

LEWISBURG'S FLOOD RESILIENT COMMUNITY TOOLBOX GUIDE

PURPOSE

This toolbox guide was developed to assist Lewisburg property owners and residents in becoming resilient to flooding events. It will help to:

- Understand your risk to flooding events
- Learn how to prepare your property, family, and community for flooding
- Determine what you should do following a flood event

Additional materials are available in Appendix B of the Lewisburg Flood Mitigation Study and through the resources provided in Section 5 of this Flood Resilient Community Toolbox Guide.



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1. KNOW YOUR RISK

Flooding impacts in Lewisburg take different forms depending on where a property is located and the source of the floodwaters.

Sources or types of flooding that impact Lewisburg include:



Riverine Flooding: occurs from local streams and rivers overtopping their banks during or after short, intense rainfall events or long periods of wet weather (like tropical storms or hurricane remnants). Lewisburg sees both of these types of events, as summarized in Section 1 of the Flood Mitigation Study.



Overland or Street Runoff (Pluvial) Flooding: occurs when excessive water runs over the land surface (ground and streets). In areas that are close to streams or rivers this flooding could occur due the inability of storm sewers to drain due to highwater. Lewisburg also has areas that lack storm sewers, which can contribute to this type of flooding.

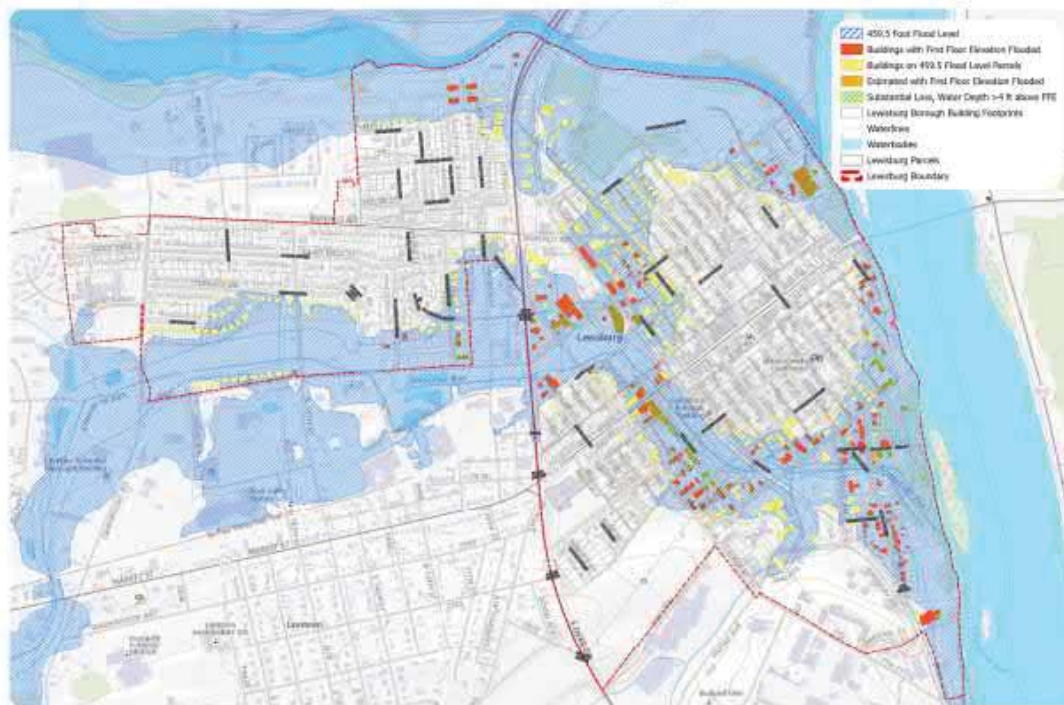


Groundwater Flooding: when the ground and subsurface becomes saturated groundwater can enter homes and buildings through the floors and walls in basements.

The most significant risk in the Borough is from Riverine flooding, both in the wide area it affects and the potential impacts it can cause. The Flood Risk Handout figure on page 3 is an example handout identifying the areas impacted by base flood event (100-year event).

FLOOD RISK

The Federal Emergency Management Agency (FEMA) develops and manages floodplain maps that help you determine what flood zone your home or business is in, and your corresponding risk level. This map also identifies if your property's first floor or basement / property would flood during base flood elevation flooding event.



IF YOUR HOME'S RISK IS ELEVATED FOR FLOODING YOU SHOULD TAKE ACTION!

Actions to consider based on your flood risk: red & orange = first floor, yellow = basement/property

PREPARE THE INSIDE OF YOUR HOME OR BUSINESS

-  PREPARE A LIST OF BELONGINGS
-  GET FLOOD INSURANCE
-  STORE VALUABLES
-  ELEVATE UTILITIES
-  FLOODPROOF BASEMENTS
-  INSTALL FLOOD VENTS
-  USE FLOOD RESISTANT INSULATION & DRYWALL
-  REPLACE CARPETING WITH TILES

PREPARE THE OUTSIDE OF YOUR HOME OR BUSINESS

-  ELEVATE YOUR HOME
-  SECURE YARD ITEMS
-  SEAL CRACKS AND GAPS
-  DIRECT WATER AWAY FROM STRUCTURES
-  ANCHOR FUEL TANKS
-  FLOODPROOF WALLS

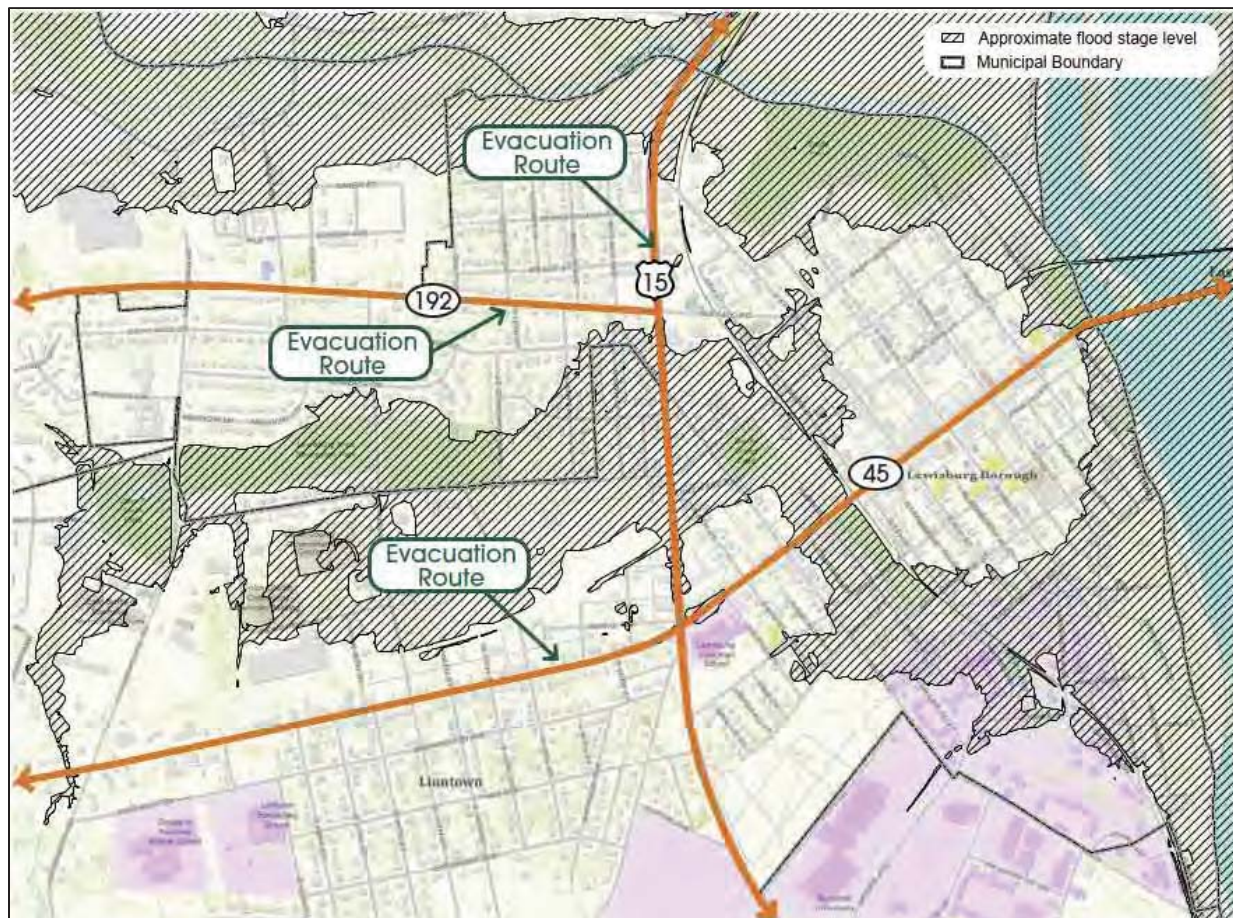
2. BECOMING A FLOOD RESILIENT COMMUNITY BEFORE, DURING, AND AFTER

All Lewisburg residents should be ready for flooding events as the impacts are Borough-wide and affect everyone's daily routines. Part of Becoming a Flood Resilient Community is knowing what to do before, during, and after a flood event.

Before a Flood

For additional information review – Preparation resources available on page 10 of this Guide and Appendix B of the Lewisburg Flood Mitigation Study.

Step 1: Understand Your Risk by reviewing and understanding flood maps to determine what flood zone you are in and what flood zone designation signifies, as well as understanding safe pathways and evacuation routes around known flooding problem areas.



Step 2: Prepare the Inside of Your House



HAVE A PLAN FOR YOUR LOVED ONES & PETS



REPLACE CARPETING WITH TILES



GET FLOOD INSURANCE



INSTALL BASEMENT DRAINAGE SYSTEM



STORE VALUABLES



INSTALL FLOOD VENTS ON BASEMENTS, SHEDS & GARAGES



ELEVATE UTILITIES



USE FLOOD PROOF INSULATION & WALL SYSTEMS

Step 3: Prepare the Outside of Your House



CONSIDER ELEVATING YOUR HOME



DIRECT WATER AWAY FROM STRUCTURE CLEAN GUTTER & DOWNSPOUT PIPING



SECURE ALL YARD ITEMS



ANCHOR FUEL TANKS



SEAL CRACKS AND GAPS



FLOODPROOF WALLS

Sign up for CodeRED Emergency Notifications from Lewisburg Borough – Many Lewisburg Evacuation Routes become flooded, therefore getting out early is critical.



Borough of Lewisburg
Emergency Notification
Sign-up at www.Lewisburgborough.org
Or Text “[LewisburgPA](https://www.louisiana.gov/)” to 99411
Or for assistance call 570-523-3614 x314

During a Flood



Take Protective Measures



Evacuate if Directed To



Stay Out of And Away from
the Water



Seek Higher Ground if Trapped
in a Building



Stay Connected to Emergency
Broadcasts

After a Flood

For additional information review -
Recovery resources available on page 12 of this
Guide and Appendix B of the Lewisburg Flood
Mitigation Study.

Pay Attention to Lewisburg, County, State and Federal Authorities

Take Personal Protective Measures when Dealing with Flood Damaged Materials

Be Aware of the Risk of Electrocutation – Do Not Touch Equipment While Standing in Water

Stay Out of the Water – Avoid Wading and Driving Through Floodwaters

Assess and Document Damage, Contact Insurance Providers, and Track Costs

Review and follow the County and Borough Debris Removal Procedures



3. LEWISBURG'S FLOOD RESILIENT STRATEGY

The Borough was devastated 50 years ago by the Hurricane Agnes flood and since that time it has made significant strides in improvements to the community's flood resiliency. Projects have included removal of flood prone properties in the floodplain, reconnection of floodplains and open spaces, widening bridges and culverts, and restricting development in the floodplain.

The 'Flood Mitigation Study' and the 'Becoming Flood Resilient' resources were a recommendation of the Borough's Early Intervention Plan adopted in 2019 to limit the Borough's exposure to a significant flooding event. The goals of the study included:

1. Identifying Borough-wide impacts based on severity of flooding
2. Developing flood mitigation tools for preparedness and recovery
3. Step toward becoming a Flood Resilient Community
4. Planning and developing concepts for a demonstration Green Infrastructure Project within the Borough

Findings of the Study will guide the Borough's future Flood Resilient Strategy: to implement a set of prioritized initiatives while allocating resources to improve upon the community's flood resiliency. Preliminary initiatives of the strategy include:

- Updating Ordinances to improve flood resiliency.
- Further evaluations of flood mitigation projects in Limestone/Bull Run Watershed.
- Coordinate with Borough residents and business owners to develop flood prep/recovery plans.
- Continue flooding resiliency education and engagement through expanded methods.
- Identify external and/or dedicate Borough financial resources to flood mitigation efforts.
- Utilize, maintain, and update Borough flood preparation tools.

4. LEWISBURG'S FLOODPLAIN

Flooding occurs when rivers and creeks overflow their banks and submerge land that is normally dry. Flooding in Lewisburg occurs when excessive rain or snowmelt runoff overwhelms rivers and creeks and water overflows the banks and into adjacent land and areas known as the floodplains.

Lewisburg's Floodplain – The Federal Emergency Management Agency (FEMA) has defined the Special Flood Hazard Areas (SFHA) in Lewisburg that are adjacent to the West Branch Susquehanna River, Buffalo Creek, and Limestone/Bull Run. There are various definitions for these areas as defined by FEMA.

Special Flood Hazard Areas

Floodway: The channel of a river or stream and the parts of the floodplain adjoining the channel that are reasonably required to efficiently carry and discharge the floodwater or flood flow of a river or stream.

Zone AE: These are high-potential Special Flood Hazard Areas (SFHA) for One-Percent Floods that are subject to rising waters and are usually near a body of water. FEMA has determined the Base Flood Elevation for these zones and they are included on Flood Insurance Rate Maps. <https://www.floodsmart.gov/all-about-flood-maps>

Zone A: These are high-potential Special Flood Hazard Areas (SFHA) for One-Percent Floods that are subject to rising waters and are usually near a body of water. There are no base flood elevations or depths available within these zones.

Zone X Shaded: Has a moderate flood risk and is traditionally called the 500-year floodplain, meaning the area has a 0.02 percent chance of such a flood happening each year.

Flood Maps

To identify a community's flood risk, FEMA conducts a Flood Insurance Study. The study includes statistical data for river flow, hydrologic and hydraulic analyses, rainfall and topographic surveys. FEMA uses this data to create the flood hazard maps that outline a community's different flood risk areas.



To create a FEMA map (firmette) for your property: <http://msc.fema.gov/portal>

Floodsmart.gov FAQs: <https://www.floodsmart.gov>

Lewisburg Borough Flood Information: <https://www.lewisburgborough.org/zoning/flood-information/>

5. MORE INFORMATION


Lewisburg has prepared this toolbox for residents and business owners to become aware of the resources available to become a more flood resilient community. Everyone should be aware that the Borough is susceptible to flooding throughout the year and in any location. This section provides some additional information to become more resilient to flooding conditions.

Build Responsibly

- Make sure you get a permit from the CK-COG before you build:
<https://www.ckcog.com>
- Use contractors who are familiar with the regulations regarding building in flood-prone areas.
- Reference current Borough Permits, Codes, and Zoning requirements:
<https://www.lewisburgborough.org/zoning/permits-codes-zoning/>

Flooding, Erosion or Drainage Concerns?

- On-site visits and technical assistance are provided to residents who are experiencing problems in areas of flooding and drainage, or for those who want recommendations on how to retrofit an existing property.
- Funding or other financial assistance may be available for elevation and other mitigation activities for flooded properties.
- Direct inquires to the Lewisburg Borough Zoning Officer.

 Lewisburg Borough

A zoning permit is required in Lewisburg Borough.

Forms:

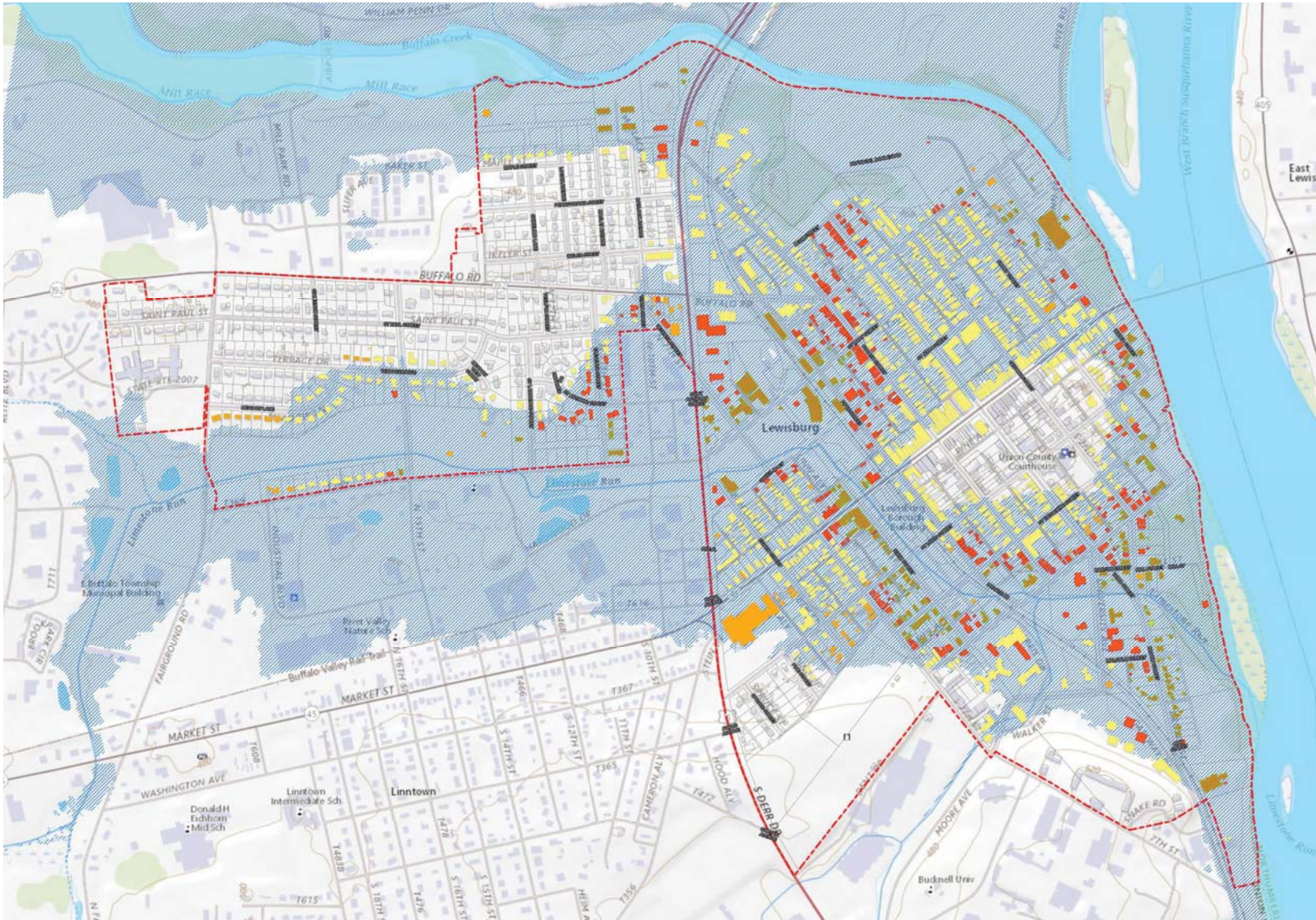
- **Zoning Permit Application**
- **Zoning Site Map Preparation**
- **Lewisburg HARB Application**
- **Lewisburg HARB Handout**
- **PA Act 90 Disclosure Form (required for ALL Lewisburg Permit applications)**

For more information about zoning contact:

Central Keystone COG
1610 Industrial Boulevard,
Suite 400A,
Lewisburg, PA 17837

Toll Free: (877) 457-9401
Fax: (570) 522-1327
permits@ckcog.com

KNOW YOUR FLOOD RISK: DO YOU KNOW IF YOUR HOME OR PROPERTY FLOODS? BOROUGH OF LEWISBURG



DO YOU KNOW YOUR RISK?

PLEASE USE A STICKER TO IDENTIFY YOUR HOME OR BUSINESS.

Does your first floor potentially flood in the base flood (100 year) event?

Red building (■) = yes

Orange building (■) = yes

...If not, does your basement or property potentially flood in the base flood (100 year) event?

Yellow building (■) = yes

Please review the information on the handout based on your potential flood risk and homes' characteristics.



Legend

- 459.5 Foot Flood Level
- Buildings with First Floor Elevation Flooded
- Buildings on 459.5 Flood Level Parcels
- Estimated with First Floor Elevation Flooded
- Substantial Loss, Water Depth >4 ft above FFE
- Lewisburg Borough Building Footprints
- Waterlines
- Waterbodies
- Lewisburg Parcels
- Lewisburg Boundary

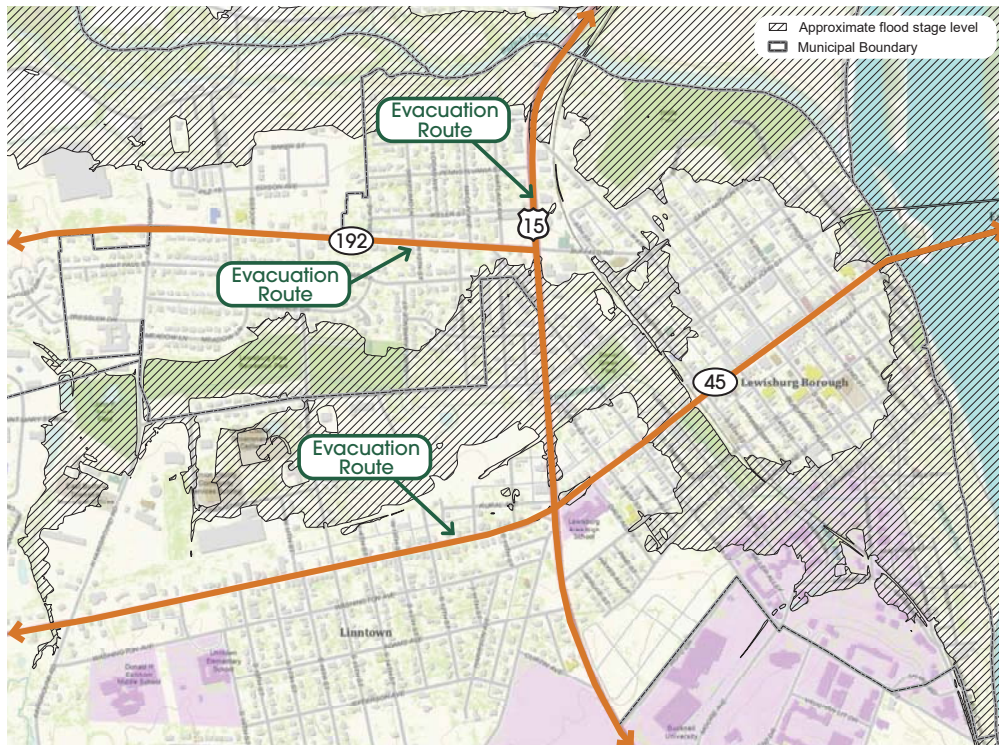
BECOMING A RESILIENT COMMUNITY - BEFORE

BOROUGH OF LEWISBURG

WHAT SHOULD YOU DO BEFORE A FLOODING EVENT?

STEP 1 UNDERSTAND YOUR RISK

Review and understand Flood Maps to determine what flood zone you are in and understand what each flood zone designation signifies.



STEP 2 PREPARE THE INSIDE OF YOUR HOUSE

-  HAVE A PLAN FOR YOUR LOVED ONES & PETS
-  GET FLOOD INSURANCE
-  STORE VALUABLES
-  ELEVATE UTILITIES
-  REPLACE CARPETING WITH TILES
-  INSTALL BASEMENT DRAINAGE SYSTEM
-  INSTALL FLOOD VENTS ON BASEMENTS, SHEDS & GARAGES
-  USE FLOOD PROOF INSULATION & WALL SYSTEMS

STEP 3 PREPARE THE OUTSIDE OF YOUR HOUSE

-  CONSIDER ELEVATING YOUR HOME
-  SECURE ALL YARD ITEMS
-  SEAL CRACKS AND GAPS
-  DIRECT WATER AWAY FROM STRUCTURE CLEAN GUTTER & DOWNSPOUT PIPING
-  ANCHOR FUEL TANKS
-  FLOODPROOF WALLS

BECOMING A RESILIENT COMMUNITY - DURING BOROUGH OF LEWISBURG

WHAT SHOULD YOU DO DURING A FLOODING EVENT?



PROTECTIVE MEASURES

When flooding is forecasted, temporary measures can be employed to help protect your property. The most widely used tool to protect against flooding are sandbags. However, a variety of other methods such as temporary dams, temporary floodgates, and flood wrapping systems are also effective in protecting property. None of these temporary measures are failproof. Property owners or tenants should deploy the system, secure the property, and move to a safe location outside the flood zone.



EVACUATE

If told to evacuate, do so immediately. Never drive around barricades. Local responders use them to safely direct traffic out of flooded areas.



STAY OUT OF AND AWAY FROM THE WATER

Do not walk, swim or drive through flood waters. Turn Around. Don't Drown. Stay off bridges over fast moving water. Fast moving water can wash bridges away without warning. Stay inside your car if it is trapped in rapidly moving water. Get on the roof if the water is rising inside the car.



SEEK HIGHER GROUND

Get to the highest level if trapped in a building. Only get on the roof if necessary and once their signal for help. Do not climb into a closed attic to avoid getting trapped by rising floodwater.



STAY CONNECTED TO EMERGENCY BROADCAST

Listen to EAS, NOAA Weather Radio or local alerting systems for current emergency information and instructions regarding flooding.

WHAT CAN YOU DO TO REDUCE PERSONAL INJURY DUE TO FLOODING?

- Planning escape routes to high ground before a flood emergency occurs.
- Staying tuned to radio, TV and the National Weather Service website for forecasts, flood warnings and instructions on returning to evacuated areas.
- Evacuating the flood hazard area when advised to do so by Lewisburg emergency personnel. If you have a health emergency during a flood, there is no guarantee you can be rescued.
- Remaining in your home after being asked to evacuate puts you and emergency personnel involved in rescue in great danger.
- Never enter flood waters with your vehicle. If your car stalls in high water, abandon it immediately and seek higher ground.
- Do not go near water which is swirling or looks like a whirlpool.
- Keep away from flooded ditches, culverts and storm drains.
- Lewisburg will likely have a curfew in place at night during a flood, plan to have a safe, secure location during nighttime hours.
- Looking before you step. After a flood, the ground and floors are covered with debris including broken glass and sharp metals. Mud covered surfaces can be very slippery.
- Look out for animals. Small animals, wild or domesticated, that have been flooded out of their homes will be frightened and may seek shelter in your home or outbuilding.
- Be alert of gas leaks. Use a flashlight to inspect your property for damage. Do not smoke or use candles, lanterns or open flames unless you know that the gas service has been turned off and the area has been ventilated.

BECOMING A RESILIENT COMMUNITY - AFTER BOROUGH OF LEWISBURG

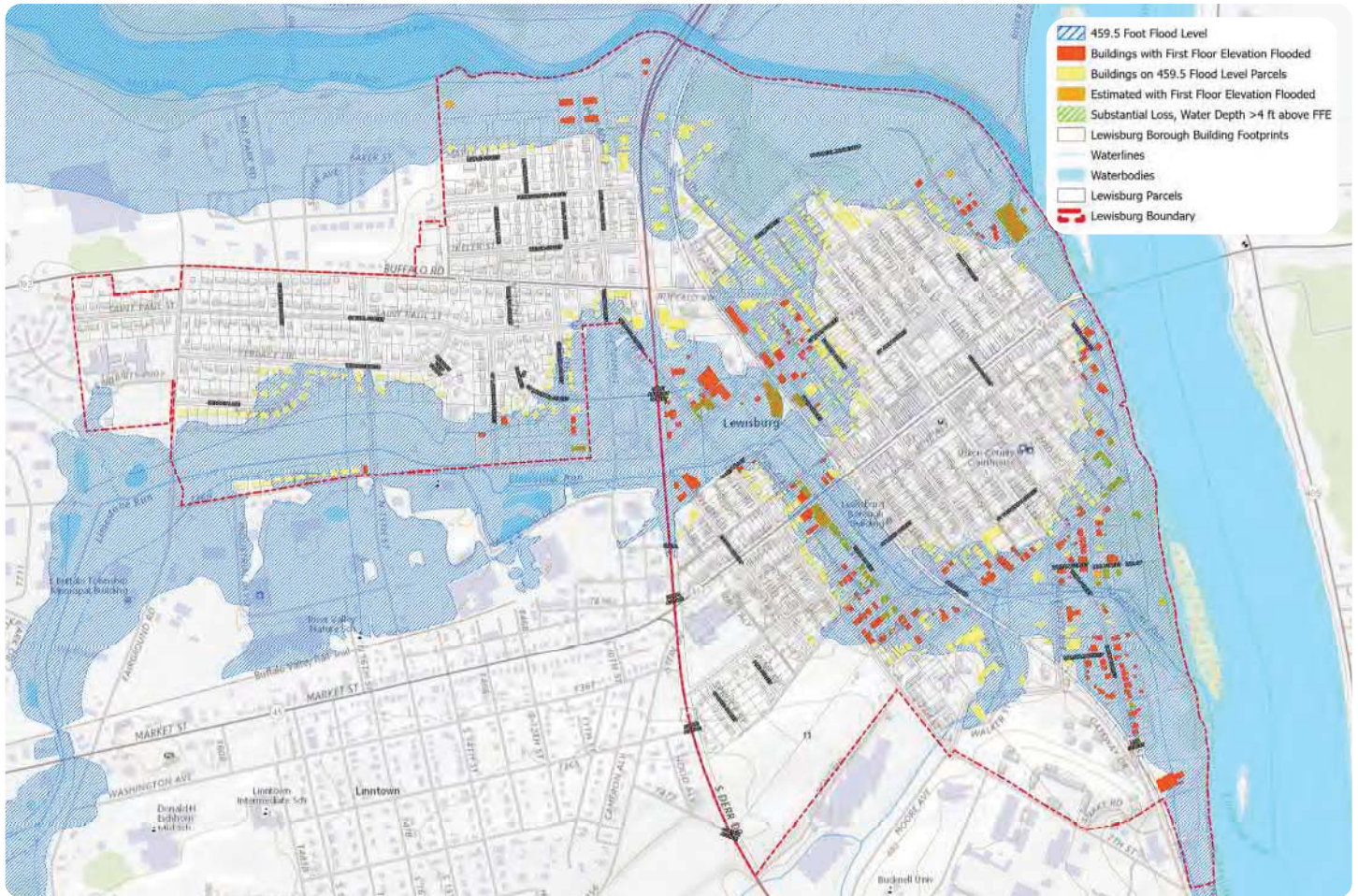
WHAT SHOULD YOU DO AFTER A FLOODING EVENT?

- Pay attention to Lewisburg authorities for information and instruction. Return home only when authorities say it is safe.
- Wear heavy work gloves, protective clothing and boots during clean up and use appropriate face coverings or masks if cleaning mold or other debris.
- People with asthma and other lung conditions and/or immunosuppression should not enter buildings with indoor water leaks or mold growth that can be seen or smelled. Children should not take part in flood cleanup work.
- Be aware that snakes and other animals may be in your house.
- Be aware of the risk of electrocution. Do not touch electrical equipment if it is wet or if you are standing in water. Turn off electricity to prevent electric shock if it is safe to do so.
- Avoid wading in floodwater, which can be contaminated and contain dangerous debris. Underground or downed power lines can also electrically charge the water.
- Contact insurance provider and make a claim.
- Use a generator or other gasoline-powered machine only outdoors and away from windows.
- Assess and document all damage. Knowing where the water line is will help you and your community plan for future events.
- Save all receipts and track costs from incurred damage.
- Assess damage
- Assess your flood plan and adjust as needed
- If your home was flooding (basement or first floor), your electric meter will be removed. Permits and inspection are required for electric to be restored to your home or business.
- Lewisburg Borough has a debris removal plan; follow the Borough's directions before moving debris from your home or property to the curbline.
- Minimize driving in flooded neighborhood; streets and bridges may be closed and maintenance work / debris removal operations will be occurring.



FLOOD RISK

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-  [REPLACE CARPETING WITH TILES](#)

PREPARE THE OUTSIDE OF YOUR HOME OR BUSINESS

-  [ELEVATE YOUR HOME](#)
-  [SECURE YARD ITEMS](#)
-  [SEAL CRACKS AND GAPS](#)
-  [DIRECT WATER AWAY FROM STRUCTURES](#)
-  [ANCHOR FUEL TANKS](#)
-  [FLOODPROOF WALLS](#)

PREPARE THE OUTSIDE OF YOUR HOUSE



ELEVATE YOUR HOME

While it is an investment, elevating your home prepares your property against floods and lowers food insurance premiums. When a home is properly elevated, the lowest floor should be above the BFE. Areas below the BFE can be used for parking, storage, or access to the house.



SECURE YARD ITEMS

Unsecured items can be swept away or damaged by floodwaters. They can also be swept into your home, causing damage. Secure items in your yard by anchoring them or attaching them to more substantial structures.



SEAL CRACKS AND GAPS

Check caulking around windows and doors to make it is not cracked, broken, or missing. Fill any holes or gaps around pipes and wires that enter your building.



DIRECT WATER AWAY FROM STRUCTURES

If you have a single-family home, make sure your yard slopes away from buildings on your property and that water has a place to drain. Clear your gutters, assess drainage issues, or collect water in rain barrels.



ANCHOR FUEL TANKS

Anchor any fuel tanks to the pad to prevent them from tipping over or floating in a flood. Spilled fuel could become a fire hazard. Make sure vents and fill-line openings are above the BFE. Note: This may require permission from your fuel provider.



FLOODPROOF WALLS

Add water-resistant exterior sheathing on walls and seal them to prevent shallow flooding from damaging your home. Cover openings below the BFE and seal all exterior openings around pumping and equipment.



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