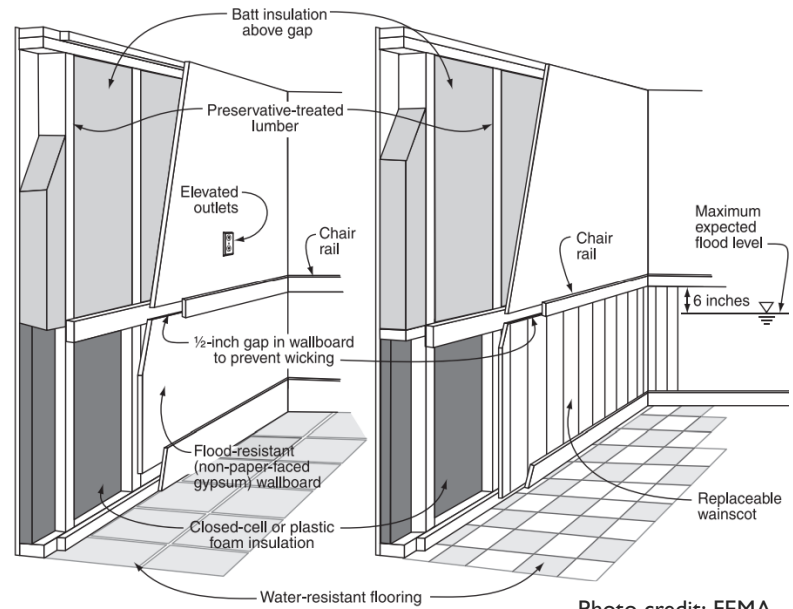


Photo credit: FEMA

Key Takeaways

During flood events, floodwater entering the building can cause damage to the structure as well as its contents.

To avoid continuous replacement costs of insulation in frequently flooded structures, water-resistant insulation can be installed in the walls and floors of the structure.



I-ADAPT

Interior Adaptation Water-Resistant Insulation

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Estimated Costs/Benefits

*U.S. dollars (2022), estimates are subject to change

Potential Costs		Potential Benefits	
Item (quantity needed)	Estimate	Post-Flooding Recovery Action	Estimate
Water-resistant insulation panels (35)	\$32-\$42 per panel	Replace insulation	\$1,100-\$2,800
Contractor labor	\$300-\$1,000	Mold remediation	\$1,100-\$3,400
ESTIMATED TOTAL COST 1000 sq ft structure	\$1,420-\$2,470	ESTIMATED TOTAL SAVINGS	\$2,200-\$6,200

Potential Funding Sources

- [Building Resilient Infrastructure and Communities Grant \(BRIC\)](#)

Additional Resources

- [Delaware Homeowners Handbook to Prepare for Natural Hazards](#)
- [FEMA Flood Damage-Resistant Materials Requirements](#)
- [FEMA Protect Your Property from Flooding](#)

Resources can also be found at <https://de.gov/iadapt>

Expected Maintenance

- After flood events, clean-up floodwaters and any contamination brought in by flooding.
- Periodically ensure that the insulation has not been damaged.

Additional Actions

- This measure will be most effective if completed with other wet floodproofing measures such as elevating utilities/equipment and using other water-resistant materials throughout the structure.

Permitting Agencies

Contacts for permitting requirements include but are not limited to the following:

- Your city and/or county government for local flood ordinances or regulations
- Your city and/or county government for building permits

Who to Contact

- General contractor
- Utility companies

Technical definitions and more information are located on the I-ADAPT website: <https://de.gov/iadapt>.



This information is intended to be used for planning purposes. It is not intended to substitute or take precedence over the guidance of design engineers, contractors, utility companies or regulatory agencies.

For more information, contact DNREC's Division of Climate, Coastal and Energy at DNREC_IADAPT@Delaware.gov

