



# Fulton County Guide to Weather-Ready Homes

Department of Real Estate and Asset Management  
December 2025



**FULTON  
COUNTY**

# Overview of the Guide

Extreme weather events can put our homes and properties at serious risk of damage or loss, regardless of the financial or emotional investments we've made in them. As our planet continues to change, it's essential that we adapt to reduce our vulnerability. Just one major weather event can have lasting consequences if we're not prepared.

To support this effort, this guide is designed to help Fulton County residents prepare their homes for severe weather by exploring practical retrofit options, ranked by skill level, cost, and time required.

If you do not feel comfortable with any of the projects described in this guide, please hire a contractor.



# Table of Contents

About This Guide .....	<b>2</b>
Table of Contents .....	<b>3</b>
Background .....	<b>4</b>
Floods .....	<b>6</b>
Introduction .....	6
Project Rating Chart .....	5
Project Guides .....	8
Additional Resources .....	11
Extreme Heat .....	<b>12</b>
Introduction .....	12
Project Rating Chart .....	13
Project Guides .....	14
Additional Resources .....	17
Wind Thunderstorms & Hurricanes .....	<b>18</b>
Introduction .....	18
Project Rating Chart .....	19
Project Guides .....	20
Additional Resources .....	24
Appendices .....	<b>25</b>
Appendix A: Floods .....	25
Appendix B: Extreme Heat .....	28
Appendix C: Wind Thunderstorms & Hurricanes .....	31
General Resources .....	34
Endnotes .....	35



# Background

The Fulton County Board of Commissioners adopted a Sustainability + Resilience Plan in 2019 with a vision to thrive as the premier county in Georgia for sustainability and resilience, protecting residents, visitors and environmental systems. The Sustainability Team within Fulton County's Department of Real Estate and Asset Management created this guide to help Fulton County homes become more weather-ready and resilient. More information about the county's sustainability and resilience initiatives can be found on the [Fulton County sustainability website](#) .



# Project Rating System



Category	Time	Skill	Cost
Low	1-2 hours	Beginner No Prior Experience	\$30-50
Medium	2-4 hours	Intermediate Basic skills and tools	\$60-90
High	4 hours	Advanced Specialized tools or knowledge	More than \$90

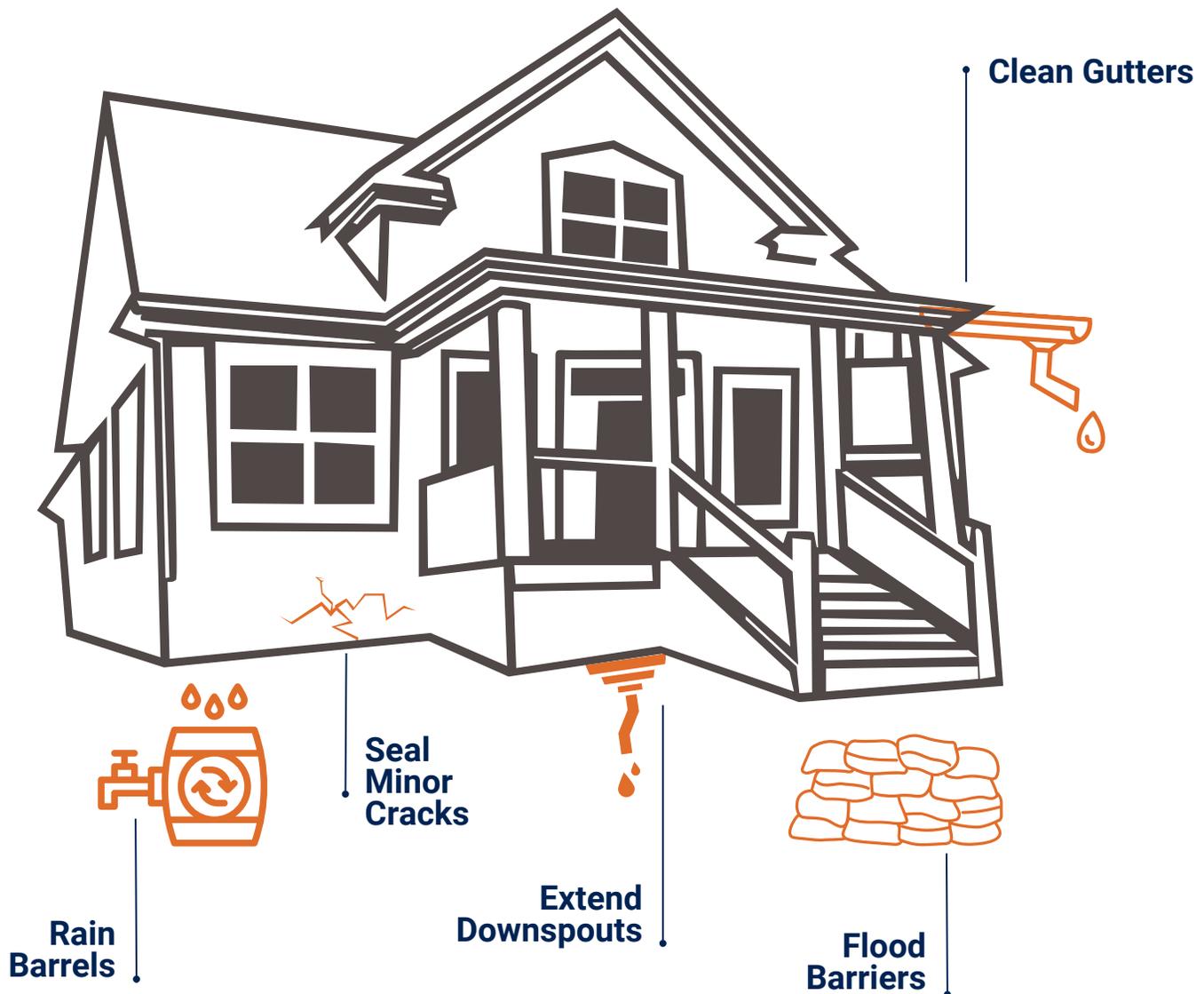
# Floods

*High Risk & Probability<sup>1</sup>*  
Hurricane Season Jun - Nov

## Flood Retrofits

### Home Projects To Prepare Your Home For Floods

Flooding happens when water covers normally dry land, whether from storms, heavy rain, or plumbing issues. It can damage homes and create safety risks. The retrofit projects outlined here offer simple, effective ways to reduce water damage and costly repairs. The following pages include step-by-step guides for **cleaning gutters, installing rain barrels, preparing sand flood barriers, extending downspouts, and sealing minor foundation cracks.**<sup>2</sup>



<sup>1</sup>James Dickey and Evie Lee, Fulton County Resilience Study (July 2024).

<sup>2</sup>Reduce Flood Risk, Protect Your Home with Low-Cost Projects You Can Do Yourself, accessed June 11, 2025, <https://www.reducefloodrisk.org/mitigation/protect-your-home-with-low-cost-projects-you-can-do-yourself/>.

# Floods

## Project Rating System

	Category	Skill Level	Average Cost	Time
<b>Sandbag Flood Barrier</b>	Low	minimal skill	\$187 <small>*For 20 bags</small>	1-2 hours
<b>Extending Downspouts</b>	Low	minimal skill	\$11	2-4 hours
<b>Rain Barrels</b>	Medium	some skill	\$186	2-3 hours
<b>Cleaning Gutters</b>	Medium	some skill	\$0	1-2 hours
<b>Sealing Minor Cracks</b>	High	advanced tools	\$31	1-2 hours

# Flood Retrofits Step-By-Step Guides

## Sandbag Flood Barriers Extending Downspouts

If you do not feel comfortable with any of the projects described in this section, please hire a contractor.

### Important Notes

Before a storm, check that gutters are clean, the rain barrel is empty, sandbags are placed, downspouts work, and minor cracks are sealed.

**Sandbag barriers block water from entering and flooding your home.<sup>1</sup>**

#### Sandbag Barriers

**Tools: Long Sandbags for flooding, Sand, Funnel**

1. **Select Size** – Choose from sandbag sizes. Larger bags hold more sand for better flood barriers.
2. **Fill with Sand** – Use the funnel to add sand into the bag, leaving enough room to close it. An elastic band at the opening ensures a tight seal to prevent leaks.
3. **Position for Flood Control** – Place filled sandbags near flood-prone outdoor areas like doors, windows, driveways, basements, or in spots where water tends to pool.
4. **Reuse & Share** – Good sandbags resist tearing and fading for repeated use.

**Extending downspouts helps prevent flooding, erosion, and basement damage.<sup>2</sup>**

#### Extending Downspouts

**Tools: Downspout Extension**

1. **Identify Locations** – Identify downspouts around your home that are letting water out next to your foundation.
2. **Extend the Downspout** – Purchase one downspout extension for each location. Lengthen the extension as long as possible and attach the extension to your downspout. Place the other end of the extension away from your home and downhill from your home if possible.
3. **Cover the Downspout** – If the downspout extension is located on mulch or pine straw, you can cover the extension with mulch or pine straw to reduce visibility. Alternatively, you can purchase a bubbler pot, debris filter, and PVC pipe if you would like to bury a downspout extension underground.<sup>3</sup>

<sup>1</sup>Lake County TV, "How to Properly Sandbag for Flood Protection," YouTube Video, Dec 8, 2017, tutorial video, 3:00, <https://www.youtube.com/watch?v=7b0p5ZzN524>.

<sup>2</sup>Apple Drains, "Downspout Drain Extensions | How to Avoid Foundation Failure," YouTube Video, Aug 26, 2022, tutorial video, 3:49, [https://www.youtube.com/watch?v=Y\\_fwUeWkPAw](https://www.youtube.com/watch?v=Y_fwUeWkPAw).

<sup>3</sup>Waterproof, "Underground Downspouts - How to install downspout extension kit," YouTube Video, May 14, 2024, tutorial video, 1:07, <https://www.youtube.com/watch?v=KXIKsPdHgpw>.

# Rain Barrels

## Cleaning Gutters

Rain barrels collect roof runoff for outdoor use.<sup>1</sup>

### Rain Barrels

**Tools:** Rain Barrel, Hacksaw, Flexible Gutter Elbow, Hose for Overflow, Bricks/Cinder Blocks/Rain Barrel Stand

1. **Obtain a Barrel** – Purchase a rain barrel. You can also create your own rain barrel from a plastic food-rated barrel.
2. **Find a Location** – Locate an existing gutter downspout that ends on level ground and is near an area that you would like to use the water for.
3. **Elevate the Barrel** – Place bricks, cinderblocks, or a rain barrel stand next to the downspout. The rain barrel uses gravity to fill watering cans or a hose with water, so the barrel needs to be slightly elevated.
4. **Redirect the Water** – Place the flexible gutter elbow on top of the rain barrel and mark on the downspout where the elbow will need to attach. Move the rain barrel out of the way. Cut the downspout with a hacksaw where you marked it. Save the cut piece for reattachment in the winter. Attach the flexible gutter elbow to the new bottom of the downspout.
5. **Complete Installation** – Place the rain barrel back on the bricks and align the downspout elbow so that water will flow into the rain barrel. Attach a hose to the overflow valve and place the hose such that water is directing away from your house. The spigot at the bottom of the rain barrel can be used to fill a watering can, or you can attach a hose.
6. **Winterization** – In the winter, remove the barrel and store it indoors or upside down so that it does not freeze. Point the flexible elbow downwards and use it to reattach the original end of the downspout.

Clean gutters protect your house structure from water damage.<sup>2</sup>

### Cleaning Gutters

**Tools:** Garden Gloves, 5-Gallon Bucket, Step Ladder, Water Hose & Nozzle, Shop Towel

1. **Clear Debris** – Using garden gloves, scoop leaves, sticks, and dirt from gutters into 5-gallon bucket (hook it for hands-free use). Work from the roof or ladder.
2. **Rinse with Hose** – Hose remaining debris toward the downspout to flush it out completely.
3. **Wipe Down Gutters** – Use a shop towel to clean grime from overflow stains (optional).

<sup>1</sup>The Conservation Foundation, *How To Install Your Rain Barrel*, PDF (DuPage County Stormwater Management, January 2010), <https://www.theconservationfoundation.org/images/Rain%20Barrel%20Installation1.pdf>.

<sup>2</sup>Everyday Home Repairs, "Selecting and Installing Gutter Guards | \$35 Project!," YouTube Video, Oct 10, 2022, tutorial video, 2:10, <https://www.youtube.com/watch?v=rsCRNgEGsrk>. (Video explains how to clean gutters)

# Sealing Minor Cracks

Sealing minor foundation cracks stabilizes your home and prevents flooding.<sup>1</sup>

## Sealing Minor Cracks

**Tools: Tape Measure, Nitrile Gloves, Caulk Gun, Concrete Repair Filler, Sealant**

1. **Determine Severity** – Determine the severity of your crack by measuring its width with a tape measure. Cracks that are less than ¼ inch wide are typically suitable for DIY repair. NOTE: If your crack is in a wall, vertical cracks are less concerning than horizontal or diagonal cracks. Horizontal and diagonal cracks can signify structural issues that should be evaluated by a professional.<sup>2</sup>
2. **Clean Area**– Clean the area to remove dust and debris. This will help the filler to stick to the concrete.
3. **Apply Filler** – Use your caulk gun to apply the concrete repair filler and sealant to the crack. NOTE: If your crack is too narrow for the filler to get in, you may need to widen the crack with a screwdriver or hand grinder.
4. **Monitor Crack** – If your crack reappears or grows over time, consult a professional.

### Drainage Swells:

**Swales, Drains, and Site Grading for Stormwater Control** (Building America Solution Center) [↗](#)



### Green Spaces:

**How Your Garden Can Help Manage Flood Risk** (The Flood Hub) [↗](#)

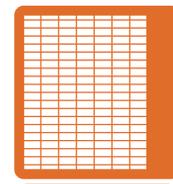


**Looking For More Ideas?  
Other Potential Flood Retrofits Include:**



**Root Barriers:**  
**Root Barrier Installation Tips & How They Work** (AmeriCover Protection From the Ground Up) [↗](#)

**Elevating Electronics:**  
**Provide Flood Protection for Appliances** (FLASH Federal Alliance for Safe Homes) [↗](#)



<sup>1</sup>Sakrete, "Pro Tip: How to Fill, Seal & Repair Concrete Cracks Like a Pro | Sakrete Concrete Repair Guide," YouTube video, November 24, 2025, tutorial video, 8:34, <https://www.youtube.com/watch?v=jPhq0F7rkKU>.

<sup>2</sup>Stephanie Minasian-Koncewicz, "Foundation Cracks: What Is Normal and When to Worry," This Old House, June 4, 2025, article, <https://www.thisoldhouse.com/foundations/foundation-cracks> (accessed December 1, 2025).

# Additional Resources

## Floods

### Retrofit Projects

**Everyday Home Repairs, “Selecting And Installing Gutter Guards | \$35 Project!”**, YouTube (Cleaning Gutters)

**How to Build a Rain Barrel** (Installing a Rain Barrel)

**Downspout Drain Extensions | How to Avoid Foundation Failure** (Installing Underground Downspouts)

**Pro Tip: How to Fill, Seal & Repair Concrete Cracks Like a Pro | Sakrete Concrete Repair Guide** (Sealing Cracks)

**This Old House, “How to Fix a Concrete Foundation Crack”**, YouTube (Sealing Cracks)

### General Information

**floodsmart.gov** (Federal Emergency Management Agency FEMA)

**reducefloodrisk.org** (Association of State Floodplain Managers)

**epa.gov/climate-change-indicators-river-flooding** (Climate Change Indicators: River Flooding)

**epa.gov/mitigate-flooding** (Mitigate Flooding through Green Infrastructure)

### Funding

**gema.georgia.gov** (Georgia Emergency management and Homeland Security Agency)

**georgiawildlife.com/RainBarrelApp** (Wildlife Resource Division)

### Flood Insurance

**fema.gov/flood-insurance** (FEMA Flood Insurance)

**FEMA Flood Insurance Fact Sheet**

**FEMA Flood Map Service Center**

**Discounted Flood Insurance Premium Rates** (FEMA Community Rating System)



**Many Fulton County residents** reside in either Zone A or Zone AE, indicating a 1% annual risk of flooding during hurricane season. This signifies a substantial likelihood of flooding during your property's lifespan. FEMA mandates flood insurance for residents who live in these zones.<sup>1</sup>

**\*\*For detailed information for your community, check the FEMA Flood Map Service Center** [↗](#)



**For more resources and guidance, please see the Appendix on the last pages of the guide**

<sup>1</sup>Georgia Department of Natural Resources, "Flood Risk Viewer," Georgia DFIRM, accessed June 11, 2025, <https://map.georgiadfirm.com/floodriskviewer/>.

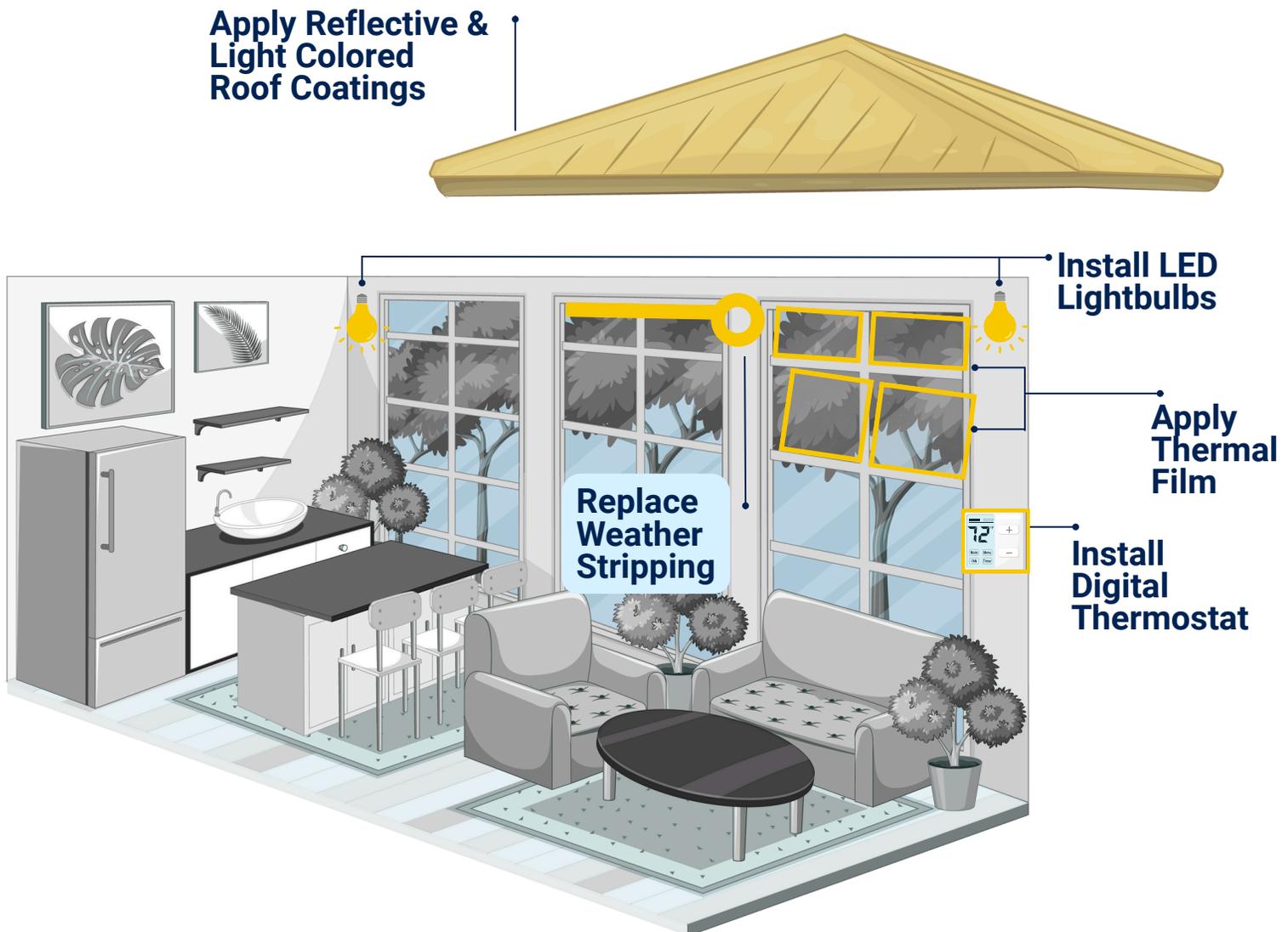
# Extreme Heat

High Risk & Probability<sup>1</sup>  
Warm Season May - Oct

## Extreme Heat Retrofits

### Home Projects To Prepare Your Home For Heat Waves

Heat waves are multi-day periods of unusually high temperatures relative to a location's normal range. Urban areas often get even hotter due to the heat island effect, where pavement and buildings absorb and trap heat more than greener surroundings. The following pages include step-by-step guides for **weathering stripping, installing LED bulbs, adding digital thermostats, using reflective & light-colored roof coatings, and applying thermal film to windows.**<sup>2</sup>



<sup>1</sup>James Dickey and Evie Lee, Fulton County Resilience Study (July 2024).

<sup>2</sup>U.S. Environmental Protection Agency, Disaster-Resilient Design Concepts, accessed June 11, 2025, [https://www.epa.gov/system/files/documents/2023-03/Disaster-ResilientDesignConcepts\\_Feb2023v-6\\_Final.pdf](https://www.epa.gov/system/files/documents/2023-03/Disaster-ResilientDesignConcepts_Feb2023v-6_Final.pdf).

# Extreme Heat

## Project Rating System



	Rating	Skill Level	Average Cost	Time
<i>Window Insulation Film</i>	Low-Medium	basic skill	\$13	1-2 hours
<i>LED Bulbs</i>	Low-Medium	basic skill	\$70 <small>*For 10 LED bulbs</small>	1-2 hours
<i>Weather Stripping</i>	Low-Medium	basic skill	\$55 <small>*Per 100 ft</small>	1-2 hours
<i>Programmable Thermostats</i>	High	advanced skill	\$114	2-3 hours
<i>Reflective Roof Coating</i>	High	very advanced skill	\$570	> 4 hours

# Extreme Heat Retrofits Step-By-Step Guides

## Window Insulation Film LED Bulbs

If you do not feel comfortable with any of the projects described in this section, please hire a contractor.

### Important Notes

Routinely inspect weather stripping, roof coating, thermal film, and thermostat for wear or damage, and ensure all bulbs are LED and functioning.

Window film insulates windows, saving energy and improving comfort.<sup>1</sup>

#### Applying Window Insulation Film

**Tools:** Window Insulation Kit, Scissors, Measuring Tape, Hair Dryer, Cleaning Supplies

1. **Clean the Window** – Clean and dry the window frame to help the tape stick.
2. **Prep the Film** – Measure and cut the film slightly larger than the window.
3. **Add Tape** – Apply double-sided tape around the window, on the window frame.
4. **Attach Film** – Attach the film to the tape, starting from the top corner and smoothing it down.
5. **Shrink the Film** – Use a hair dryer to shrink the film and remove wrinkles. Cut any excess film from around the edges.

LED bulbs produce significantly less heat, are safer, and more energy-efficient.<sup>2</sup>

#### Installing LED Bulbs

**Tools:** LED Bulbs, Step Ladder & Screwdriver (if needed to reach and/or open fixtures)

*\*If you aren't sure what type of bulb, wattage, or color temperature to choose, bring your old bulb to the hardware store and ask someone to assist you.*

1. **Turn Off the Power** – Turn off the light switch, and for added safety, shut off power at the circuit breaker.
2. **Remove the Old Bulb** – Let the old bulb cool, then twist it counterclockwise to remove.
3. **Insert the LED Bulb** – Hold the LED bulb by the base and twist it clockwise into the socket until snug.
4. **Turn the Power Back On** – Turn the power back on and test the light to ensure it works.

<sup>1</sup>Henry Parker, "Easy Upgrade for Home Comfort and Energy Savings," accessed June 20, 2025, <https://todayshomeowner.com/insulation/guides/window-insulation-film/>.

<sup>2</sup>"LED Lighting," Energy Saver, U.S. Department of Energy, accessed December 1, 2025, <https://www.energy.gov/energysaver/led-lighting>.

# Weather Stripping Installing Digital Thermostats

Weather sealing keeps indoor air in and outdoor air out.<sup>1</sup>

## Weather Stripping

**Tools:** Foam Weather Stripping, Measuring Tape, Utility Knife & Scissors, Mild Soap, Towel

1. **Select Windows and Doors** – Select the windows and doors that you believe might be leaking air. There could be a visible gap, or you could feel the air coming in with your hand. These instructions work well for windows and some doors, although sometimes doors are better suited for weather stripping or door sweeps that have metal attachments.
2. **Prepare the Surface** – Clean and dry the surface where you'll apply the weather stripping. Remove any old material or residue first, then wipe with mild soap and water. Make sure the area is completely dry so the new adhesive sticks well.
3. **Measure and Cut** – Measure the gap, cut the foam strip a bit longer for a snug fit, and test it to ensure it seals properly without bunching or coming up short.
4. **Apply the Foam Strip** – Peel a small section of the backing, press the foam in place, and continue peeling and pressing in small sections. Press firmly to ensure it sticks well.
5. **Test the Seal** – Open and close the door or window to check for smooth movement. Press down any loose spots to ensure the foam stays in place.

Programmable thermostats regulate temperature by maintaining a preset range.<sup>2</sup>

## Installing Programmable Thermostats

**Tools:** New Digital Thermostat, Screwdriver, Wire Strippers, Wire Connectors, Voltage Tester, Level, Pencil

1. **Select Thermostat** – Select the programmable thermostat that best suits your needs. Basic models can be as little as \$25 and enable you to program your HVAC system to run at different temperatures depending on the day of the week and the time of day. More sophisticated models allow you to set temperatures remotely from your phone and typically cost at least \$100.
2. **Turn Off the Power** – Turn off the power at the circuit breaker and verify it's off with a voltage tester before handling wires.
3. **Remove the Old Thermostat** – Remove the old thermostat cover, label the wires (e.g., R to R, G to G), then unscrew and detach the thermostat from the wall.
4. **Prepare the New Thermostat** – Match the labeled wires to the corresponding terminals on the new thermostat. (e.g., R to R, G to G).
5. **Connect the Wires** – Strip wire ends if needed, connect each wire to its matching terminal, and secure with wire connectors.
6. **Mount the Thermostat** – Mount the new thermostat to the wall. The exact attachment system varies by brand.
7. **Turn the Power Back On** – Go back to the breaker and turn the power on. Wait a few minutes for the thermostat to start up.
8. **Test It** – Change the temperature setting to see if your heater or AC responds.
9. **Preset the Schedule** – Set the temperature on your thermostat for morning, afternoon, and evening hours. You can save money by setting the temperature lower in the winter and higher in the summer when you know you will not be home or in the middle of the night. Schedule the temperature to be back at its normal setpoint by the time you get home or wake up to ensure that your house is always at a comfortable temperature.

<sup>1</sup>Window Hardware Direct, "The Ultimate Guide to Weather Stripping for Your Home," accessed June 20, 2025, <https://windowhardwaredirect.com/blogs/news/the-ultimate-guide-to-weather-stripping-for-your-home>.

<sup>2</sup>Greenway Kitchen, "Insider Secrets: How to Install Digital Thermostat in House," accessed June 20, 2025, <https://greenwaykitchen.com/how-to-install-digital-thermostat-in-house/>.

Reflective roof coatings reduce heat absorption, thereby reducing heat, saving energy, and protecting your roof.<sup>1</sup>

## Reflective Roof Coating

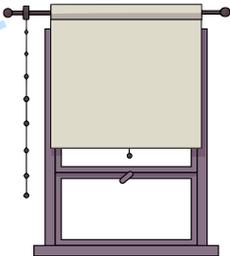
**Tools:** Reflective Roof Coating, Broom or Pressure Washer, Mixing Stick, Paint Roller or Sprayer

- 1. Determine Applicability** – Reflective roof coatings are commonly applied to commercial buildings, since most commercial building roofs are flat and easy to paint. Residential roofs that are steep and/or have shingles may not be the best application for cool roofs. However, there are cool roof coatings that can be applied to certain types of shingles, or you can purchase shingles that are manufactured to reflect more light. Determining if your roof is a good candidate for reflective coating and which coating to use requires advanced knowledge and skills. Consult a roofing contractor unless you are extremely skilled in this area.
- 2. Confirm Your Warranty** – You don't want to accidentally void a roof warranty by applying a material to your roof. Contact your roof manufacturer to check.
- 3. If Doing the Project on Your Own, Prep Your Roof** – Sweep or pressure wash your roof to remove dirt and debris. If you see any cracks, fill them with caulk or patching compound. Let the surface dry completely.
- 4. Mix the Coating** – Use a stick or mechanical mixer to blend the coating evenly.
- 5. Apply the Coating** – Apply the reflective roof coating with a paint roller or sprayer. If using a sprayer, use safety goggles.
- 6. Let it Dry** – Follow manufacturer's instructions for drying time and number of coats to apply.

**HVAC Maintenance:**  
**How to Keep Your HVAC System Working Efficiently**  
(EnergySTAR) [↗](#)

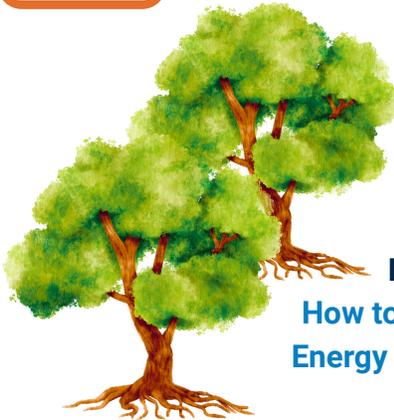


**Window Shades:**  
**Cover Your Windows to Keep Cool in Extreme Heat** (Flash) [↗](#)



**Looking For More Ideas?  
Other Potential Extreme Heat Retrofits Include:**

**Indoor Fans:**  
**Fans for Cooling** (U.S. Dept. of Energy) [↗](#)



**Planting Greenery:**  
**How to Plant Trees to Conserve Energy for Summer Shade** (Arbor Day Foundation) [↗](#)

<sup>1</sup>IMP, "DIY-Friendly Roof Coating to Cool Down Your Home in Summer," accessed June 20, 2025, <https://imp.news/how-to/how-to-use-reflective-roof-coatings-to-keep-your-home-cool-and-save-energy-47872/>.

# Additional Resources

## Extreme Heat

### Retrofit Projects

Window Hardware Direct, “The Ultimate Guide to Weather Stripping for Your Home (Weather Stripping)

BDF BuyDecorativeFilm, “Self Adhesive Window Film Installation Guide by BDF BuyDecorativeFilm”, YouTube (Thermal Film)

### Retrofitting Resources

[gefa.georgia.gov/weatherization-assistance-program](https://gefa.georgia.gov/weatherization-assistance-program) (Weatherization Assistance Program)

[georgiapower.com/rebates-and-discounts](https://georgiapower.com/rebates-and-discounts) (Rebates and Incentives)

[georgiapower.com/ease](https://georgiapower.com/ease) (EASE Energy Assistance for Savings & Efficiency)

[energyrebates.georgia.gov](https://energyrebates.georgia.gov) (Georgia’s HER & HEAR Program)

[georgiapower.com/home-energy-improvementprogram](https://georgiapower.com/home-energy-improvementprogram) (Home Energy Improvement Program)

### Educational, Safety, & Awareness Resources

[heat.gov](https://heat.gov) (National Heat Health Information System)

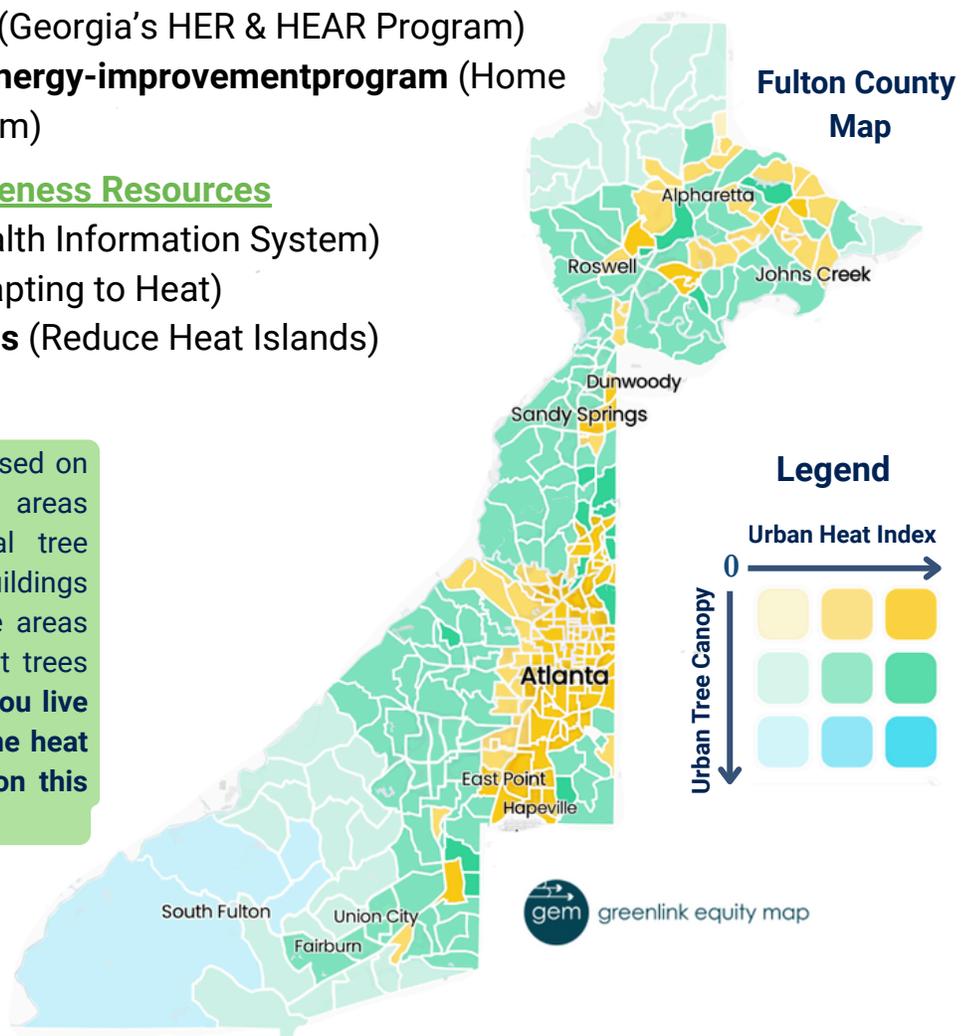
[epa.gov/adapting-heat](https://epa.gov/adapting-heat) (Adapting to Heat)

[epa.gov/reduce-heat-islands](https://epa.gov/reduce-heat-islands) (Reduce Heat Islands)

The map colors Fulton County based on heat and trees. Dark yellow areas indicate high heat and minimal tree canopy, where pavement and buildings absorb and trap heat.<sup>2</sup> Light blue areas show cooler zones with abundant trees that help lower temperatures. **If you live in a yellow zone, consider extreme heat retrofits and use the resources on this page to stay safe and cool.**

!!! **Extreme Heat Outdoor Tips**

- **Limit sun exposure:** Wear light clothes, sunscreen, a hat, and take shady breaks.
- **Hose Down:** Cool down with wet clothes, cool showers, or soaking hands and feet at pulse points.
- **Stay Hydrated:** Drink water or sports drinks and avoid caffeine to prevent dehydration and heat exhaustion.<sup>1</sup>



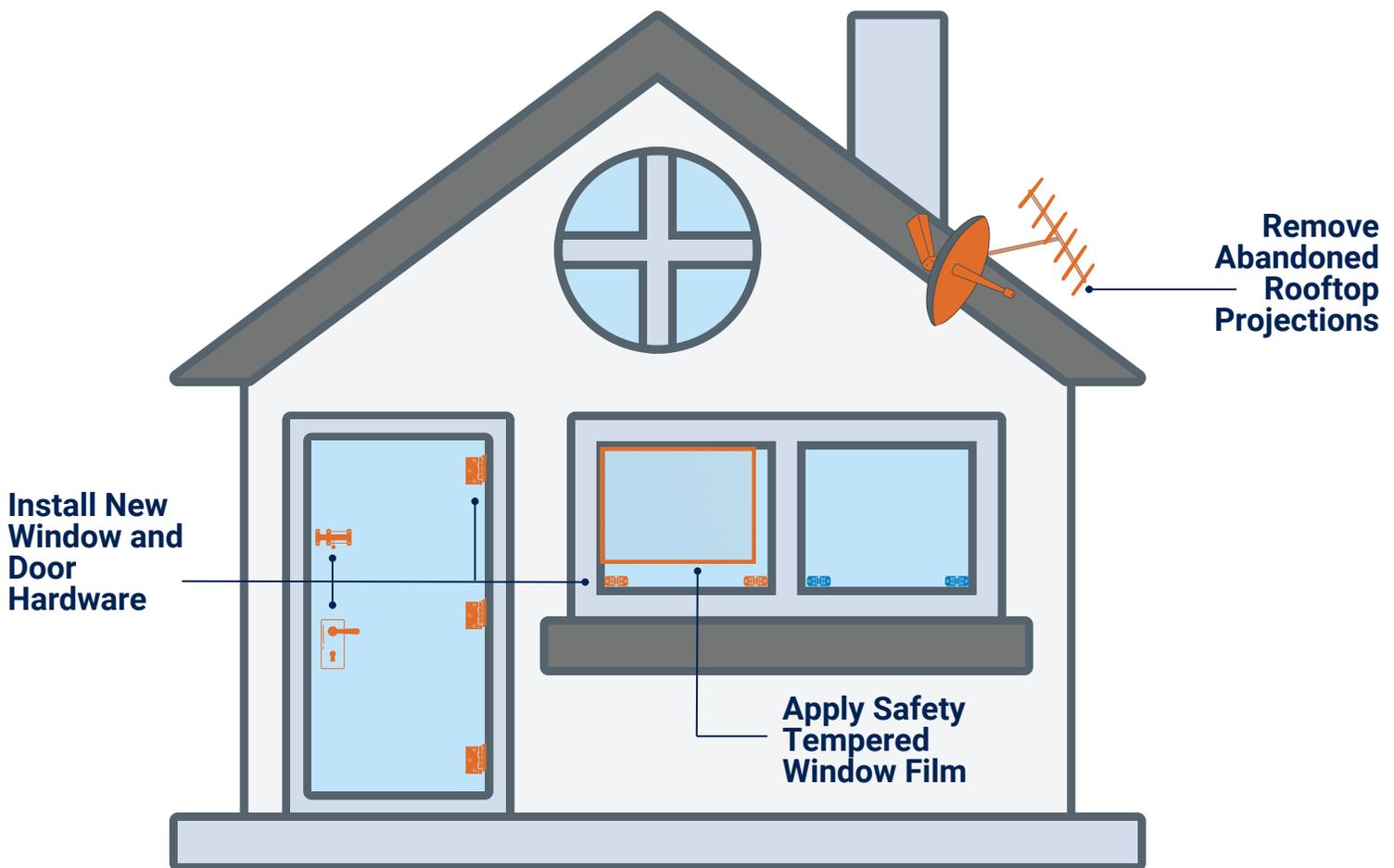
<sup>1</sup>British Red Cross, "Staying cool in summer: Top tips to keep cool in hot weather," accessed July 22, 2025, <https://www.redcross.org.uk/stories/health-and-social-care/first-aid/beat-the-hot-weather-top-tips-for-staying-cool>.

<sup>2</sup>Greenlink Analytics, "Fulton County Urban Heat Index and Urban Tree Canopy", accessed June 4, 2025, <https://www.greenlinkanalytics.org/>.

### Extreme Storm Retrofits

#### Home Projects To Prepare Your Home For Heavy Rain and Wind

Severe storms like thunderstorms and hurricanes bring damaging winds, debris, and heavy rain that can impact buildings and down trees or power lines. While their intensity varies, all pose similar threats to homes and infrastructure. The following section includes step-by-step guides for **installing new window and door hardware, applying tempered safety window films, and removing abandoned rooftop projections.**<sup>1</sup>



<sup>1</sup>Preservation Society of Charleston, Resilience Guidance for Charleston, accessed May 15, 2025, <https://www.preservationsociety.org/wp-content/uploads/2024/07/GuidanceFullReduced.pdf>.

# Wind Thunderstorms & Hurricanes

## Project Rating System

	Difficulty	Skill Level	Average Cost	Time
<i>Safety Window Film</i>	Low	Basic skills	\$94	1-2 hours
<i>Window Latches</i>	Medium	Basic tools	\$6	1-2 hours
<i>Replacing Door Hinges</i>	Low-Medium	Basic skills	\$25	1-2 hours
<i>Satellite Dish Removal</i>	Medium-High	Specialized Tools	\$42	2-3 hours

# Wind, Thunderstorm & Hurricane Retrofits Step-By-Step Guides

## Applying Safety Window Film

If you do not feel comfortable with any of the projects described in this section, please hire a contractor.

### Important Notes

Before a storm, remove yard debris (leaves, trash, scattered objects), trim tree branches, stabilize fences, close storm shutters, and store outdoor items and propane tanks inside.

Safety window film absorbs impact from flying debris and holds shattered glass together, minimizing property damage.<sup>1</sup>

### Applying Safety Window Film

**Tools:** Tape Measure, Spray Bottle, Soap, Squeegee, Paper towels, Razor Blade, Masking tape

1. **Mix the Soapy Solution** – Mix 16 oz of water with 6-10 drops of liquid soap in a spray bottle.
2. **Clean the Window** – Spray the indoor glass with the solution, wipe clean with a lint-free towel. Scrape off dirt and grease, and clean edges and gaskets.
3. **Cut the Film** – Measure your window, then cut the film 2 inches larger in both width and height.
4. **Remove the Backing** – Put masking tape on the bottom and top sides of one corner of the window film. Pull the pieces of tape apart to separate the film from the backing. Spray the sticky side of the film with soapy water as you peel.
5. **Apply the Film** – Spray the window well with the soapy water. The key to a tight fit is making the window completely wet first. Place the wet film on the window, starting at the top, and slide it into position.
6. **Squeegee into Place** – Lightly spray the top of the film with the soapy water, then use a squeegee to press it down. Start across the top and middle to form a "T," then push from the center outward to remove bubbles.
7. **Trim the Edges** – Using a sharp knife and squeegee edge as a guide, trim the excess film around the edges.
8. **Final Squeegee & Drying** – Wrap the squeegee in a paper towel and repeat step 6. Small bubbles should fade as the film dries.
9. **Let it Cure** – Wait 72 hours before cleaning the film.

<sup>1</sup>BDF, "Safety Window Film Installation Guide," accessed July 5, 2025, <https://buydecorativefilm.com/pages/installation-2?srsltid=AfmBOorm2fGmYlJQUkT6Qwjea6jttoUs79vuYEAvoI4PabXH353xvv0t>.

# Replacing Window Latches Replacing Door Hinges

Attaching sturdy window latches protects from wind and water storm damage.<sup>1</sup>

## Replacing Window Latches

**Tools:** Screwdriver, New Window Latches

1. **Identify Latch Type** – Identify your latch type so you can replace it with the same version.
2. **Remove Old Latch** – Remove the old latch with a screwdriver. Wipe the surface clean.
3. **Check New Latch** – Check that the new latch fits exactly where the old latch was, and that the holes align. If the holes do not align, you may need to drill new holes.
4. **Install New Latch** – Install the new latch with a screwdriver.
5. **Test New Latch** – Test the new latch to make sure that it locks and unlocks. In the unlocked position, make sure the window can open and close to ensure it is operating properly.

Replacing old hinges keeps doors secure in storms.<sup>2</sup>

## Replacing Door Hinges

**Tools:** Door Hinges, Screwdriver (Electric Screwdriver - optional)

1. **Choose the Right Hinges** – Pick the correct type, size, corner style, and finish for your door. You can bring one of your existing hinges to the hardware store to ensure you get an exact copy. Ensure that the holes are in the correct position.
2. **Remove Old Hinges** – Prop up the door with a door stop or other material so that the door doesn't lean to the side while you are replacing a hinge. Remove and replace the hinges one at a time so that you can leave the door in place. Use your screwdriver or electric screwdriver to remove all of the screws on one hinge. Remove the hinge.
3. **Install New Hinges** – Place the new hinge where the old one was. Ensure it lays flush on the door or door frame. Check that the new screws are the same size or larger than the existing screws for a tight fit. Screw in the new hinges one at a time. Repeat for each hinge.
4. **Check Your Work** – Open and close the door a few times to ensure it is operating properly.

<sup>1</sup>Homeowner Repair, "How To Replace The Sash Lock on a Window," YouTube video, Posted Feb 24, 2016, tutorial video, 3:55, <https://www.youtube.com/watch?v=hSOVX0unvk0>.

<sup>2</sup>SchlageLocks, "How to Replace and Upgrade Your Door Hinges," YouTube video, Posted Dec 2, 2016, tutorial video, 3:52, <https://www.youtube.com/watch?v=vdCIHAczgTk>.

## Removing old roof projections prevents storm debris and roof damage.<sup>1</sup>

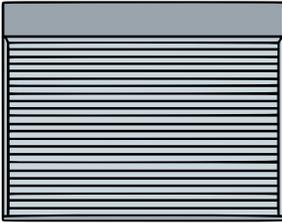
### Satellite Dish Removal

**Tools:** Ladder, Wire Cutters, Socket Wrench, Putty Knife, Utility Knife, Rope, Roofing Sealant, Towel

1. **Prepare & Stay Safe** – Choose a clear and dry day. Set a stable ladder and have a helper for safety. Inspect the roof area to ensure it is safe to work on. Clear a safe path from the ladder to the dish or other roof projection. If you have a steep roof or feel uncomfortable with heights, it is best to hire a professional.
2. **Disconnect Power & Cables** – Before starting any work, unplug the satellite receiver and make sure the power is disconnected. Then, use wire cutters to disconnect the remaining cables. If you plan to reinstall the dish later, label the cables. Coil and secure loose cables.
3. **Remove the Dish Assembly** – Remove the dish from the mounting bracket. Loosen the bolts while supporting the dish, then carefully detach it. Slowly lower the dish to the ground with a rope.
4. **Remove the Mount & Footplate** – Carefully remove the mounting bolts. If the bolts are stuck, you can use oil or cut the bracket. If the footplate is difficult to remove, consider leaving it in place.
5. **Seal the Holes** – Clean any holes and the surrounding roof area. Generously apply roofing sealant to each hole so that the sealant creates a small dome at the top of the hole. Add a second coat for extra protection.

<sup>1</sup>McClellands, "How To Remove A Satellite Dish From The Roof Safely," accessed July 5, 2025, <https://mcclellandsroofing.com/blogs/remove-satellite-dish-from-roof/>.

**Installing Hurricane Shutters:**  
**Step-by-Step Guide to Installing Hurricane Shutters** (Hurricane Shutter Co.) [↗](#)



**Tree Pruning:**  
**How to Make Trees Storm Resistant** (Tree City USA) [↗](#)



**Looking For More Ideas?**  
**Other Potential Storm Retrofits Include:**

**Replace Gravel with Mulch:**  
**How to Prepare Your Yard for High Winds: Trees and Landscaping** (Flash) [↗](#)



**Secure Outdoor Items:**  
**Protect Your Home from Severe Weather** (National Association of Home Builders) [↗](#)



# Additional Resources

## Wind, Thunderstorms, and Hurricanes

### Retrofitting Resources

**[rd.usda.gov/single-family-housing-repair-loans-grants-17](https://rd.usda.gov/single-family-housing-repair-loans-grants-17)**

(U.S. Department of Agriculture Rural Development)

**[thespruce.com/home-updates-for-extreme-weather](https://thespruce.com/home-updates-for-extreme-weather)**

(19 Home Updates You Need to Make Before Extreme Weather Hits)

### Educational, Safety, & Awareness Resources

**[gema.georgia.gov/hurricane-evacuation-zone](https://gema.georgia.gov/hurricane-evacuation-zone)** (Hurricane Evacuation Zone)

**[gema.georgia.gov/hurricanes](https://gema.georgia.gov/hurricanes)** (Hurricanes)

**[firststreet.org](https://firststreet.org)** (Property Climate Risk)

**[epa.gov/social-vulnerability-report](https://epa.gov/social-vulnerability-report)** (Climate Change and Social Vulnerability)

### Emergency Preparedness

**[fema.gov](https://fema.gov)** (Federal Emergency Management Agency)

**[ready.gov/hurricanes](https://ready.gov/hurricanes)** (Hurricane Preparedness)

**[nhc.noaa.gov](https://nhc.noaa.gov)** (NOAA National Hurricane Center)

**[fema.gov/wireless-emergency-alerts](https://fema.gov/wireless-emergency-alerts)** (Wireless Emergency Alerts (WEA))

Loan Programs serve best for large expensive projects such as connecting a backup generator, insulating your home, or repairing your roof.

!! Contact your insurance provider before ordering replacement windows or doors to check for potential premium reductions.

**Appendix A:**  
**Flood Section**  
**Retrofit Projects Additional Information**



# Project Costs

# Flood Section

## Sandbag Flood Barriers

Funnel (\$4), Sand (\$150), Sandbags (\$33)

**\$187**

## Extending Downspouts

Downspout Extension (\$11)

**\$11**

## Rain Barrels

Pre-Made Rain Barrel (\$95), Hacksaw (\$17), Flexible Gutter Elbow (\$7), Hose (\$17), Bricks/Rain Barrel Stand (\$56)

**\$192**

## Cleaning Gutters

Garden Gloves, 5-Gallon Bucket, Step Ladder, Water Hose, Water Hose Nozzle, Shop Towel

**\$0**

## Sealing Minor Cracks

Tape Measure, Nitrile Gloves (\$8), Caulk Gun (\$16), Concrete Repair Filler & Seal (\$8)

**\$32**

**Total Retrofit Costs: \$422**

\*Costs are averages from HomeDepot.com. Items with zero cost indicate an assumption that most homes already have these items.

## Potential Flood Damage Costs

	Lower End	Higher End	Average
Repairing Structural Damage <sup>1</sup>	\$1,000	\$5,000	\$3,000
Water Extraction/Drying <sup>1</sup>	\$2,000	\$10,000	\$6,000
Mold Remediation <sup>1</sup>	\$500	\$6,000	\$3,250
Electrical/Plumbing Repairs <sup>1</sup>	\$2,000	\$5,000	\$3,500
Replacing Personal Property <sup>1</sup>	\$10,000	\$30,000	\$20,000
			<b>\$35,750</b>

## Potential Savings

If a homeowner were to experience all of these damages from a flood, they could have to pay over \$35,000 for repairs. Spending just \$400 on flood mitigation upfront will help to reduce or even eliminate these repair costs.

**Appendix B:**  
**Extreme Heat Section**  
**Retrofit Projects Additional Information**



# Project Costs

## Extreme Heat Section

### Window Insulation Film

Window Insulation Film (\$13)

\$13

### LED Bulbs

LED Bulbs (\$70), Step Ladder & Screwdriver (if needed)

\$70

\*The estimated average is for 10 LED Bulbs

### Weather Stripping

Measuring Tape, Weather Stripping - 10ft/Bag, 10 Bags (\$55), Utility Scissors, Mild Soap, Shop Towel

\$55

\*The estimated average assumes 10 bags of 10 ft. strips

### Programmable Thermostats

Digital Thermostat (\$78), Screwdriver, Wire Strippers (\$21), Wire Connectors (\$6), Voltage Tester (\$10)

\$115

### Reflective Roof Coating

Reflective Roof Coatings (\$130), Airless Sprayer (\$425), Mixing Stick (\$3), Gloves, Safety Glasses (\$13), Ladder

\$571

**Total Retrofit Costs: \$824**

\*Costs are averages from HomeDepot.com. Items with zero cost indicate an assumption that most homes already have these items.

## Energy Cost Savings

	Average (Annual)
LED Lightbulbs <sup>3</sup>	\$52
Reflective Roof Coating <sup>4</sup>	\$58
Digital Thermostats <sup>5</sup>	\$50
Window Insulation Film <sup>6</sup>	\$57
Weather Stripping <sup>6</sup>	\$57
<b>Total Average: \$274</b>	

## Potential Savings

If a homeowner were to do all of these improvements, they could save over \$270 on their energy bills each year. With an average home energy cost of \$2,067 in Georgia, that equals 13% in savings.<sup>2</sup>

**Appendix C:**

**Wind, Thunderstorms, & Hurricanes Section  
Retrofit Projects Additional Information**



# Project Costs

## Winds Thunderstorms & Hurricanes

### Safety Window Film

Tape Measure, Spray Bottle, Liquid Soap, Squeegee (\$5), Paper Towels, Sharp Knife, Masking Tape, Window Film (\$90)

**\$95**

### Replacing Door Hinges

3 Door Hinges (\$25), Screwdriver, Electric Screwdriver

**\$25**

### Window Latches

Window Latch (\$6), Screwdriver

**\$6**

### Satellite Dish Removal

Ladder, Wire Cutters, Socket Wrench, Putty Knife (\$7), Utility Knife, Rope (\$18), Roofing Sealant (\$18), Shop Towel

**\$43**

**Total Retrofit Costs: \$169**

\*Costs are averages from HomeDepot.com. Items with zero cost indicate an assumption that most homes already have these items.

## Potential Storm Damage Costs

	Lower End	Higher End	Average
Window Repair/ Replacement <sup>6</sup>	\$250	\$3,500	\$1,875
Roof Repair <sup>6</sup>	\$1,200	\$8,000	\$4,600
Siding Repair <sup>6</sup>	\$600	\$5,500	\$3,050
Gutter Repair/Replacement <sup>6</sup>	\$200	\$2,000	\$1,100
			<b>Total Average: \$10,625</b>

## Potential Savings

If a homeowner were to experience all of these damages from a storm with high winds, they could have to pay over \$10,000 for repairs. Spending less than \$200 on storm preparation upfront can help to reduce or even eliminate some of these repair costs.

# Weather Resilience Supporting Resources

## Home Improvement Aid

**Weatherization Assistance Program** *Financing Energy Efficiency*

<https://gefa.georgia.gov/weatherization-assistance-program>

**Georgia Power Home Energy Improvement Program** *Energy Efficiency Rebates*

<https://www.georgiapower.com/residential/save-money-and-energy/products-programs/home-energy-efficiency-programs/home-energy-improvementprogram>

**Georgia's Home Energy Rebates** *FAQs*

<https://energyrebates.georgia.gov/faqs>

## Disaster Relief

**Georgia Department of Community Affairs** *Disaster Relief*

<https://dca.georgia.gov/financing-tools/disaster-relief>

**Supplemental Disaster Relief Program (SDRP)** *Farmer Disaster Relief*

<https://www.fsa.usda.gov/supplemental-disaster-relief-program-sdrp>

**Individuals and Households Program**

*Financial Services*

<https://www.fema.gov/assistance/individual/program>

**FEMA Transitional Sheltering Assistance** *Disaster Aid*

<https://www.femaemergencyhotels.com/>

**Atlanta-Fulton County Emergency**

**Management Agency** *Disaster Assistance*

<https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/atlanta-fulton-emergency-management-agency/disaster-assistance>

<https://www.fultoncountyga.gov/inside-fulton-county/fulton-county-departments/atlanta-fulton-emergency-management-agency/disaster-assistance>

**Disaster Assistance.gov** *Disaster Assistance*

<https://www.disasterassistance.gov/>

## Programs & Grants

**The Individuals and Households Program** *Housing Assistance for Damaged Homes*

<https://gema.georgia.gov/assistance/individual-assistance>

**Georgia Homeowner Rehabilitation and Reconstruction Program** *Funding for Home Reconstruction*

<https://www.georgiahrrp.com/>

**Georgia Dream Homeownership Program** *Financing Homes*

<https://georgia.gov/apply-georgia-dream-homeownership-program>

**Community HOME Investment Program (CHIP)** *Affordable Housing*

<https://dca.georgia.gov/community-home>

**Community Development Block Grants (CDBG)** *Economically Empowered Neighborhoods*

<https://dca.georgia.gov/community-development-block-grants-cdbg>

## Appendix Endnotes

<sup>1</sup>Dam Easy Flood Barriers. “The True Cost of Flood. Breaking Some Numbers.” Dam Easy Flood Barriers blog, September 10, 2024. <https://dameasyfloodbarriers.com/a/blog/the-true-cost-of-flood>.

<sup>2</sup>U.S. Energy Information Administration, Household Energy Use in Georgia: 2009 Residential Energy Consumption Survey State Brief (PDF), U.S. Department of Energy, Residential Energy Consumption Survey, [https://www.eia.gov/consumption/residential/reports/2009/state\\_briefs/pdf/ga.pdf](https://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/ga.pdf).

<sup>3</sup>U.S. Department of Energy. 2012 Residential Lighting Study. PDF. [https://www1.eere.energy.gov/buildings/publications/pdfs/ssl/2012\\_residential-lighting-study.pdf](https://www1.eere.energy.gov/buildings/publications/pdfs/ssl/2012_residential-lighting-study.pdf).

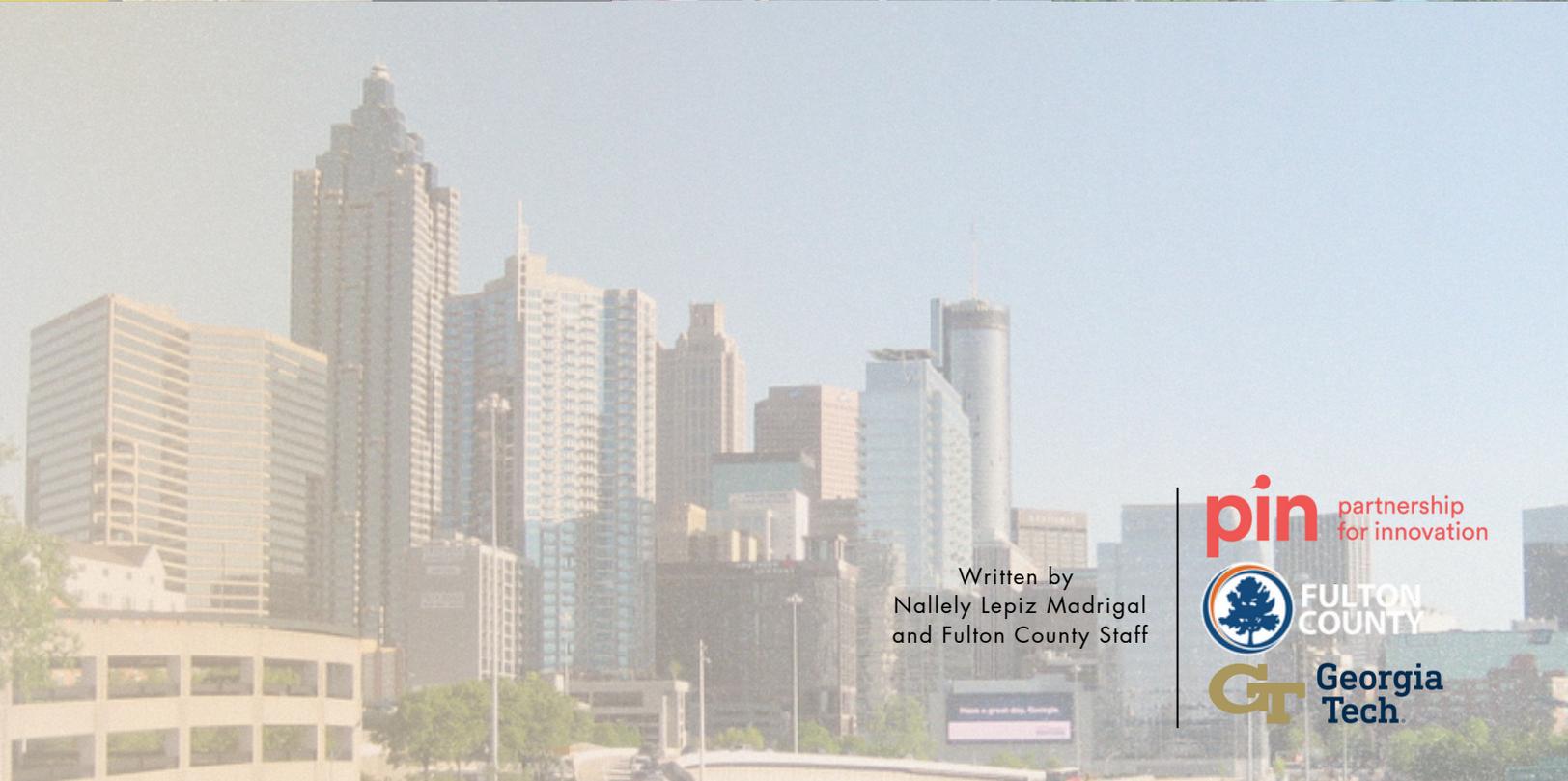
<sup>4</sup>O'Malley, Sharon. “6 Tips for Selecting an Energy-Saving Cool Roof.” Architect Magazine, December 15, 2010. [https://www.architectmagazine.com/technology/products/6-tips-for-selecting-an-energy-saving-cool-roof\\_o](https://www.architectmagazine.com/technology/products/6-tips-for-selecting-an-energy-saving-cool-roof_o).

<sup>5</sup>ENERGY STAR. “Smart Thermostat FAQs for EEPS.” Smart Thermostat information page. [https://www.energystar.gov/products/heating\\_cooling/smart\\_thermostats/smart\\_thermostat\\_faq](https://www.energystar.gov/products/heating_cooling/smart_thermostats/smart_thermostat_faq).

<sup>6</sup>ENERGY STAR. “Estimating Energy Savings from Sealing and Insulating – Methodology.” Save at Home guide. [https://www.energystar.gov/saveathome/seal\\_insulate/methodology](https://www.energystar.gov/saveathome/seal_insulate/methodology).

<sup>7</sup>Angi. “How Much Does Repairing Storm or Wind Damage Cost?” Angi article. <https://www.angi.com/articles/how-much-does-repairing-storm-or-wind-damage-cost.htm>.





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