

LSU AgCenter Interactive Maps

Tools help Louisiana citizens assess risk of flooding

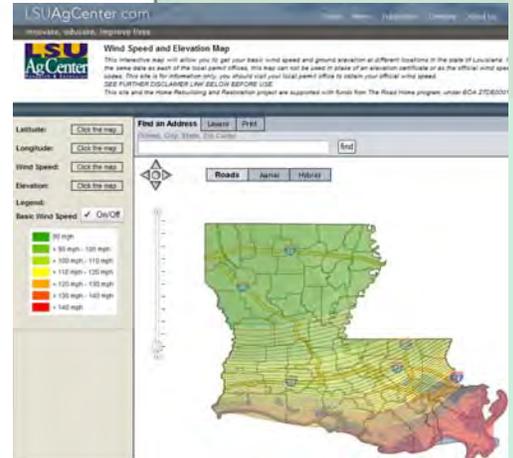


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When rivers start rising many Louisianans want to compare their area's elevation to a predicted flood crest nearby.

The LSU AgCenter has two mapping services/sites that ANYONE can use to find ground elevation at ANY spot in Louisiana. Both sites were built as part of the LSU AgCenter code enforcement and hazard resistant building education programs to aid with recovery from hurricanes Katrina and Rita.

- Both sites allow you to find a point by pan-and-click on the map or by entering a street address.
- Both sites allow you to turn on a background aerial image to locate a specific building or property.
- You can zoom in and out on either map, as well as pan the map in any direction.
- Click with the mouse on either map to place a pin and see ground elevation value (along with other information about the point).
- These sites provide images with a resolution and precision that is more accurate than the flood modeling or forecasts shown on them. The location of flood boundaries is approximate and should be used **for estimating purposes only.**



This mapping site gives Basic Wind Speed for building code purposes and shows ground elevations provided by the USGS.

Wind Speed Map System: maps.LSUAgCenter.com/windspeed

The LSU AgCenter's wind speed and elevation interactive map does not require you to select a parish before locating the property of interest.

- Turn off the "Basic Wind Speed" layer. (The on-off toggle is just to the left, above the legend.)
- Enter an address and click on "find."
- Turn on the "Hybrid" base map to activate the aerial imagery and identify individual structures.

Flood Map System: www.LSUAgCenter.com/floodmaps

The LSU AgCenter's flood maps portal displays flood insurance rate maps, which are used in the National Flood Insurance Program.

- Click on the parish of your choice and choose "Go."
- When the parish map opens, turn off the flood layers. (Uncheck the boxes in the upper right corner.)
- Enter an address and click on "Locate."
- Turn on the "Hybrid" map to activate the aerial imagery and identify individual structures. (Check "Hybrid" option that appears on map.)



This mapping site presents Flood Insurance Rate Maps (FIRMs) and related products. It also shows ground elevations provided by the USGS.

maps.LSUAgCenter.com
LSU AgCenter mapping services

Using the Flood Maps portal during flood threats

For any point on the map, you can see whether the area has been identified as a special flood hazard area. A special flood hazard area has a 1 percent chance per year of being inundated. Areas protected from rivers by levees are NOT in the special flood hazard area unless they flood from some other source, such as poor drainage or other rivers and streams running through the parish. For example, New Orleans is protected from the Mississippi River and Lake Pontchartrain by levees, but many areas flood due to rain that exceeds the capacity of drainage canals and pump systems. Similarly, Baton Rouge is protected from the Mississippi River by a levee but has extensive flood hazard areas associated with the Amite and Comite rivers, which run through and east of the parish.

For any point on the map, you can see the approximate ground elevation. Ground elevation is provided by the U.S. Geological Survey. If you have been told that a flood will reach a certain level AT YOUR LOCATION, and you know the ground elevation, you can estimate the flood depth. For example, if the flood will reach 55 feet mean sea level and your ground elevation (from this website) is 52 feet mean sea level, you would anticipate that the flood would be about 3 feet deep at your point—unless there is high ground between you and the river that would prevent the flood from reaching your property.

The flood level at your location is seldom the same as the reading on the nearest river gauge. Some river gauges use a different vertical reference than the USGS uses when providing ground elevations. A correction factor must be applied.

Online mapping systems have limitations. Use with caution

The websites should not be relied upon to determine levee elevations. Narrow features such as the crown of levees are difficult to represent accurately and are only approximations. Local Office of Emergency Preparedness should have information about current local levee elevations.

The flood elevation in the river, at the gauge, is not necessarily the elevation the water will be 100 yards or a few miles away from the gauge. The river elevations are of the water level in a very constrained environment. Local authorities will attempt to provide water surface elevation in specific locations.

Some stream gauges need to be adjusted when comparing their readings to ground elevation. Most river gauges in southern Louisiana use the same **vertical reference** system that is used to provide ground elevations in our websites. Other gauges require a conversion factor. Find gauge locations and readings at: <https://water.weather.gov/ahps/region.php?rfc=lmrfc>. Add the 'Gage 0' Datum: ## (at the lower left of the forecast hydrograph) to the gauge height shown on the graph when comparing it to ground elevation. For example, when comparing the gauge reading at Monroe on the Quachita River to ground elevation you would add 30.8 ft.

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The LSU AgCenter is a statewide campus of the LSU System and provides equal opportunities in programs and employment.

What you need to know about the flood maps on the LSU AgCenter Flood Maps portal

- These maps do NOT show historic floods. They do NOT show imminent flood threats or forecasts.
- Where an area is protected by a levee, the map shows only areas that flood WHEN THE LEVEES HOLD (do not leak, break or get overtopped).
- Most areas along the main rivers in Louisiana are protected by levees. This includes the major rivers and streams that feed them
- Lands near these rivers may be more likely to flood when the rivers inside the levees are very high, even if the levees hold. There may be seepage, leakage, a higher underground water table or sand-boils (where water finds a channel of sandy soil, travels under the levee and rises on the protected side).
- Lands near rivers and streams that drain into these major rivers may be more likely to flood for several reasons. Water will back up from the major rivers into the feeder streams. High water levels in the receiving rivers will retard the normal flow of streams into them. When rivers and streams are full, heavy rains that normally would run off quickly may accumulate, producing a flood.
- Lands shown on the maps as flood hazard areas usually are the lowest lands and the most difficult to drain. These would be the areas most likely to flood, most likely to flood first – in a slow levee failure -- and most likely to have the deepest floodwater, if the levees were fully overtopped.
- Flood maps that show hazard areas in shades of blue are NEWER and have more reliable flood risk assessments than flood maps that show flood hazard areas only in shades of gray.