

# Cuyahoga County, OH

Risk-assessment baseline packet

County FIPS: 39035    Release: 2026-10    Data as of: 2026-09-30    Storm Events data through: 2026-06-30

Hazard Plain is an independent product built from public federal data. It is not a FEMA document and is not reviewed or endorsed by FEMA or any state agency.

## Summary

Plan status as of 2026-09-30: Approved, expires 2027-09-15. Plan: Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517), approved 2022-09-16. Since the plan was approved on 2022-09-16: no new hazard declaration and 172 NOAA Storm Events records; details under "What changed since your last plan". Highest expected annual loss (FEMA National Risk Index, modeled total; see B1-a): Inland Flooding (\$177,839,182 a year), Cold Wave (\$49,835,950) and Tornado (\$32,603,539). The tables that follow are organized by the items of FEMA's Local Mitigation Plan Review Tool, Element B (B1-a to B2-c); each heading says which item its tables support.

## TERMS USED

**EAL:** expected annual loss: FEMA's modeled average yearly loss from a hazard.  
**NRI:** FEMA's National Risk Index (version 1.20, December 2025).  
**NFIP:** National Flood Insurance Program.  
**RL, SRL:** repetitive loss and severe repetitive loss: flood-insured properties with repeated claims (definitions in B2-c).  
**FMA, HMGP:** Flood Mitigation Assistance and Hazard Mitigation Grant Program, FEMA mitigation grants.  
**PA:** FEMA Public Assistance: disaster aid to governments and some nonprofits.  
**Zone-level:** NOAA logged the event for a National Weather Service forecast zone, which may include parts of neighboring counties.  
**County-coded:** NOAA logged the event to this county.  
**FIPS:** the federal code for a place; 39035 is this area.  
**D0 to D4:** U.S. Drought Monitor categories, from abnormally dry (D0) to exceptional drought (D4).  
**F/EF, EFU:** Fujita and Enhanced Fujita tornado ratings; EFU is an unrated tornado.  
**kt, CONUS:** knots (1 kt is about 1.15 mph); the contiguous United States.  
**CFR:** Code of Federal Regulations.  
**A4-a, E1-a:** other items of FEMA's Local Mitigation Plan Review Tool (sources, and changes since the last plan).  
**Dollars:** nominal (as reported, labeled with the year), not adjusted for inflation.

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Plan clock

|                  |                                      |                 |                                                                |
|------------------|--------------------------------------|-----------------|----------------------------------------------------------------|
| Status:          | Approved, expires 2027-09-15         | Plan:           | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) |
| Approved:        | 2022-09-16                           | Days to expiry: | 350                                                            |
| Update underway: | none recorded in FEMA's plan tracker |                 |                                                                |

What changed since your last plan (approved 2022-09-16)

|                                                |                                                     |                                      |                                       |
|------------------------------------------------|-----------------------------------------------------|--------------------------------------|---------------------------------------|
| New federal declarations:                      | none                                                | Storm Events records since approval: | 172 records (data through 2026-06-30) |
| Repetitive loss now:                           | FMA RL 3, SRL 36 (44 CFR 77.2); any definition: 147 | Repeat-flood change:                 | this release sets the baseline count. |
| Sources: 1, 2, 4, 6 (numbered list at the end) |                                                     |                                      |                                       |

Plan status for every jurisdiction listed in this county: 64 rows, in the section "Plan clock: Plan status for every jurisdiction listed in this county" on the following pages.

State plan status and tribal plans in this state: see the state page.

## Plan clock

### Plan status for every jurisdiction listed in this county

Source: 1

| Jurisdiction             | Type    | Status                                                                   | Plan                                                                                  | Approved                                 | Expires                 | Days to expiry<br><i>negative = days since expiry</i> | Update underway                                       | Notes                                      |
|--------------------------|---------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------|-------------------------|-------------------------------------------------------|-------------------------------------------------------|--------------------------------------------|
| Cuyahoga County          | County  | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-03-07      |
| Bay Village city         | City    | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Beachwood city           | City    | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-01-16      |
| Bedford city             | City    | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-01-16      |
| Bedford Heights city     | City    | Plan 108517 approved 2022-09-16, pending adoption here; not yet eligible | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517), pending adoption here | 2022-09-16 by FEMA; not yet adopted here | 2027-09-15 once adopted |                                                       | FEMA tracker shows a plan approvable pending adoption | Not yet eligible: adopt the approved plan. |
| Bentleyville village     | Village | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-10-07      |
| Berea city               | City    | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-01-16      |
| Bratenahl village        | Village | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Brecksville city         | City    | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-01-16      |
| Broadview Heights city   | City    | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-01-16      |
| Brook Park city          | City    | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-03-07      |
| Brooklyn city            | City    | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Brooklyn Heights village | Village | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-10-07      |

| Jurisdiction             | Type    | Status                       | Plan                                                           | Approved   | Expires    | Days to expiry<br><i>negative = days since expiry</i> | Update underway | Notes                                 |
|--------------------------|---------|------------------------------|----------------------------------------------------------------|------------|------------|-------------------------------------------------------|-----------------|---------------------------------------|
| Chagrin Falls village    | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2022-11-09 |
| Cleveland city           | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-03-07 |
| Cleveland Heights city   | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-03-07 |
| Cuyahoga Heights village | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-05-29 |
| East Cleveland city      | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-01-16 |
| Euclid city              | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2022-10-07 |
| Fairview Park city       | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-03-07 |
| Garfield Heights city    | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-03-07 |
| Gates Mills village      | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2022-10-07 |
| Glenwillow village       | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-01-16 |
| Highland Heights city    | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2022-11-09 |
| Highland Hills village   | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-03-07 |
| Hunting Valley village   | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2022-12-12 |
| Independence city        | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2022-12-12 |
| Lakewood city            | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                   |                 | this jurisdiction approved 2023-01-16 |

| Jurisdiction             | Type    | Status                       | Plan                                                           | Approved   | Expires    | Days to<br>expiry<br><i>negative =<br/>days since<br/>expiry</i> | Update underway | Notes                                 |
|--------------------------|---------|------------------------------|----------------------------------------------------------------|------------|------------|------------------------------------------------------------------|-----------------|---------------------------------------|
| Linndale village         | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2023-05-29 |
| Lyndhurst city           | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-10-07 |
| Maple Heights city       | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-12-12 |
| Mayfield Heights city    | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-11-09 |
| Mayfield village         | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-11-09 |
| Middleburg Heights city  | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-11-09 |
| Moreland Hills village   | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-12-12 |
| Newburgh Heights village | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-11-09 |
| North Olmsted city       | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2023-05-29 |
| North Randall village    | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-12-12 |
| North Royalton city      | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-11-09 |
| Olmsted Falls city       | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2023-03-07 |
| Orange village           | Village | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-11-09 |
| Parma city               | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2022-10-07 |
| Parma Heights city       | City    | Approved, expires 2027-09-15 | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517) | 2022-09-16 | 2027-09-15 | 350                                                              |                 | this jurisdiction approved 2023-03-07 |

| Jurisdiction              | Type     | Status                                                                   | Plan                                                                                  | Approved                                 | Expires                 | Days to expiry<br><i>negative = days since expiry</i> | Update underway                                       | Notes                                      |
|---------------------------|----------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------|-------------------------|-------------------------------------------------------|-------------------------------------------------------|--------------------------------------------|
| Pepper Pike city          | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-01-16      |
| Richmond Heights city     | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       |                                            |
| Rocky River city          | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Seven Hills city          | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Shaker Heights city       | City     | Plan 108517 approved 2022-09-16, pending adoption here; not yet eligible | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517), pending adoption here | 2022-09-16 by FEMA; not yet adopted here | 2027-09-15 once adopted |                                                       | FEMA tracker shows a plan approvable pending adoption | Not yet eligible: adopt the approved plan. |
| Solon city                | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| South Euclid city         | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Strongsville city         | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-10-07      |
| University Heights city   | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Valley View village       | Village  | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Walton Hills village      | Village  | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-12-12      |
| Warrensville Heights city | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2023-01-16      |
| Westlake city             | City     | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-12-12      |
| Woodmere village          | Village  | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2022-11-09      |
| Olmsted township          | Township | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                               | 2027-09-15              | 350                                                   |                                                       | this jurisdiction approved 2024-12-11      |

| Jurisdiction                          | Type                     | Status                                                                   | Plan                                                                                  | Approved                                             | Expires                       | Days to<br>expiry                           | Update underway                                       | Notes                                      |
|---------------------------------------|--------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------|---------------------------------------------|-------------------------------------------------------|--------------------------------------------|
|                                       |                          |                                                                          |                                                                                       |                                                      |                               | <i>negative =<br/>days since<br/>expiry</i> |                                                       |                                            |
| Chagrin Valley<br>Dispatch Council    | Special District         | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                                           | 2027-09-15                    | 350                                         |                                                       | this jurisdiction approved 2026-07-01      |
| Cleveland Metro Parks                 | Special District         | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                                           | 2027-09-15                    | 350                                         |                                                       |                                            |
| Cleveland State<br>University         | College/<br>University   | Plan 108517 approved 2022-09-16, pending adoption here; not yet eligible | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517), pending adoption here | 2022-09-16<br>by FEMA;<br>not yet<br>adopted<br>here | 2027-09-15<br>once<br>adopted |                                             | FEMA tracker shows a plan approvable pending adoption | Not yet eligible: adopt the approved plan. |
| Cuyahoga County<br>Community College  | College/<br>University   | Plan 108517 approved 2022-09-16, pending adoption here; not yet eligible | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517), pending adoption here | 2022-09-16<br>by FEMA;<br>not yet<br>adopted<br>here | 2027-09-15<br>once<br>adopted |                                             | FEMA tracker shows a plan approvable pending adoption | Not yet eligible: adopt the approved plan. |
| Hunger Network                        | Other                    | Plan 108517 approved 2022-09-16, pending adoption here; not yet eligible | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517), pending adoption here | 2022-09-16<br>by FEMA;<br>not yet<br>adopted<br>here | 2027-09-15<br>once<br>adopted |                                             | FEMA tracker shows a plan approvable pending adoption | Not yet eligible: adopt the approved plan. |
| North Ohio Regional<br>Sewer District | Water/Sewer<br>Authority | Approved, expires 2027-09-15                                             | Cuyahoga County 2022 Hazard Mitigation Plan (FEMA plan 108517)                        | 2022-09-16                                           | 2027-09-15                    | 350                                         |                                                       | this jurisdiction approved 2022-12-12      |

Plan 108517 covers 1 other participant: Oakwood city (Montgomery County).

## Supports FEMA checklist item B1-a: hazard identification

Hazards NRI does not cover (local data needed)

- dam failure (incl. upstream dams)
- levee failure
- flash flood as its own subtype
- ice jams
- debris flows
- erosion (riverine and coastal)
- land subsidence and sinkholes
- expansive soils

### The 18 National Risk Index hazards, ranked by expected annual loss (EAL)

Sources: 5, 6

| Rank<br>by EAL | Hazard          | NRI risk<br>rating | EAL rating          | EAL buildings<br><i>modeled dollars<br/>per year</i> | EAL<br>agriculture<br><i>modeled dollars<br/>per year</i> | Cost of expected<br>deaths and injuries<br><i>FEMA's dollar value per<br/>year, not property damage</i> | EAL total (see<br>note)<br><i>modeled dollars<br/>per year</i> | Storm Events<br>records, 1996 to<br>2026-06-30<br><i>count</i> | Storm Events coverage note                                                                                                |
|----------------|-----------------|--------------------|---------------------|------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1              | Inland Flooding | Relatively High    | Relatively High     | \$177,773,630                                        | \$12,971                                                  | \$52,581                                                                                                | \$177,839,182                                                  | 128                                                            |                                                                                                                           |
| 2              | Cold Wave       | Very High          | Very High           | \$14,553                                             | \$1,557                                                   | \$49,819,839                                                                                            | \$49,835,950                                                   | 14                                                             |                                                                                                                           |
| 3              | Tornado         | Very High          | Relatively High     | \$17,862,769                                         | \$50                                                      | \$14,740,719                                                                                            | \$32,603,539                                                   | 9                                                              |                                                                                                                           |
| 4              | Heat Wave       | Relatively High    | Relatively High     | \$300                                                | under \$1                                                 | \$10,976,331                                                                                            | \$10,976,631                                                   | 2                                                              |                                                                                                                           |
| 5              | Earthquake      | Relatively Low     | Relatively Moderate | \$3,315,666                                          | n/a                                                       | \$1,038,204                                                                                             | \$4,353,870                                                    |                                                                | Storm Events does not record earthquakes.                                                                                 |
| 6              | Strong Wind     | Relatively High    | Relatively High     | \$1,755,517                                          | \$3,565                                                   | \$1,402,604                                                                                             | \$3,161,686                                                    | 521                                                            | Includes 64 High Wind and 8 Strong Wind records (NOAA non-thunderstorm wind types, outside NRI's Strong Wind definition). |
| 7              | Lightning       | Relatively High    | Relatively High     | \$21,362                                             | n/a                                                       | \$1,272,143                                                                                             | \$1,293,505                                                    | 11                                                             |                                                                                                                           |
| 8              | Ice Storm       | Relatively High    | Relatively High     | \$744,210                                            | n/a                                                       | \$287,914                                                                                               | \$1,032,124                                                    | 1                                                              |                                                                                                                           |
| 9              | Winter Weather  | Relatively High    | Relatively High     | \$682,057                                            | \$51                                                      | \$72,537                                                                                                | \$754,645                                                      | 125                                                            |                                                                                                                           |
| 10             | Hail            | Relatively Low     | Relatively Low      | \$224,991                                            | \$389                                                     | \$58,466                                                                                                | \$283,846                                                      | 253                                                            |                                                                                                                           |
| 11             | Hurricane       | Relatively Low     | Relatively Low      | \$220,668                                            | \$1,070                                                   | \$6,859                                                                                                 | \$228,597                                                      | 0                                                              | Declared 2 times; no Storm Events record of this type.                                                                    |
| 12             | Wildfire        | Very Low           | Very Low            | \$54,256                                             | \$1                                                       | \$6,015                                                                                                 | \$60,272                                                       | 0                                                              | No recorded events in Storm Events since 1996 (data through 2026-06-30).                                                  |

| Rank<br>by EAL | Hazard              | NRI risk<br>rating   | EAL rating                   | EAL buildings<br><i>modeled dollars<br/>per year</i> | EAL agriculture<br><i>modeled dollars<br/>per year</i> | Cost of expected<br>deaths and injuries<br><i>FEMA's dollar value per<br/>year, not property damage</i> | EAL total (see<br>note)<br><i>modeled dollars<br/>per year</i> | Storm Events<br>records, 1996 to<br>2026-06-30<br><i>count</i> | Storm Events coverage note                                               |
|----------------|---------------------|----------------------|------------------------------|------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------|
| 13             | Coastal<br>Flooding | Very Low             | Very Low                     | \$5,578                                              | n/a                                                    | \$447                                                                                                   | \$6,024                                                        | 0                                                              | No recorded events in Storm Events since 1996 (data through 2026-06-30). |
| 14             | Landslide           | Very Low             | Very Low                     | \$100                                                | n/a                                                    | \$287                                                                                                   | \$387                                                          | 1                                                              |                                                                          |
| 15             | Drought             | No Rating            | No Expected<br>Annual Losses | n/a                                                  | \$0                                                    | n/a                                                                                                     | \$0                                                            | 5                                                              |                                                                          |
|                | Tsunami             | Insufficient<br>Data | Insufficient Data            | n/a                                                  | n/a                                                    | n/a                                                                                                     | n/a                                                            | 0                                                              | No recorded events in Storm Events since 1996 (data through 2026-06-30). |

Total = buildings + agriculture + population equivalence; FEMA values each expected death (or 10 injuries) at \$13.7 million (2024 dollars).

NRI risk rating combines expected annual loss with social vulnerability and community resilience; EAL rating rates expected annual loss alone. Both compare this county with all U.S. counties.

Local data needed: state and local wildfire and tsunami records (Storm Events records these hazards only in part).

Not applicable to this county per NRI, with no federal declaration and no Storm Events record since 1996: avalanche and volcanic activity. That is the evidence for leaving them out of the plan.

The state hazard mitigation plan also lists hazards for this county; FEMA asks the plan to explain any hazard it leaves out.

## Supports FEMA checklist item B1-b: hazard location

Affects the whole county (national data give no location within it): Cold Wave, Drought, Hail, Heat Wave, Ice Storm, Lightning, Strong Wind and Winter Weather.

Coastal Flooding and Inland Flooding: The FEMA Flood Insurance Rate Map (FIRM) is the required location source for flooding. See the FEMA Flood Map Service Center (<https://msc.fema.gov>) for this county.

### Hazards that vary within the county: highest-rated census tracts

Source: 5

| Hazard     | Highest-rated census tracts<br><i>NRI risk rating, score 0 to 100</i>                                            |
|------------|------------------------------------------------------------------------------------------------------------------|
| Earthquake | tract 1093.01 (Relatively Low, 69.5); tract 1078.02 (Relatively Low, 62.5); tract 1970 (Relatively Low, 62.1)    |
| Hurricane  | tract 1841.04 (Very Low, 42.6); tract 1078.02 (Very Low, 42.5); tract 1891.11 (Very Low, 41.2)                   |
| Landslide  | tract 1963 (Very Low, 80.1); tract 1945 (Very Low, 71.0); tract 1351.04 (Very Low, 67.7)                         |
| Tornado    | tract 1078.02 (Relatively High, 88.1); tract 1968 (Relatively High, 85.7); tract 1841.04 (Relatively High, 84.9) |
| Tsunami    | no tract has a National Risk Index rating for this hazard                                                        |
| Wildfire   | tract 1891.11 (Relatively Low, 72.1); tract 1963 (Relatively Low, 69.3); tract 1957 (Relatively Low, 68.7)       |

Up to 3 census tracts per hazard, highest National Risk Index rating first, then highest score; a tract number is the Census tract number (for example 1093.01 is Census Tract 1093.01). FEMA's Resilience Analysis and Planning Tool maps the National Risk Index for every tract: <https://www.fema.gov/emergency-managers/practitioners/resilience-analysis-and-planning-tool>

## Supports FEMA checklist item B1-c: hazard extent

### Extent: scale, observed range and worst recorded event per hazard

Sources: 6, 7

| Hazard                                            | Scale                                 | Records<br><i>count and years</i>        | Observed range                                                  | Worst recorded event                                                                                           | Most damaging<br>(when different)                                                              | How it applies to jurisdictions                                                                                                                                                                                                                                                                                                                                                                    | Note                                                                                                                                                                 |
|---------------------------------------------------|---------------------------------------|------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coastal Flood, Storm Surge/ Tide                  | none in data (flood depth: FIRM)      | 0                                        |                                                                 |                                                                                                                |                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                    | Flood depth: see the FEMA Flood Insurance Rate Map.                                                                                                                  |
| Cold/Wind Chill, Extreme Cold/Wind Chill          | wind chill                            | 14 records, 1996 to 2022 (14 zone-level) | 1 day to 17 days (median 2 days); 13 with a recorded value      | 17 consecutive days, 2021-02-01 to 2021-02-17, 7 direct deaths, zone-level                                     | Cold/Wind Chill, 1996-02-02, \$800,000 property; crops not reported (zone total, 1996 dollars) | Countywide (zone-level records).                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                      |
| Frost/Freeze (outside NRI's Cold Wave definition) | crop damage                           | 0                                        |                                                                 |                                                                                                                |                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                      |
| Drought                                           | U.S. Drought Monitor scale (D0 to D4) | 5 records, 1996 to 1999 (5 zone-level)   | 31 days to 122 days (median 76.5 days); 2 with a recorded value | 122 days (4 months), 1999-06-01 to 1999-09-30, a run of 4 consecutive Storm Events drought records, zone-level | Drought, 1999-09-01, property not reported; \$500,000 crops (zone total, 1999 dollars)         | Countywide (zone-level records).                                                                                                                                                                                                                                                                                                                                                                   | Storm Events enters a drought at D2 or worse east of the Rockies and D3 or worse from the Rockies west (NWS Instruction 10-1605); NRI drought counts D3 and D4 only. |
| Earthquake                                        | Modified Mercalli (local data)        | 0                                        |                                                                 |                                                                                                                |                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                    | Storm Events does not record earthquakes; the USGS earthquake catalog is the source.                                                                                 |
| Hail                                              | hail size (inches)                    | 299 records, 1956 to 2026                | 0.25 in to 2.75 in (median 1 in); 298 with a recorded value     | 2.75 in hail, 1965-05-16                                                                                       | Hail, 1994-09-25, \$5,000,000 property; crops not recorded (1994 dollars)                      | Event records naming jurisdictions in the plan: Cleveland city (27 records), Parma city (13 records), Strongsville city (13 records), North Royalton city (12 records), North Olmsted city (11 records), Lakewood city (8 records), Solon city (8 records), Westlake city (8 records), Euclid city (7 records), Garfield Heights city (7 records); and 36 more jurisdictions (see the Excel file). |                                                                                                                                                                      |
| Excessive Heat, Heat                              | heat index (in event narratives)      | 2 records, 1999 (2 zone-level)           | 7 days to 31 days (median 19 days); 2 with a recorded value     | July 1999 (1 monthly summary record), zone-level                                                               |                                                                                                | Countywide (zone-level records).                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                      |
| Hurricane, Tropical Storm, Tropical Depression    | Saffir-Simpson                        | 0                                        |                                                                 |                                                                                                                |                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                    | Storm Events files every zone of a storm's episode under the storm's type; flooding from the storm is filed as Flood or Flash Flood records.                         |

| Hazard                                                           | Scale                                                                              | Records<br><i>count and years</i>            | Observed range                                                                         | Worst recorded event                                                                            | Most damaging<br>(when different)                                                  | How it applies to jurisdictions                                                                                                                                                                                                                                                                                                                                                                                                                                        | Note                                                                                                                                                                                                          |
|------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ice Storm                                                        | Sperry-Piltz ice scale (local data)                                                | 1 record, 2005<br>(1 zone-level)             |                                                                                        | Ice Storm, 2005-01-05, \$1,300,000 property; crops not reported (2005 dollars); NWS zone OHZ011 |                                                                                    | Countywide (zone-level records).                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                               |
| Flash Flood, Flood, Lakeshore Flood                              | damage and flood days (flood depth: FIRM)                                          | 128 records, 1996 to 2025<br>(14 zone-level) |                                                                                        | Flash Flood, 2006-06-22, \$35,000,000 property; crops not reported (2006 dollars)               |                                                                                    | Event records naming jurisdictions in the plan: Cleveland city (12 records), Brecksville city (5 records), Chagrin Falls village (5 records), Lakewood city (5 records), Newburgh Heights village (5 records), Berea city (4 records), Broadview Heights city (4 records), Brooklyn Heights village (4 records), Euclid city (4 records), Garfield Heights city (4 records); and 29 more jurisdictions (see the Excel file). Zone-level records (14) apply countywide. | Flood depth: see the FEMA Flood Insurance Rate Map. Storm Events damage is often \$0 or blank for floods, major ones included; FEMA Public Assistance by declaration (B1-d) shows which floods cost the most. |
| Debris Flow                                                      | none (count and damage only)                                                       | 1 record, 2011<br>(1 zone-level)             |                                                                                        | Debris Flow, 2011-05-25, \$2,000 property; \$0 crops (2011 dollars); NWS zone OHZ011            |                                                                                    | Countywide (zone-level records).                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                               |
| Lightning                                                        | annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names) | 11 records, 1996 to 2005                     |                                                                                        | Lightning, 1999-07-06, damage not reported, 1 direct death                                      | Lightning, 2005-09-22, \$80,000 property; crops not reported (2005 dollars)        | Event records naming jurisdictions in the plan: Cleveland city (3 records), Solon city (2 records), Brooklyn city (1 record), Cleveland Heights city (1 record), Euclid city (1 record), Garfield Heights city (1 record), Lyndhurst city (1 record), Warrensville Heights city (1 record).                                                                                                                                                                            | Storm Events lists lightning with damage or casualties.                                                                                                                                                       |
| High Wind and Strong Wind (outside NRI's Strong Wind definition) | wind speed (kt and mph)                                                            | 72 records, 1996 to 2024<br>(72 zone-level)  | 34 kt (39 mph) to 64 kt (74 mph) (median 51 kt (59 mph)); 60 with a recorded value     | 64 kt (74 mph) measured gust, High Wind, 2017-01-10; NWS zone OHZ011                            | High Wind, 2012-10-29, \$40,000,000 property; \$0 crops (zone total, 2012 dollars) | Countywide (zone-level records).                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                               |
| Thunderstorm Wind                                                | wind speed (kt and mph)                                                            | 608 records, 1955 to 2026                    | 31 kt (36 mph) to 90 kt (104 mph) (median 51.5 kt (59 mph)); 474 with a recorded value | 90 kt (104 mph), measurement type not recorded, Thunderstorm Wind, 1962-08-20                   | Thunderstorm Wind, 2010-05-07, \$6,500,000 property; \$0 crops (2010 dollars)      | Event records naming jurisdictions in the plan: Cleveland city (40 records), North Olmsted city (25 records), Lakewood city (21 records), Westlake city (20 records), North Royalton city (18 records), Parma city (18 records), East Cleveland city (15 records), Solon city (13 records), Brecksville city (12 records), Fairview Park city (12 records); and 41 more jurisdictions (see the Excel file).                                                            |                                                                                                                                                                                                               |

| Hazard                                                                                      | Scale                                       | Records<br><i>count and years</i>                    | Observed range                                                | Worst recorded event                                                                                                                                                          | Most damaging<br>(when different)                                                         | How it applies to jurisdictions                                                                                                                                                                                                                                                                                       | Note                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tornado                                                                                     | Enhanced Fujita<br>(Fujita before Feb 2007) | 21 records,<br>1951 to 2024                          | F/EF0 to F/EF4<br>(median F/EF1); 21<br>with a recorded value | F4 tornado, 1953-06-08,<br>15.6 mi path length<br>(whole path, pre-1996), 33<br>yd wide, damage not<br>recorded (pre-1996<br>record), 6 direct deaths,<br>300 direct injuries | Tornado, 1965-04-11,<br>\$25,000,000<br>property; crops not<br>recorded (1965<br>dollars) | Event records naming jurisdictions in<br>the plan: Bedford Heights city (1<br>record), Brook Park city (1 record),<br>Cleveland Heights city (1 record),<br>Lyndhurst city (1 record), North<br>Randall village (1 record), Pepper<br>Pike city (1 record), Solon city (1<br>record), Valley View village (1 record). | Before 1996 a tornado is listed once, under<br>the county where it began, with its whole<br>path's rating and length; from 1996 on, each<br>county lists its own segment. Length is not<br>used to rank tornadoes (see Methods). |
| Tsunami                                                                                     | none (count and<br>damage only)             | 0                                                    |                                                               |                                                                                                                                                                               |                                                                                           |                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                  |
| Wildfire                                                                                    | acres burned<br>(local data)                | 0                                                    |                                                               |                                                                                                                                                                               |                                                                                           |                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                  |
| Winter Storm,<br>Heavy Snow,<br>Blizzard, Lake-<br>Effect Snow,<br>Winter<br>Weather, Sleet | none in data<br>(snowfall: local<br>data)   | 125 records,<br>1996 to 2025<br>(124 zone-<br>level) |                                                               | Winter Storm,<br>2008-03-07, \$7,500,000<br>property; \$0 crops (2008<br>dollars); NWS zone<br>OHZ011                                                                         |                                                                                           | No event record names a jurisdiction<br>in the plan. Zone-level records (124)<br>apply countywide.                                                                                                                                                                                                                    |                                                                                                                                                                                                                                  |

Where a hazard names more than 10 jurisdictions, the table lists the 10 with the most records; every one is in the Excel file, sheet "B1-c Extent".

In event narratives only (local data needed): wind chill, temperature, heat index, ice thickness, acres burned and snow depth; any physical measure of debris flow, lightning and tsunami.

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records from zones that no NWS zone-county file places in this county (mostly before 2020) are not counted here (the Methods page explains the zone matching).

Dollars are nominal (as reported), labeled with the year; not adjusted for inflation.

A monthly summary record covers most or all of a month; it does not count days at wave conditions.

## Supports FEMA checklist item B1-d: previous occurrences

Federal declarations for this county: 19 declarations covering 13 separate hazard incidents counted in this packet (declarations for the same incident count once; non-natural and evacuation-only declarations are not counted).

### Federal disaster declarations for this county

Sources: 1, 2, 3

| Declared   | Incident<br>began | FEMA<br>number | Type              | Title                                                                | Mapped hazard                                                                 | County Public Assistance<br><i>federal share obligated, nominal<br/>dollars</i> | Notes                       |
|------------|-------------------|----------------|-------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------|
| 2020-03-31 | 2020-01-20        | DR-4507-OH     | Major<br>disaster | COVID-19 Pandemic                                                    | Non-natural, not counted                                                      | \$255,731,819.06                                                                |                             |
| 2020-03-13 | 2020-01-20        | EM-3457-OH     | Emergency         | COVID-19                                                             | Non-natural, not counted                                                      | no Public Assistance recorded                                                   | same incident as<br>DR-4507 |
| 2013-01-03 | 2012-10-29        | DR-4098-OH     | Major<br>disaster | Severe Storms and Flooding Due to<br>the Remnants of Hurricane Sandy | Hurricane (primary); also designated: Inland Flooding                         | \$12,163,028.93                                                                 |                             |
| 2012-06-30 | 2012-06-29        | EM-3346-OH     | Emergency         | Severe Storms                                                        | Hazard not mapped (severe storm title names no single<br>hazard); not counted | no Public Assistance recorded                                                   |                             |

| Declared   | Incident began | FEMA number | Type           | Title                                                       | Mapped hazard                                                                                                            | County Public Assistance                        |       |
|------------|----------------|-------------|----------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------|
|            |                |             |                |                                                             |                                                                                                                          | <i>federal share obligated, nominal dollars</i> | Notes |
| 2006-07-02 | 2006-06-21     | DR-1651-OH  | Major disaster | Severe Storms, Tornadoes, Straight Line Winds, and Flooding | Inland Flooding; Strong Wind; Tornado                                                                                    | PA not declared for this county                 |       |
| 2005-09-13 | 2005-08-29     | EM-3250-OH  | Emergency      | Hurricane Katrina Evacuation                                | Hurricane: evacuation support, not a local hazard event; not counted                                                     | \$160,929.67                                    |       |
| 2004-09-19 | 2004-08-27     | DR-1556-OH  | Major disaster | Severe Storms and Flooding                                  | Inland Flooding: designated for Hazard Mitigation only (no Public or Individual Assistance for this county); not counted | PA not declared for this county                 |       |
| 2004-06-03 | 2004-05-18     | DR-1519-OH  | Major disaster | Severe Storms and Flooding                                  | Inland Flooding                                                                                                          | \$2,798,555.98                                  |       |
| 2003-09-23 | 2003-08-14     | EM-3187-OH  | Emergency      | Power Outage                                                | Non-natural, not counted                                                                                                 | \$1,218,135.57                                  |       |
| 2003-08-01 | 2003-07-21     | DR-1484-OH  | Major disaster | Tornadoes, Flooding, Severe Storms, and High Winds          | Tornado (primary); also designated: Inland Flooding, Strong Wind                                                         | PA not declared for this county                 |       |
| 2002-11-18 | 2002-11-10     | DR-1444-OH  | Major disaster | Severe Storms and Tornadoes                                 | Tornado                                                                                                                  | PA not declared for this county                 |       |
| 1992-08-04 | 1992-07-12     | DR-951-OH   | Major disaster | Severe Storms, Tornadoes & Flooding                         | Inland Flooding; Tornado                                                                                                 | no Public Assistance recorded                   |       |
| 1989-06-10 | 1989-05-23     | DR-831-OH   | Major disaster | Severe Storms & Flooding                                    | Inland Flooding                                                                                                          | PA not declared for this county                 |       |
| 1978-01-26 | 1978-01-26     | EM-3055-OH  | Emergency      | Blizzards & Snowstorms                                      | Winter Weather                                                                                                           | no Public Assistance recorded                   |       |
| 1975-09-11 | 1975-09-11     | DR-480-OH   | Major disaster | Winds, Tornadoes, Heavy Rains & Flooding                    | Inland Flooding (primary); also designated: Tornado                                                                      | no Public Assistance recorded                   |       |
| 1973-04-27 | 1973-04-27     | DR-377-OH   | Major disaster | Severe Storms & Flooding                                    | Inland Flooding                                                                                                          | no Public Assistance recorded                   |       |
| 1972-07-19 | 1972-07-19     | DR-345-OH   | Major disaster | Tropical Storm Agnes                                        | Inland Flooding (primary); also designated: Hurricane                                                                    | no Public Assistance recorded                   |       |
| 1969-07-15 | 1969-07-15     | DR-266-OH   | Major disaster | Tornadoes, Severe Storms & Flooding                         | Tornado (primary); also designated: Inland Flooding                                                                      | no Public Assistance recorded                   |       |
| 1965-04-14 | 1965-04-14     | DR-191-OH   | Major disaster | Tornadoes & Severe Storms                                   | Tornado                                                                                                                  | no Public Assistance recorded                   |       |

School districts and special districts in this county: \$268,077.97 (included in the county total above). Public Assistance matched by applicant name to the school districts and special districts FEMA lists as plan participants in this county. They have no row of their own in the jurisdiction table, so their total is listed here. These dollars are already included in the county PA column of the declarations table (the FEMA record places each applicant in this county), so this line is not added to it.

County Public Assistance: applicants the FEMA record places in this county, including any state agencies FEMA files there; statewide rows are listed on the state page; federal share obligated, nominal dollars.

Statewide declarations

Source: 2

| Declared   | Incident began | FEMA number | Type           | Title                    | Mapped hazard                         |
|------------|----------------|-------------|----------------|--------------------------|---------------------------------------|
| 1964-03-24 | 1964-03-24     | DR-167-OH   | Major disaster | Severe Storms & Flooding | Inland Flooding                       |
| 1959-01-23 | 1959-01-23     | DR-90-OH    | Major disaster | Floods                   | Inland Flooding                       |
| 1956-05-17 | 1956-05-17     | DR-57-OH    | Major disaster | Wind Storm               | Other, not an NRI hazard; not counted |

FEMA recorded these with designated area Statewide and no county, so they are listed on every county page in the state and not counted with county rows. Local data needed: whether each one affected this county.

Public Assistance filed under this county for declarations that do not list it: 2 rows, \$38,613.66

Sources: 2, 3

| FEMA number | Declared   | Title                            | Applicant                           | PA obligated<br><i>federal share obligated, nominal dollars</i> |
|-------------|------------|----------------------------------|-------------------------------------|-----------------------------------------------------------------|
| EM-3286-OH  | 2008-04-24 | Record Snow and Near Record Snow | Bainbridge, Township of             | \$27,442.99                                                     |
| EM-3286-OH  | 2008-04-24 | Record Snow and Near Record Snow | Auburn, Township of (Geauga County) | \$11,170.67                                                     |

FEMA's Public Assistance summaries file these applicants under this county, but FEMA's declaration rows for these disasters do not designate it (an electric cooperative or district serving several counties, for example). Not in any declaration row above and not counted.

Public Assistance not placed in any Ohio county: 1 row, \$3,080,910.74; listed on the Ohio state page.

Source: 3

Previous occurrences by hazard, with explicit no-event rows

Sources: 2, 6, 7

| Hazard           | Storm Events records,<br>all years on file<br><i>(years in the Period column)</i> | Since plan<br>approval<br><i>records</i> | In the 12 months before<br>plan approval<br><i>records</i> | Last 5<br>years<br><i>records</i> | Declared incidents,<br>all years<br><i>separate disasters</i> | Declared since<br>approval<br><i>separate disasters</i> | Period             | Statement                                                                                   |
|------------------|-----------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------|---------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------|
| Coastal Flooding | 0                                                                                 | 0                                        | 0                                                          | 0                                 | 0                                                             | 0                                                       | 1996 to 2026-06-30 | No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events                              |
| Cold Wave        | 14                                                                                | 1                                        | 0                                                          | 1                                 | 0                                                             | 0                                                       | 1996 to 2026-06-30 |                                                                                             |
| Drought          | 5                                                                                 | 0                                        | 0                                                          | 0                                 | 0                                                             | 0                                                       | 1996 to 2026-06-30 |                                                                                             |
| Earthquake       | 0                                                                                 | 0                                        | 0                                                          | 0                                 | 0                                                             | 0                                                       |                    | Storm Events does not record earthquakes; the USGS earthquake catalog is the source.        |
| Hail             | 299                                                                               | 39                                       | 0                                                          | 39                                | 0                                                             | 0                                                       | 1955 to 2026-06-30 |                                                                                             |
| Heat Wave        | 2                                                                                 | 0                                        | 0                                                          | 0                                 | 0                                                             | 0                                                       | 1996 to 2026-06-30 |                                                                                             |
| Hurricane        | 0                                                                                 | 0                                        | 0                                                          | 0                                 | 2                                                             | 0                                                       | 1996 to 2026-06-30 | No Storm Events records of this type; 2 federal declared incidents (see declarations table) |

| <b>Hazard</b>      | <b>Storm Events records,<br/>all years on file<br/><i>(years in the Period column)</i></b> | <b>Since plan<br/>approval<br/><i>records</i></b> | <b>In the 12 months before<br/>plan approval<br/><i>records</i></b> | <b>Last 5<br/>years<br/><i>records</i></b> | <b>Declared incidents,<br/>all years<br/><i>separate disasters</i></b> | <b>Declared since<br/>approval<br/><i>separate disasters</i></b> | <b>Period</b>         | <b>Statement</b>                                                  |
|--------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------|
| Ice Storm          | 1                                                                                          | 0                                                 | 0                                                                   | 0                                          | 0                                                                      | 0                                                                | 1996 to<br>2026-06-30 |                                                                   |
| Inland<br>Flooding | 128                                                                                        | 10                                                | 0                                                                   | 10                                         | 10                                                                     | 0                                                                | 1996 to<br>2026-06-30 |                                                                   |
| Landslide          | 1                                                                                          | 0                                                 | 0                                                                   | 0                                          | 0                                                                      | 0                                                                | 1996 to<br>2026-06-30 |                                                                   |
| Lightning          | 11                                                                                         | 0                                                 | 0                                                                   | 0                                          | 0                                                                      | 0                                                                | 1996 to<br>2026-06-30 |                                                                   |
| Strong Wind        | 680                                                                                        | 105                                               | 10                                                                  | 115                                        | 2                                                                      | 0                                                                | 1955 to<br>2026-06-30 | Includes 64 High Wind and 8 Strong Wind records.                  |
| Tornado            | 21                                                                                         | 5                                                 | 0                                                                   | 5                                          | 7                                                                      | 0                                                                | 1950 to<br>2026-06-30 |                                                                   |
| Tsunami            | 0                                                                                          | 0                                                 | 0                                                                   | 0                                          | 0                                                                      | 0                                                                | 1996 to<br>2026-06-30 | No recorded events, 1996 to 2026-06-30, NOAA<br>NCEI Storm Events |
| Wildfire           | 0                                                                                          | 0                                                 | 0                                                                   | 0                                          | 0                                                                      | 0                                                                | 1996 to<br>2026-06-30 | No recorded events, 1996 to 2026-06-30, NOAA<br>NCEI Storm Events |
| Winter<br>Weather  | 125                                                                                        | 12                                                | 4                                                                   | 16                                         | 1                                                                      | 0                                                                | 1996 to<br>2026-06-30 |                                                                   |

## Notable Storm Events records

Sources: 1, 6, 7

| Date       | Event type        | Magnitude or extent                                        | Damage<br><i>nominal dollars</i>                                    | Deaths,<br>injuries<br><i>direct only</i> | Location                               | Why listed                                                                                       |
|------------|-------------------|------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------|
| 2021-02-01 | Cold/Wind Chill   |                                                            | \$0 property; \$0 crops (zone total, 2021 dollars)                  | 7, 0                                      | NWS zone OHZ011 (CUYAHOGA), zone-level | deaths or injuries recorded                                                                      |
| 2017-01-10 | High Wind         | 64 kt (74 mph) measured gust                               | \$0 property; \$0 crops (zone total, 2017 dollars)                  | 0, 0                                      | NWS zone OHZ011 (CUYAHOGA), zone-level | B1-c worst recorded: High Wind and Strong Wind                                                   |
| 2011-05-25 | Debris Flow       |                                                            | \$2,000 property; \$0 crops (zone total, 2011 dollars)              | 0, 0                                      | NWS zone OHZ011 (CUYAHOGA), zone-level | B1-c worst recorded: Debris Flow                                                                 |
| 2008-03-07 | Winter Storm      |                                                            | \$7,500,000 property; \$0 crops (zone total, 2008 dollars)          | 0, 0                                      | NWS zone OHZ011 (CUYAHOGA), zone-level | B1-c worst recorded: Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet |
| 2006-06-22 | Flash Flood       |                                                            | \$35,000,000 property; crops not reported (2006 dollars)            | 0, 0                                      | EAST PORTION                           | B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood                                         |
| 2005-01-05 | Ice Storm         |                                                            | \$1,300,000 property; crops not reported (zone total, 2005 dollars) | 0, 0                                      | NWS zone OHZ011 (CUYAHOGA), zone-level | B1-c worst recorded: Ice Storm                                                                   |
| 1999-07-06 | Lightning         |                                                            | damage not reported                                                 | 1, 0                                      | WARRENSVILLE HGTS                      | B1-c worst recorded: Lightning                                                                   |
| 1999-07-01 | Heat              |                                                            | damage not reported                                                 | 0, 0                                      | NWS zone OHZ011 (CUYAHOGA), zone-level | B1-c worst recorded: Excessive Heat, Heat                                                        |
| 1965-05-16 | Hail              | 2.75 in                                                    | damage not recorded (pre-1996 record)                               | 0, 0                                      | location not recorded                  | B1-c worst recorded: Hail                                                                        |
| 1962-08-20 | Thunderstorm Wind | 90 kt (104 mph), measurement type not recorded             | damage not recorded (pre-1996 record)                               | 0, 0                                      | location not recorded                  | B1-c worst recorded: Thunderstorm Wind                                                           |
| 1962-08-20 | Tornado           | F2, 0.5 mi path length (whole path, pre-1996), 500 yd wide | \$2,500,000 property; crops not recorded (1962 dollars)             | 4, 20                                     | location not recorded                  | deaths or injuries recorded                                                                      |
| 1953-06-08 | Tornado           | F4, 15.6 mi path length (whole path, pre-1996), 33 yd wide | damage not recorded (pre-1996 record)                               | 6, 300                                    | location not recorded                  | deaths or injuries recorded                                                                      |

**The full list is in the Excel file, sheet "B1-d Storm Events history" (1,287 rows).**

Location is the place NOAA recorded, as written in its data; it need not be a jurisdiction in this plan.

Local data needed: state-declared emergencies, from your state emergency management agency (federal data do not include them).

FEMA's declaration data list no tribal or special-area declarations for this state.

## Supports FEMA checklist item B1-e: probability of future events

### Probability: FEMA annualized frequency and descriptor per hazard

Sources: 5, 6

| Hazard           | FEMA annualized frequency (modeled)<br><i>unit per row</i> | Unit                                    | In plain terms                                                                            | Descriptor    | Descriptor basis                                                | NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional) | NRI period                                 | Location   | Note                                                                                                                                                                                                                |
|------------------|------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coastal Flooding | 0.0127                                                     | events per year at a location (modeled) | about 0.013 per year at a given location in the county                                    |               | Storm Events records in 0 of 30 years, 1996 to 2025 (0%)        | not shown                                                                                                | modeled                                    | see B1-f   | No descriptor: no Storm Events record 1996 to 2025                                                                                                                                                                  |
| Cold Wave        | 3.68                                                       | event-days per year                     | about 3.68 days per year                                                                  | Likely        | Storm Events event-days in 9 of 30 years, 1996 to 2025 (30%)    | 70                                                                                                       | 2005-11-12 to 2024-11-12 (19 years)        | countywide |                                                                                                                                                                                                                     |
| Drought          | 0                                                          | event-days per year                     | none modeled                                                                              | Possible      | Storm Events event-days in 2 of 30 years, 1996 to 2025 (6.67%)  | 0                                                                                                        | 2000 to 2025 (25.25 years; D3 and D4 only) | countywide | NRI models no drought event-days here (2000 to 2025, 25.25 years; D3 and D4 only); Storm Events has a record in 2 of 30 years. The descriptor comes from Storm Events, which counts D2 drought that NRI leaves out. |
| Earthquake       | 0.00093                                                    | annual probability at a location        | chance a given location in the county has at least minor-damage shaking in a year: 0.093% |               |                                                                 | not shown                                                                                                | modeled                                    | see B1-f   | No descriptor (Storm Events does not record earthquakes).                                                                                                                                                           |
| Hail             | 3.66                                                       | events per year                         | about 3.66 per year                                                                       | Highly likely | FEMA annualized frequency (modeled)                             | 141.8 (modeled)                                                                                          | 1986 to 2023 (38 years)                    | countywide |                                                                                                                                                                                                                     |
| Heat Wave        | 2.21                                                       | event-days per year                     | about 2.21 days per year                                                                  | Possible      | Storm Events event-days in 1 of 30 years, 1996 to 2025 (3.33%)  | 38                                                                                                       | 2005-11-12 to 2024-11-12 (19 years)        | countywide |                                                                                                                                                                                                                     |
| Hurricane        | 0.0131                                                     | events per year                         | about 1 in 76 years                                                                       | Possible      | FEMA annualized frequency (modeled)                             | 6                                                                                                        | 1851 to 2024 (Atlantic)                    | see B1-f   | NRI counts hurricane and tropical storm tracks passing within storm-force wind range; federal declarations are in B1-d.                                                                                             |
| Ice Storm        | 0.907                                                      | event-days per year                     | about 0.907 days per year                                                                 | Possible      | Storm Events event-days in 1 of 30 years, 1996 to 2025 (3.33%)  | 23                                                                                                       | 1946-12-31 to 2014-02-12 (67 years)        | countywide |                                                                                                                                                                                                                     |
| Inland Flooding  | 2.75                                                       | event-days per year                     | about 2.75 days per year                                                                  | Likely        | Storm Events event-days in 23 of 30 years, 1996 to 2025 (76.7%) | 77                                                                                                       | 1996 to 2023 (28 years)                    | see B1-f   |                                                                                                                                                                                                                     |

| <b>Hazard</b>     | <b>FEMA<br/>annualized<br/>frequency<br/>(modeled)<br/><i>unit per row</i></b> | <b>Unit</b>                                                                                   | <b>In plain terms</b>                                                    | <b>Descriptor</b> | <b>Descriptor basis</b>                                                 | <b>NRI events or days in its<br/>record period (hail, wind<br/>and tornado are area-<br/>weighted, so can be<br/>fractional)</b> | <b>NRI period</b>                               | <b>Location</b> | <b>Note</b>                                           |
|-------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------|-------------------------------------------------------|
| Landslide         | 0.143                                                                          | events per year<br>(modeled)                                                                  | about 1 in 7 years                                                       | Likely            | FEMA annualized<br>frequency<br>(modeled)                               | not shown                                                                                                                        | modeled                                         | see B1-f        |                                                       |
| Lightning         | 40                                                                             | days per year with<br>a strike                                                                | about 40 days per<br>year                                                | Highly<br>likely  | FEMA annualized<br>frequency<br>(modeled)                               | not shown                                                                                                                        | 1995 to 2023<br>(29 years;<br>CONUS)            | countywide      |                                                       |
| Strong<br>Wind    | 2.03                                                                           | events per year                                                                               | about 2.03 per year                                                      | Highly<br>likely  | FEMA annualized<br>frequency<br>(modeled)                               | 30                                                                                                                               | 1986 to 2023<br>(38 years)                      | countywide      |                                                       |
| Tornado           | 0.422                                                                          | events per year                                                                               | about 1 in 2 years                                                       | Likely            | FEMA annualized<br>frequency<br>(modeled)                               | not shown                                                                                                                        | 1950 to 2023<br>(EF2+); 1986 to<br>2023 (EF0-1) | see B1-f        |                                                       |
| Tsunami           |                                                                                | annual probability<br>at the most<br>exposed location<br>(used in place of a<br>county value) |                                                                          |                   | Storm Events<br>records in 0 of 30<br>years, 1996 to<br>2025 (0%)       | not shown                                                                                                                        | modeled                                         | see B1-f        | No descriptor: no Storm Events record<br>1996 to 2025 |
| Wildfire          | 0.0000172                                                                      | annual probability<br>at a location                                                           | chance a given<br>location in the<br>county burns in a<br>year: 0.00172% |                   | Storm Events<br>records in 0 of 30<br>years, 1996 to<br>2025 (0%)       | not shown                                                                                                                        | modeled                                         | see B1-f        | No descriptor: no Storm Events record<br>1996 to 2025 |
| Winter<br>Weather | 19.4                                                                           | event-days per year                                                                           | about 19.4 days per<br>year                                              | Highly<br>likely  | Storm Events<br>event-days in 30<br>of 30 years, 1996<br>to 2025 (100%) | 369                                                                                                                              | 2005-11-12 to<br>2024-11-12 (19<br>years)       | countywide      |                                                       |

FEMA annualized frequency (modeled) is the National Risk Index v1.20 (December 2025) estimate of how often a hazard affects this county in a year; it is not recorded events divided by years, and its unit differs by hazard (events, event-days, or days with a lightning strike per year). For earthquake, wildfire, coastal flooding and tsunami the value is the chance (or number of events) at a location in the county, not across the county, so no "1 in N years" is given and the descriptor comes from Storm Events where it has a record (none for earthquake). The Methods page gives each hazard's method, from FEMA's National Risk Index Technical Documentation v1.20.

Where NRI gives event-days, the descriptor comes from the share of years with a Storm Events record; NRI's source records more events, so the two differ.

Descriptor scale used in this packet (defined per unit)

Sources: 5, 6

| Unit                        | Descriptor    | Definition                                               |
|-----------------------------|---------------|----------------------------------------------------------|
| events per year             | Highly likely | 1 or more per year                                       |
| events per year             | Likely        | about once in 1 to 10 years                              |
| events per year             | Possible      | about once in 10 to 100 years                            |
| events per year             | Unlikely      | less than once in 100 years                              |
| annual probability          | Likely        | 10% to under 100% chance in a given year                 |
| annual probability          | Possible      | 1% to under 10% chance in a given year                   |
| annual probability          | Unlikely      | under 1% chance in a given year                          |
| event-days (share of years) | Highly likely | event-days recorded in 90% or more of years              |
| event-days (share of years) | Likely        | event-days recorded in 10% to under 90% of years         |
| event-days (share of years) | Possible      | event-days recorded in some years but under 10% of years |
| lightning strike-days       | Highly likely | cloud-to-ground strikes on 1 or more days per year       |

Intensity bands: historical frequency (Storm Events)

Source: 6

| Hazard                                         | Band                      | Years        | Events<br><i>county-coded records</i> | Years in period | Events per year<br><i>events / years</i> |
|------------------------------------------------|---------------------------|--------------|---------------------------------------|-----------------|------------------------------------------|
| Hail                                           | 1.00-1.99 in              | 1996 to 2025 | 107                                   | 30              | 3.57                                     |
| Hail                                           | 2.00 in+                  | 1996 to 2025 | 3                                     | 30              | 0.1                                      |
| Thunderstorm Wind (counted as NRI Strong Wind) | 50-64 kt                  | 1996 to 2025 | 364                                   | 30              | 12.1                                     |
| Thunderstorm Wind (counted as NRI Strong Wind) | 65 kt+                    | 1996 to 2025 | 17                                    | 30              | 0.567                                    |
| Thunderstorm Wind (counted as NRI Strong Wind) | unmeasured or below 50 kt | 1996 to 2025 | 48                                    | 30              | 1.6                                      |
| Tornado                                        | EF0-1                     | 1996 to 2025 | 8                                     | 30              | 0.267                                    |
| Tornado                                        | EF2-3                     | 1996 to 2025 | 1                                     | 30              | 0.0333                                   |
| Tornado                                        | EF4-5                     | 1996 to 2025 | 0                                     | 30              | 0                                        |
| Tornado                                        | unrated (EFU)             | 1996 to 2025 | 0                                     | 30              | 0                                        |

The bands show how often events of each severity were recorded in this county, to profile how severe events have been (FEMA's probability item asks for the range of intensities).

Hail smaller than 1 inch is not counted: on 2010-01-05 the National Weather Service raised its severe-hail threshold from 3/4 inch to 1 inch, so smaller reports became less common after 2009 (NWS Service Change Notice 09-52). NRI hail frequency uses a 0.75 inch threshold.

Optional: future conditions. Not a required item in the 2025 FEMA Local Mitigation Planning Policy Guide; some states ask for it. The federal Climate Mapping for Resilience and Adaptation (CMRA) site gives county exposure to future climate conditions (<https://resilience.climate.gov/>).

## Supports FEMA checklist item B1-f: hazards that vary across jurisdictions

### Range of census tract risk within the county

Source: 5

| Hazard           | Tracts<br><i>rated of all</i> | NRI risk score, 0 to 100 |        |      | Tracts by rating                                                             |
|------------------|-------------------------------|--------------------------|--------|------|------------------------------------------------------------------------------|
|                  |                               | Min                      | Median | Max  |                                                                              |
| Coastal Flooding | 46 of 427                     | 68.0                     | 71.5   | 76.7 | Very Low 46, No Rating 381                                                   |
| Cold Wave        | 427 of 427                    | 15.5                     | 70.2   | 89.8 | Relatively High 94, Relatively Moderate 315, Relatively Low 12, Very Low 6   |
| Drought          | 0 of 427                      |                          |        |      | No Rating 427                                                                |
| Earthquake       | 427 of 427                    | 0.8                      | 23.7   | 69.5 | Relatively Low 49, Very Low 378                                              |
| Hail             | 427 of 427                    | 0.8                      | 15.3   | 38.4 | Relatively Low 2, Very Low 425                                               |
| Heat Wave        | 427 of 427                    | 1.3                      | 35.4   | 68.1 | Relatively Moderate 28, Relatively Low 368, Very Low 31                      |
| Hurricane        | 427 of 427                    | 11.4                     | 28.5   | 42.6 | Very Low 427                                                                 |
| Ice Storm        | 427 of 427                    | 0.3                      | 28.6   | 73.5 | Relatively Moderate 3, Relatively Low 134, Very Low 290                      |
| Inland Flooding  | 427 of 427                    | 0.4                      | 27.7   | 92.9 | Relatively High 13, Relatively Moderate 83, Relatively Low 206, Very Low 125 |
| Landslide        | 400 of 427                    | 8.6                      | 16.4   | 80.1 | Very Low 400, No Rating 27                                                   |
| Lightning        | 427 of 427                    | 0.1                      | 17.7   | 38.9 | Relatively Low 157, Very Low 270                                             |
| Strong Wind      | 427 of 427                    | 0.6                      | 27.8   | 68.9 | Relatively Moderate 5, Relatively Low 364, Very Low 58                       |
| Tornado          | 427 of 427                    | 2.0                      | 51.7   | 88.1 | Relatively High 6, Relatively Moderate 173, Relatively Low 243, Very Low 5   |
| Tsunami          | 0 of 427                      |                          |        |      | Insufficient Data 427                                                        |
| Wildfire         | 350 of 427                    | 18.6                     | 36.2   | 72.1 | Relatively Low 3, Very Low 347, No Rating 77                                 |
| Winter Weather   | 427 of 427                    | 12.7                     | 38.5   | 81.8 | Relatively High 2, Relatively Moderate 83, Relatively Low 341, Very Low 1    |

Rated tracts only: No Rating (score 0.0), Not Applicable and Insufficient Data tracts are counted but not used for the minimum, median and maximum.

The score ranks a tract against all U.S. tracts (100 = highest). The rating is FEMA's category for the tract's risk value, computed differently, so the two can disagree.

Frequency data for cold wave, hail, heat wave, ice storm, lightning, strong wind and winter weather are county-wide or coarse (49 km grid or NWS zone), the same for every jurisdiction; the tract range mostly reflects where buildings and people are.

**Each jurisdiction (starting figures from federal data)**

Sources: 1, 3, 4, 6

| <b>Jurisdiction</b>      | <b>Type</b> | <b>Plan status</b>                                                       | <b>Repetitive loss</b><br><i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i> | <b>Public Assistance to this jurisdiction</b><br><i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i> | <b>Event records naming this place</b><br><i>all years; since its plan</i> | <b>Notes</b>                                                                                                   |
|--------------------------|-------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Cuyahoga County          | County      | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 3                                                                      | \$2,043,745.57                                                                                                                           | 0 total; 0 since its plan                                                  | Includes \$2,043,745.57 for declarations not counted as hazard incidents (DR-4507-OH, EM-3187-OH).             |
| Bay Village city         | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                                      | \$66,280.50                                                                                                                              | 0 total; 0 since its plan                                                  |                                                                                                                |
| Beachwood city           | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                                      | \$24,201.71                                                                                                                              | 6 total; 1 since its plan                                                  | Includes \$24,201.71 for declarations not counted as hazard incidents (EM-3187-OH).                            |
| Bedford city             | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 2                                                                      | \$71,026.99                                                                                                                              | 13 total; 5 since its plan                                                 | Includes \$5,630.21 for declarations not counted as hazard incidents (EM-3187-OH).                             |
| Bedford Heights city     | City        | Plan 108517 approved 2022-09-16, pending adoption here; not yet eligible | FMA RL 0, SRL 1; any 3                                                                      | no Public Assistance recorded                                                                                                            | 9 total; no approved plan                                                  |                                                                                                                |
| Bentleyville village     | Village     | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                                      | no Public Assistance recorded                                                                                                            | 5 total; 2 since its plan                                                  |                                                                                                                |
| Berea city               | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                                      | \$140,763.65                                                                                                                             | 17 total; 3 since its plan                                                 | Includes \$34,772.62 for declarations not counted as hazard incidents (DR-4507-OH, EM-3187-OH).                |
| Bratenahl village        | Village     | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                                      | \$59,875.93                                                                                                                              | 10 total; 4 since its plan                                                 |                                                                                                                |
| Brecksville city         | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 5                                                                      | \$238,548.30                                                                                                                             | 23 total; 3 since its plan                                                 | Includes \$7,248.52 for declarations not counted as hazard incidents (EM-3187-OH).                             |
| Broadview Heights city   | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 4                                                                      | \$87,745.13                                                                                                                              | 14 total; 4 since its plan                                                 | Includes \$9,337.36 for declarations not counted as hazard incidents (EM-3187-OH).                             |
| Brook Park city          | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                                      | \$65,343.97                                                                                                                              | 4 total; 2 since its plan                                                  | Includes \$10,557 for declarations not counted as hazard incidents (EM-3187-OH).                               |
| Brooklyn city            | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                                      | \$53,343.49                                                                                                                              | 10 total; 2 since its plan                                                 | Includes \$26,479.48 for declarations not counted as hazard incidents (DR-4507-OH, EM-3187-OH).                |
| Brooklyn Heights village | Village     | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                                      | \$1,244,902.34                                                                                                                           | 9 total; 1 since its plan                                                  |                                                                                                                |
| Chagrin Falls village    | Village     | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                                      | no Public Assistance recorded                                                                                                            | 13 total; 3 since its plan                                                 |                                                                                                                |
| Cleveland city           | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 1; any 8                                                                      | \$8,459,444.38                                                                                                                           | 82 total; 4 since its plan                                                 | Includes \$1,021,513.53 for declarations not counted as hazard incidents (DR-4507-OH, EM-3187-OH, EM-3250-OH). |
| Cleveland Heights city   | City        | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                                      | \$261,274.62                                                                                                                             | 13 total; 1 since its plan                                                 | Includes \$5,414.25 for declarations not counted as hazard incidents (EM-3187-OH).                             |
| Cuyahoga Heights village | Village     | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                                      | \$11,803.82                                                                                                                              | 3 total; 0 since its plan                                                  | Includes \$2,279.04 for declarations not counted as hazard incidents (EM-3187-OH).                             |

| Jurisdiction             | Type    | Plan status                  | Repetitive loss<br><i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i> | Public Assistance to this jurisdiction<br><i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i> | Event records naming this place<br><i>all years; since its plan</i> | Notes                                                                                           |
|--------------------------|---------|------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| East Cleveland city      | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | \$114,323.66                                                                                                                      | 16 total; 6 since its plan                                          |                                                                                                 |
| Euclid city              | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 1                                                               | \$60,013.30                                                                                                                       | 17 total; 3 since its plan                                          | Includes \$10,881.75 for declarations not counted as hazard incidents (EM-3187-OH).             |
| Fairview Park city       | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | \$40,813.56                                                                                                                       | 16 total; 3 since its plan                                          | Includes \$5,825.66 for declarations not counted as hazard incidents (EM-3187-OH).              |
| Garfield Heights city    | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 1; any 4                                                               | \$46,222.87                                                                                                                       | 21 total; 1 since its plan                                          | Includes \$4,559.93 for declarations not counted as hazard incidents (EM-3187-OH).              |
| Gates Mills village      | Village | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 2                                                               | \$3,645.25                                                                                                                        | 7 total; 0 since its plan                                           | Includes \$3,645.25 for declarations not counted as hazard incidents (EM-3187-OH).              |
| Glenwillow village       | Village | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | no Public Assistance recorded                                                                                                     | 0 total; 0 since its plan                                           |                                                                                                 |
| Highland Heights city    | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | \$25,060.21                                                                                                                       | 10 total; 5 since its plan                                          | Includes \$4,362.56 for declarations not counted as hazard incidents (EM-3187-OH).              |
| Highland Hills village   | Village | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | \$1,569.30                                                                                                                        | 0 total; 0 since its plan                                           | Includes \$1,569.30 for declarations not counted as hazard incidents (EM-3187-OH).              |
| Hunting Valley village   | Village | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | no Public Assistance recorded                                                                                                     | 1 total; 0 since its plan                                           |                                                                                                 |
| Independence city        | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 13; any 21                                                             | \$74,183.38                                                                                                                       | 6 total; 0 since its plan                                           | Includes \$11,891.77 for declarations not counted as hazard incidents (EM-3187-OH).             |
| Lakewood city            | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 2; any 3                                                               | \$257,759.04                                                                                                                      | 34 total; 6 since its plan                                          | Includes \$31,003.94 for declarations not counted as hazard incidents (EM-3187-OH).             |
| Linndale village         | Village | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | no Public Assistance recorded                                                                                                     | 14 total; 5 since its plan                                          |                                                                                                 |
| Lyndhurst city           | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | no Public Assistance recorded                                                                                                     | 15 total; 4 since its plan                                          |                                                                                                 |
| Maple Heights city       | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | \$99,133.05                                                                                                                       | 5 total; 1 since its plan                                           | Includes \$63,101.37 for declarations not counted as hazard incidents (DR-4507-OH, EM-3187-OH). |
| Mayfield Heights city    | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | \$26,667.69                                                                                                                       | 6 total; 0 since its plan                                           | Includes \$17,702.70 for declarations not counted as hazard incidents (EM-3187-OH).             |
| Mayfield village         | Village | Approved, expires 2027-09-15 | FMA RL 0, SRL 1; any 3                                                               | \$2,376.09                                                                                                                        | 12 total; 4 since its plan                                          | Includes \$2,376.09 for declarations not counted as hazard incidents (EM-3187-OH).              |
| Middleburg Heights city  | City    | Approved, expires 2027-09-15 | FMA RL 0, SRL 2; any 7                                                               | \$112,589.74                                                                                                                      | 1 total; 0 since its plan                                           | Includes \$21,024 for declarations not counted as hazard incidents (EM-3187-OH).                |
| Moreland Hills village   | Village | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | \$13,650                                                                                                                          | 5 total; 1 since its plan                                           |                                                                                                 |
| Newburgh Heights village | Village | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | \$29,759.82                                                                                                                       | 10 total; 3 since its plan                                          | Includes \$1,106.65 for declarations not counted as hazard incidents (EM-3187-OH).              |

| Jurisdiction              | Type    | Plan status                                                              | Repetitive loss<br><i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i> | Public Assistance to this jurisdiction<br><i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i> | Event records naming this place<br><i>all years; since its plan</i> | Notes                                                                               |
|---------------------------|---------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| North Olmsted city        | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 6                                                               | \$133,803.43                                                                                                                      | 39 total; 13 since its plan                                         |                                                                                     |
| North Randall village     | Village | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                               | no Public Assistance recorded                                                                                                     | 4 total; 1 since its plan                                           |                                                                                     |
| North Royalton city       | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 1; any 6                                                               | \$399,868.55                                                                                                                      | 33 total; 5 since its plan                                          | Includes \$15,586.50 for declarations not counted as hazard incidents (EM-3187-OH). |
| Olmsted Falls city        | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                               | \$33,744.99                                                                                                                       | 12 total; 1 since its plan                                          | Includes \$3,898.82 for declarations not counted as hazard incidents (EM-3187-OH).  |
| Orange village            | Village | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                               | \$1,401.75                                                                                                                        | 0 total; 0 since its plan                                           | Includes \$1,401.75 for declarations not counted as hazard incidents (EM-3187-OH).  |
| Parma city                | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 5                                                               | \$186,406.77                                                                                                                      | 35 total; 4 since its plan                                          | Includes \$29,383.13 for declarations not counted as hazard incidents (EM-3187-OH). |
| Parma Heights city        | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                               | \$82,072.36                                                                                                                       | 14 total; 6 since its plan                                          | Includes \$11,583 for declarations not counted as hazard incidents (EM-3187-OH).    |
| Pepper Pike city          | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 4                                                               | \$12,366.52                                                                                                                       | 10 total; 0 since its plan                                          | Includes \$9,516.51 for declarations not counted as hazard incidents (EM-3187-OH).  |
| Richmond Heights city     | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                               | \$22,999.96                                                                                                                       | 6 total; 1 since its plan                                           | Includes \$3,617.78 for declarations not counted as hazard incidents (EM-3187-OH).  |
| Rocky River city          | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                               | \$117,647.16                                                                                                                      | 11 total; 0 since its plan                                          | Includes \$2,094.75 for declarations not counted as hazard incidents (EM-3187-OH).  |
| Seven Hills city          | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                               | \$84,764.06                                                                                                                       | 15 total; 3 since its plan                                          |                                                                                     |
| Shaker Heights city       | City    | Plan 108517 approved 2022-09-16, pending adoption here; not yet eligible | FMA RL 0, SRL 0; any 0                                                               | \$61,642.59                                                                                                                       | 20 total; no approved plan                                          | Includes \$15,589.84 for declarations not counted as hazard incidents (EM-3187-OH). |
| Solon city                | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                               | \$52,377.24                                                                                                                       | 27 total; 5 since its plan                                          | Includes \$10,959.91 for declarations not counted as hazard incidents (EM-3187-OH). |
| South Euclid city         | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                               | \$40,637.17                                                                                                                       | 6 total; 1 since its plan                                           | Includes \$16,053.71 for declarations not counted as hazard incidents (EM-3187-OH). |
| Strongsville city         | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 7                                                               | \$100,420.69                                                                                                                      | 23 total; 1 since its plan                                          | Includes \$14,148.53 for declarations not counted as hazard incidents (EM-3187-OH). |
| University Heights city   | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                               | \$29,578.01                                                                                                                       | 9 total; 3 since its plan                                           | Includes \$5,166.19 for declarations not counted as hazard incidents (EM-3187-OH).  |
| Valley View village       | Village | Approved, expires 2027-09-15                                             | FMA RL 3, SRL 14; any 37                                                             | no Public Assistance recorded                                                                                                     | 9 total; 1 since its plan                                           |                                                                                     |
| Walton Hills village      | Village | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 1                                                               | \$19,371.85                                                                                                                       | 10 total; 7 since its plan                                          | Includes \$3,532.04 for declarations not counted as hazard incidents (EM-3187-OH).  |
| Warrensville Heights city | City    | Approved, expires 2027-09-15                                             | FMA RL 0, SRL 0; any 0                                                               | \$13,459.52                                                                                                                       | 3 total; 0 since its plan                                           | Includes \$5,402.53 for declarations not counted as hazard incidents (EM-3187-OH).  |

| Jurisdiction     | Type     | Plan status                  | Repetitive loss<br><i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i> | Public Assistance to this jurisdiction<br><i>FEMA records matched by applicant name; federal share obligated, nominal dollars</i> | Event records naming this place<br><i>all years; since its plan</i> | Notes                                                                                                                                    |
|------------------|----------|------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Westlake city    | City     | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 2                                                               | \$162,334.09                                                                                                                      | 31 total; 2 since its plan                                          | Includes \$15,734.25 for declarations not counted as hazard incidents (EM-3187-OH).                                                      |
| Woodmere village | Village  | Approved, expires 2027-09-15 | FMA RL 0, SRL 0; any 0                                                               | no Public Assistance recorded                                                                                                     | 4 total; 2 since its plan                                           |                                                                                                                                          |
| Olmsted township | Township | Approved, expires 2027-09-15 |                                                                                      | \$19,098.61                                                                                                                       | 0 total; 0 since its plan                                           | No NFIP community ID on this jurisdiction's plan row. Includes \$5,661.75 for declarations not counted as hazard incidents (EM-3187-OH). |

Repetitive-loss counts are for whole NFIP communities, which can extend beyond this county (see the note in B2-c).

School districts and special districts get a plan clock row only.

County Public Assistance in B1-d also includes applicants filed under the county that are not jurisdictions in this plan (for example state agencies, special districts and nonprofits), so the jurisdiction rows add up to less.

## Supports FEMA checklist items B2-a and B2-b: vulnerability and potential impacts

Local data needed

The table below gives county-level starting figures; the plan describes impacts for each jurisdiction and its own assets.

- Critical facilities and lifelines per hazard
- A problem statement per jurisdiction per hazard
- Changes in development in hazard-prone areas since the last approval, or a statement of none (E1-a)
- Future assets

### County-level starter: exposure, expected annual loss and damage since the plan

Sources: 1, 2, 3, 5, 6, 7

| Hazard           | Building exposure<br><i>modeled dollars</i> | Agriculture exposure<br><i>modeled dollars</i> | Population exposed<br><i>people</i> | EAL buildings<br><i>modeled dollars per year</i> | EAL agriculture<br><i>modeled dollars per year</i> | Cost of expected deaths and injuries<br><i>FEMA's dollar value per year, not property damage</i> | EAL as % of exposure<br><i>buildings; agriculture where noted</i> | Storm Events damage since 2022-09-16<br><i>county-coded records, property plus crops, nominal dollars</i> | Zone-level damage since plan<br><i>property plus crops, reported for the zone</i> | Public Assistance since plan<br><i>nominal dollars; see note</i> | Note                             |
|------------------|---------------------------------------------|------------------------------------------------|-------------------------------------|--------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------|
| Coastal Flooding | \$4,967,695,290                             | n/a                                            | 7,308                               | \$5,578                                          | n/a                                                | \$447                                                                                            | 0.000112%                                                         |                                                                                                           |                                                                                   |                                                                  |                                  |
| Cold Wave        | \$274,209,116,692                           | \$8,014,262                                    | 1,264,334                           | \$14,553                                         | \$1,557                                            | \$49,819,839                                                                                     | under 0.0001%                                                     |                                                                                                           |                                                                                   |                                                                  |                                  |
| Drought          | n/a                                         | \$0                                            | n/a                                 | n/a                                              | \$0                                                | n/a                                                                                              |                                                                   |                                                                                                           |                                                                                   |                                                                  | agriculture exposure is 0 in NRI |
| Earthquake       | \$478,832,039,236                           | n/a                                            | 1,264,817                           | \$3,315,666                                      | n/a                                                | \$1,038,204                                                                                      | 0.000692%                                                         |                                                                                                           |                                                                                   |                                                                  |                                  |
| Hail             | \$274,209,116,692                           | \$8,014,262                                    | 1,264,334                           | \$224,991                                        | \$389                                              | \$58,466                                                                                         | under 0.0001%                                                     | \$1,500,000                                                                                               |                                                                                   |                                                                  |                                  |
| Heat Wave        | \$274,209,116,692                           | \$8,014,262                                    | 1,264,334                           | \$300                                            | under \$1                                          | \$10,976,331                                                                                     | under 0.0001%                                                     |                                                                                                           |                                                                                   |                                                                  |                                  |

| <b>Hazard</b>   | <b>Building exposure</b><br><i>modeled dollars</i> | <b>Agriculture exposure</b><br><i>modeled dollars</i> | <b>Population exposed</b><br><i>people</i> | <b>EAL buildings</b><br><i>modeled dollars per year</i> | <b>EAL agriculture</b><br><i>modeled dollars per year</i> | <b>Cost of expected deaths and injuries</b><br><i>FEMA's dollar value per year, not property damage</i> | <b>EAL as % of exposure</b><br><i>buildings; agriculture where noted</i> | <b>Storm Events damage since 2022-09-16</b><br><i>county-coded records, property plus crops, nominal dollars</i> | <b>Zone-level damage since plan</b><br><i>property plus crops, reported for the zone</i> | <b>Public Assistance since plan</b><br><i>nominal dollars; see note</i> | <b>Note</b>                                                                                                                                                               |
|-----------------|----------------------------------------------------|-------------------------------------------------------|--------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hurricane       | \$273,472,631,139                                  | \$8,012,261                                           | 1,260,615                                  | \$220,668                                               | \$1,070                                                   | \$6,859                                                                                                 | under 0.0001%                                                            |                                                                                                                  |                                                                                          |                                                                         |                                                                                                                                                                           |
| Ice Storm       | \$273,639,279,882                                  | n/a                                                   | 1,260,833                                  | \$744,210                                               | n/a                                                       | \$287,914                                                                                               | 0.000272%                                                                |                                                                                                                  |                                                                                          |                                                                         |                                                                                                                                                                           |
| Inland Flooding | \$274,157,837,802                                  | \$383,808                                             | 5,037                                      | \$177,773,630                                           | \$12,971                                                  | \$52,581                                                                                                | n/a (see note)                                                           | \$5,575,000                                                                                                      |                                                                                          |                                                                         | NRI counts the full building value of any census block with some flood loss; this is not the value of buildings in the floodplain. Use local FIRM overlays for B2-a/B2-b. |
| Landslide       | \$2,560,427,020                                    | n/a                                                   | 9,154                                      | \$100                                                   | n/a                                                       | \$287                                                                                                   | under 0.0001%                                                            |                                                                                                                  |                                                                                          |                                                                         |                                                                                                                                                                           |
| Lightning       | \$274,209,116,692                                  | n/a                                                   | 1,264,334                                  | \$21,362                                                | n/a                                                       | \$1,272,143                                                                                             | under 0.0001%                                                            |                                                                                                                  |                                                                                          |                                                                         |                                                                                                                                                                           |
| Strong Wind     | \$274,209,116,692                                  | \$8,014,262                                           | 1,264,334                                  | \$1,755,517                                             | \$3,565                                                   | \$1,402,604                                                                                             | 0.00064%                                                                 | \$530,500                                                                                                        | \$100,000                                                                                |                                                                         | Storm Events damage since the plan includes 1 zone-level High Wind record (\$100,000): a NOAA non-thunderstorm wind type, outside NRI's Strong Wind definition.           |
| Tornado         | \$274,209,116,692                                  | \$8,014,262                                           | 1,264,334                                  | \$17,862,769                                            | \$50                                                      | \$14,740,719                                                                                            | 0.00651%                                                                 | \$2,580,000                                                                                                      |                                                                                          |                                                                         |                                                                                                                                                                           |
| Tsunami         | n/a                                                | n/a                                                   | n/a                                        | n/a                                                     | n/a                                                       | n/a                                                                                                     |                                                                          |                                                                                                                  |                                                                                          |                                                                         | NRI publishes no building exposure for this county                                                                                                                        |
| Wildfire        | \$43,914,667,187                                   | \$3,077,506                                           | 192,585                                    | \$54,256                                                | \$1                                                       | \$6,015                                                                                                 | 0.000124%                                                                |                                                                                                                  |                                                                                          |                                                                         |                                                                                                                                                                           |
| Winter Weather  | \$274,209,116,692                                  | \$8,014,262                                           | 1,264,334                                  | \$682,057                                               | \$51                                                      | \$72,537                                                                                                | 0.000249%                                                                |                                                                                                                  | \$50,000                                                                                 |                                                                         |                                                                                                                                                                           |

Totals since 2022-09-16 (Storm Events through 2026-06-30): 155 county-coded records, 154 with a damage value recorded (including \$0), \$10,185,500; 17 zone-level records, 15 with a damage value recorded (including \$0), \$150,000 reported for the zone; Public Assistance: no counted declaration since the plan.

FEMA does not split Public Assistance by hazard. A declaration mapped to several hazards is listed under each of them with its full amount, so the per-hazard column does not add up to the total; the unit total counts each declaration once.

NRI computes earthquake exposure on its own basis, so it exceeds the county building value in B2-a.

Supports FEMA checklist item B2-a: vulnerability (county context)

County context

Source: 5

| Measure                                                                                                                                                                       | Value             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Population                                                                                                                                                                    | 1,264,334         |
| Building value (total, not at risk)                                                                                                                                           | \$274,209,116,692 |
| Agriculture value (total, not at risk)                                                                                                                                        | \$8,014,262       |
| NRI risk rating (all hazards)                                                                                                                                                 | Relatively High   |
| Expected annual loss, buildings and agriculture, all hazards                                                                                                                  | \$202,695,311     |
| Expected annual loss, population equivalence, all hazards (NRI values each statistical life at \$13.7M; a modeled value of expected deaths and injuries, not property damage) | \$79,734,945      |
| Social vulnerability rating                                                                                                                                                   | Relatively High   |
| Community resilience rating                                                                                                                                                   | Very High         |
| NRI version                                                                                                                                                                   | December 2025     |

FEMA's all-hazard expected annual loss adds buildings, agriculture and population equivalence; this table gives the property part and the population-equivalence part as separate rows.

Social vulnerability: higher means people are more likely to be harmed and slower to recover. Community resilience: lower means the community is less able to recover. High social vulnerability and low resilience both raise the NRI risk rating.

Supports FEMA checklist item B2-c: repetitive loss properties

Repetitive loss in this county, both definitions

Sources: 1, 4

| Definition                                    | Properties | Severe repetitive loss                               | Properties |
|-----------------------------------------------|------------|------------------------------------------------------|------------|
| Repetitive loss, FMA definition (44 CFR 77.2) | 3          | Severe repetitive loss, FMA definition (44 CFR 77.2) | 36         |
| Repetitive loss, NFIP insurance definition    | 134        | Severe repetitive loss, NFIP insurance definition    | 25         |

The state NFIP coordinator's list, the source FEMA's Handbook names, often uses the NFIP insurance definition (second row).

Repeat-flood properties: county and state-level rows

Sources: 1, 4

| Scope                          | RL, FMA<br><i>properties</i> | SRL, FMA<br><i>properties</i> | RL, NFIP<br><i>properties</i> | SRL, NFIP<br><i>properties</i> | Any category<br><i>properties</i> | Mitigated<br><i>properties</i> | Currently insured<br><i>properties</i> |
|--------------------------------|------------------------------|-------------------------------|-------------------------------|--------------------------------|-----------------------------------|--------------------------------|----------------------------------------|
| County total                   | 3                            | 36                            | 134                           | 25                             | 147                               | 14                             | 45                                     |
| of which: Bay Village city     | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Bedford city         | 0                            | 0                             | 2                             | 0                              | 2                                 | 0                              | 1                                      |
| of which: Bedford Heights city | 0                            | 1                             | 3                             | 1                              | 3                                 | 0                              | 1                                      |
| of which: Berea city           | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |

| Scope                                                                                         | RL, FMA<br><i>properties</i> | SRL, FMA<br><i>properties</i> | RL, NFIP<br><i>properties</i> | SRL, NFIP<br><i>properties</i> | Any category<br><i>properties</i> | Mitigated<br><i>properties</i> | Currently insured<br><i>properties</i> |
|-----------------------------------------------------------------------------------------------|------------------------------|-------------------------------|-------------------------------|--------------------------------|-----------------------------------|--------------------------------|----------------------------------------|
| of which: Brecksville city                                                                    | 0                            | 0                             | 5                             | 0                              | 5                                 | 0                              | 1                                      |
| of which: Broadview Heights city                                                              | 0                            | 0                             | 4                             | 0                              | 4                                 | 0                              | 0                                      |
| of which: Brooklyn city                                                                       | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Brook Park city                                                                     | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 1                                      |
| of which: Cleveland city                                                                      | 0                            | 1                             | 8                             | 1                              | 8                                 | 0                              | 2                                      |
| of which: Cleveland Heights city                                                              | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 1                                      |
| of which: Euclid city                                                                         | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Garfield Heights city                                                               | 0                            | 1                             | 4                             | 1                              | 4                                 | 0                              | 1                                      |
| of which: Independence city                                                                   | 0                            | 13                            | 21                            | 13                             | 21                                | 0                              | 9                                      |
| of which: Lakewood city                                                                       | 0                            | 2                             | 3                             | 2                              | 3                                 | 0                              | 1                                      |
| of which: Mayfield village                                                                    | 0                            | 1                             | 3                             | 1                              | 3                                 | 0                              | 1                                      |
| of which: Middleburg Heights city                                                             | 0                            | 2                             | 7                             | 2                              | 7                                 | 0                              | 0                                      |
| of which: North Olmsted city                                                                  | 0                            | 0                             | 6                             | 0                              | 6                                 | 0                              | 4                                      |
| of which: North Royalton city                                                                 | 0                            | 1                             | 5                             | 0                              | 6                                 | 1                              | 1                                      |
| of which: Oakwood village (community ID not in plan data)                                     | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Parma city                                                                          | 0                            | 0                             | 5                             | 0                              | 5                                 | 0                              | 0                                      |
| of which: Pepper Pike city                                                                    | 0                            | 0                             | 4                             | 0                              | 4                                 | 0                              | 1                                      |
| of which: Richmond Heights city                                                               | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Seven Hills city                                                                    | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Solon city                                                                          | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Strongsville city                                                                   | 0                            | 0                             | 7                             | 0                              | 7                                 | 0                              | 3                                      |
| of which: Valley View village                                                                 | 3                            | 14                            | 25                            | 4                              | 37                                | 13                             | 16                                     |
| of which: Westlake city                                                                       | 0                            | 0                             | 2                             | 0                              | 2                                 | 0                              | 1                                      |
| of which: Gates Mills village                                                                 | 0                            | 0                             | 2                             | 0                              | 2                                 | 0                              | 0                                      |
| of which: Walton Hills village                                                                | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Bentleyville village                                                                | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Cuyahoga County (unincorporated area)                                               | 0                            | 0                             | 3                             | 0                              | 3                                 | 0                              | 0                                      |
| of which: Rocky River city                                                                    | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Vermilion city (plan jurisdiction listed on the Erie County and Lorain County page) | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| of which: Unknown (community ID Unknown in FEMA data)                                         | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |
| Statewide, no county in FEMA's file                                                           | 0                            | 0                             | 1                             | 0                              | 1                                 | 0                              | 0                                      |

1 of the county's repeat-flood properties belong to NFIP communities whose plan jurisdiction is not listed on this page (the community rows above name the page that lists it).

The statewide row counts properties FEMA's file gives with no county in this state; they are listed for reference and are not in this county's counts.

**Repeat-flood properties by jurisdiction in the plan (NFIP community)**

Sources: 1, 4

| <b>Jurisdiction</b>      | <b>NFIP community ID</b> | <b>RL, FMA<br/><i>properties</i></b> | <b>SRL, FMA<br/><i>properties</i></b> | <b>RL, NFIP<br/><i>properties</i></b> | <b>SRL, NFIP<br/><i>properties</i></b> | <b>Any category<br/><i>properties</i></b> | <b>Mitigated<br/><i>properties</i></b> | <b>Currently insured<br/><i>properties</i></b> |
|--------------------------|--------------------------|--------------------------------------|---------------------------------------|---------------------------------------|----------------------------------------|-------------------------------------------|----------------------------------------|------------------------------------------------|
| Cuyahoga County          | 390766                   | 0                                    | 0                                     | 3                                     | 0                                      | 3                                         | 0                                      | 0                                              |
| Bay Village city         | 390093                   | 0                                    | 0                                     | 1                                     | 0                                      | 1                                         | 0                                      | 0                                              |
| Beachwood city           | 390094                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Bedford city             | 390095                   | 0                                    | 0                                     | 2                                     | 0                                      | 2                                         | 0                                      | 1                                              |
| Bedford Heights city     | 390096                   | 0                                    | 1                                     | 3                                     | 1                                      | 3                                         | 0                                      | 1                                              |
| Bentleyville village     | 390682                   | 0                                    | 0                                     | 1                                     | 0                                      | 1                                         | 0                                      | 0                                              |
| Berea city               | 390097                   | 0                                    | 0                                     | 1                                     | 0                                      | 1                                         | 0                                      | 0                                              |
| Bratenahl village        | 390734                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Brecksville city         | 390098                   | 0                                    | 0                                     | 5                                     | 0                                      | 5                                         | 0                                      | 1                                              |
| Broadview Heights city   | 390099                   | 0                                    | 0                                     | 4                                     | 0                                      | 4                                         | 0                                      | 0                                              |
| Brook Park city          | 390102                   | 0                                    | 0                                     | 1                                     | 0                                      | 1                                         | 0                                      | 1                                              |
| Brooklyn city            | 390100                   | 0                                    | 0                                     | 1                                     | 0                                      | 1                                         | 0                                      | 0                                              |
| Brooklyn Heights village | 390101                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Chagrin Falls village    | 390103                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Cleveland city           | 390104                   | 0                                    | 1                                     | 8                                     | 1                                      | 8                                         | 0                                      | 2                                              |
| Cleveland Heights city   | 390105                   | 0                                    | 0                                     | 1                                     | 0                                      | 1                                         | 0                                      | 1                                              |
| Cuyahoga Heights village | 390654                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| East Cleveland city      | 390106                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Euclid city              | 390107                   | 0                                    | 0                                     | 1                                     | 0                                      | 1                                         | 0                                      | 0                                              |
| Fairview Park city       | 390108                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Garfield Heights city    | 390109                   | 0                                    | 1                                     | 4                                     | 1                                      | 4                                         | 0                                      | 1                                              |
| Gates Mills village      | 390593                   | 0                                    | 0                                     | 2                                     | 0                                      | 2                                         | 0                                      | 0                                              |
| Glenwillow village       | 390735                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Highland Heights city    | 390110                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Highland Hills village   | 390127                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Hunting Valley village   | 390594                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Independence city        | 390111                   | 0                                    | 13                                    | 21                                    | 13                                     | 21                                        | 0                                      | 9                                              |
| Lakewood city            | 390112                   | 0                                    | 2                                     | 3                                     | 2                                      | 3                                         | 0                                      | 1                                              |
| Linndale village         | 390069                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Lyndhurst city           | 390113                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Maple Heights city       | 390114                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Mayfield Heights city    | 390115                   | 0                                    | 0                                     | 0                                     | 0                                      | 0                                         | 0                                      | 0                                              |
| Mayfield village         | 390116                   | 0                                    | 1                                     | 3                                     | 1                                      | 3                                         | 0                                      | 1                                              |

| <b>Jurisdiction</b>       | <b>NFIP community ID</b> | <b>RL, FMA</b><br><i>properties</i> | <b>SRL, FMA</b><br><i>properties</i> | <b>RL, NFIP</b><br><i>properties</i> | <b>SRL, NFIP</b><br><i>properties</i> | <b>Any category</b><br><i>properties</i> | <b>Mitigated</b><br><i>properties</i> | <b>Currently insured</b><br><i>properties</i> |
|---------------------------|--------------------------|-------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|------------------------------------------|---------------------------------------|-----------------------------------------------|
| Middleburg Heights city   | 390117                   | 0                                   | 2                                    | 7                                    | 2                                     | 7                                        | 0                                     | 0                                             |
| Moreland Hills village    | 390118                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| Newburgh Heights village  | 390119                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| North Olmsted city        | 390120                   | 0                                   | 0                                    | 6                                    | 0                                     | 6                                        | 0                                     | 4                                             |
| North Randall village     | 390736                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| North Royalton city       | 390121                   | 0                                   | 1                                    | 5                                    | 0                                     | 6                                        | 1                                     | 1                                             |
| Olmsted Falls city        | 390672                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| Orange village            | 390737                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| Parma city                | 390123                   | 0                                   | 0                                    | 5                                    | 0                                     | 5                                        | 0                                     | 0                                             |
| Parma Heights city        | 390124                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| Pepper Pike city          | 390125                   | 0                                   | 0                                    | 4                                    | 0                                     | 4                                        | 0                                     | 1                                             |
| Richmond Heights city     | 390126                   | 0                                   | 0                                    | 1                                    | 0                                     | 1                                        | 0                                     | 0                                             |
| Rocky River city          | 395372                   | 0                                   | 0                                    | 1                                    | 0                                     | 1                                        | 0                                     | 0                                             |
| Seven Hills city          | 390128                   | 0                                   | 0                                    | 1                                    | 0                                     | 1                                        | 0                                     | 0                                             |
| Shaker Heights city       | 390129                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| Solon city                | 390130                   | 0                                   | 0                                    | 1                                    | 0                                     | 1                                        | 0                                     | 0                                             |
| South Euclid city         | 390131                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| Strongsville city         | 390132                   | 0                                   | 0                                    | 7                                    | 0                                     | 7                                        | 0                                     | 3                                             |
| University Heights city   | 390133                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| Valley View village       | 390134                   | 3                                   | 14                                   | 25                                   | 4                                     | 37                                       | 13                                    | 16                                            |
| Walton Hills village      | 390636                   | 0                                   | 0                                    | 1                                    | 0                                     | 1                                        | 0                                     | 0                                             |
| Warrensville Heights city | 390135                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |
| Westlake city             | 390136                   | 0                                   | 0                                    | 2                                    | 0                                     | 2                                        | 0                                     | 1                                             |
| Woodmere village          | 390157                   | 0                                   | 0                                    | 0                                    | 0                                     | 0                                        | 0                                     | 0                                             |

**Counts by occupancy group for each jurisdiction are in the Excel file, sheet "B2-c Jurisdictions".**

Jurisdiction rows are whole NFIP communities and need not add up to the county total: a community that extends into another county is counted in full on each jurisdiction row, while the county table counts only its part in this county.

County repeat-flood properties by occupancy group

Sources: 1, 4

| Occupancy group           | RL, FMA<br><i>properties</i> | SRL, FMA<br><i>properties</i> | RL, NFIP<br><i>properties</i> | SRL, NFIP<br><i>properties</i> | Any category<br><i>properties</i> | Mitigated<br><i>properties</i> | Currently insured<br><i>properties</i> |
|---------------------------|------------------------------|-------------------------------|-------------------------------|--------------------------------|-----------------------------------|--------------------------------|----------------------------------------|
| single-family residential | 3                            | 15                            | 86                            | 5                              | 98                                | 13                             | 28                                     |
| 2 to 4 unit residential   | 0                            | 1                             | 3                             | 1                              | 3                                 | 0                              | 0                                      |
| other residential         | 0                            | 2                             | 7                             | 2                              | 7                                 | 0                              | 2                                      |
| non-residential           | 0                            | 18                            | 38                            | 17                             | 39                                | 1                              | 15                                     |
| not reported              | 0                            | 0                             | 0                             | 0                              | 0                                 | 0                              | 0                                      |

FEMA's occupancy groups have no institutional class; institutional properties are counted in non-residential or other residential in the table by occupancy group.

FMA RL and FMA SRL are the Flood Mitigation Assistance definitions (44 CFR 77.2), the ones the FEMA Local Mitigation Planning Policy Guide cites. NFIP repetitive loss (the FEMA insurance definition) is 2 or more claims over \$1,000 in 10 years, and a property can leave that group once it is mitigated. Also shown: NFIP severe repetitive loss, any category, mitigated and currently insured. The Methods page gives the OpenFEMA field details.

Counts are aggregates of FEMA's public NFIP Multiple Loss Properties file (FEMA's data date 2026-08-02; file version 2026-08-04). No property is identified. County assignment is FEMA's geocode.

In this county 3 properties are FMA repetitive loss but not NFIP repetitive loss, and 134 properties are NFIP repetitive loss but not FMA repetitive loss.

Exact counts; no count suppression.

Sources

Tables cite these sources by number. The full list, for the plan's bibliography (FEMA review item A4-a):

1. FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-29T134039Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)
2. FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-29T162832Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
3. FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-29T150754Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
4. FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-30, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
5. FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-30, [https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI\\_Table\\_Counties.zip](https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip) (download, 25 MB), [https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI\\_Table\\_CensusTracts.zip](https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip) (download, 635 MB)
6. NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-30, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
7. NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-30, <https://www.weather.gov/gis/ZoneCounty>
8. U.S. Census Bureau, Census 2024 Gazetteer, 2020 place by county, CT county-to-cousub crosswalk, version 2024-gazetteer, pulled 2026-09-30, [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024\\_Gazetteer/2024\\_Gaz\\_counties\\_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_counties_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024\\_Gazetteer/2024\\_Gaz\\_cousubs\\_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_cousubs_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024\\_Gazetteer/2024\\_Gaz\\_place\\_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_place_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024\\_Gazetteer/2024\\_Gaz\\_unsd\\_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_unsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024\\_Gazetteer/2024\\_Gaz\\_elsd\\_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_elsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024\\_Gazetteer/2024\\_Gaz\\_scsd\\_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_scsd_national.zip), [https://www2.census.gov/geo/docs/reference/codes2020/national\\_place\\_by\\_county2020.txt](https://www2.census.gov/geo/docs/reference/codes2020/national_place_by_county2020.txt), [https://www2.census.gov/geo/docs/reference/ct\\_change/ct\\_cou\\_to\\_cousub\\_crosswalk.xlsx](https://www2.census.gov/geo/docs/reference/ct_change/ct_cou_to_cousub_crosswalk.xlsx) (used to match place names and codes; no table prints its values)

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## What this packet is and what the plan adds

This packet is the federal data for the plan's risk assessment (the summary on page 1 says how it is organized); the plan and FEMA's review decide whether each item is met.

The plan adds what only the community has: local data on assets, critical facilities, development and each jurisdiction's impacts; local hazard history, including state-declared emergencies; the mitigation strategy; and adoption.

How the federal data are built: National Risk Index values are FEMA's model, not counts of events. Storm Events is more complete from 1996; zone-level records are placed by forecast zone, not by location in the county. Public Assistance for a jurisdiction is matched by applicant name. The Methods page gives every rule and the known edge cases.

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## OpenFEMA disclaimer

This product uses the Federal Emergency Management Agency's OpenFEMA API, but is not endorsed by FEMA. The Federal Government or FEMA cannot vouch for the data or analyses derived from these data after the data have been retrieved from the Agency's website(s).

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## Reuse, citation and corrections

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Cite this: Hazard Plain (2026). Cuyahoga County, OH: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-30; County FIPS 39035). Automated baseline. <https://hazardplain.org/oh/39035/> Built from FEMA OpenFEMA, the FEMA National Risk Index and NOAA NCEI Storm Events; source versions in the packet's Sources list.

Corrections: to report an error, name the packet, the table and what your records show. Contact: [contact@hazardplain.org](mailto:contact@hazardplain.org)