



# Understanding the Flood Indicator Report

This screening tool provides users with information regarding the presence of indicators of potential flood risk on or near a property of interest. **This tool does not calculate actual risk. Site-specific conditions affect actual flood risk. It does not provide information regarding the applicability of DEP regulations.** Flood indicators include, waterbodies, watercourses, FEMA Flood Zones, and State Flood Hazard Areas identified by DEP on New Jersey Flood Hazard Area mapping (Flood Plan) and associated Design Flood Elevation profiles, as well as New Jersey Tidal Climate Adjusted Flood Elevation (CAFE). These indicators are often associated with flood prone areas, but actual flood risk should be determined by a licensed professional engineer, who is experienced in delineating floodplains and can evaluate site-specific conditions like, topography, location, and condition of local infrastructure.

**Please Note: the absence of indicators does not mean that a property is free from flood risk. Flooding can occur anywhere.** The size and extent of flood prone areas are also expanding due to climate change-related impacts like increasing [rainfall intensities](#) and [sea-level rise](#).

Local factors that can change the extent of flooding:

- Increases in impervious surface
- Changes to stream flow
- Natural impediments
- Aging, poorly maintained, or failing infrastructure

For areas subject to tidal flooding, future sea-level conditions in tidal areas are depicted by the NJ Tidal CAFE. Read more [guidance on sea-level rise](#). For non-tidal areas, the Department recommends using the FEMA 500-year floodplain as an indicator of current and future conditions (e.g., increasing rainfall intensities).

To determine actual flood risk for at given property, contact:

- A licensed professional engineer
- Your municipality
- [DEP's](#) Division of Land Resource Protection

This flood report includes flood indicators that are present within the buffer set around the property. Flood indicators can include:

- FEMA Flood Zones
- FEMA Preliminary Flood Zones
- Watercourses
- Waterbodies
- NJ Flood Plan
- NJ Flood Elevation Profile
- NJ Tidal Climate Adjusted Flood Elevation (CAFE)

Flood indicators are described in detail below. While the indicators noted above include the best available data to indicate flood potential, these indicators are of varying age and completeness and may not reflect on-site conditions. Actual flood risk should be determined by a flood professional who can evaluate site-specific conditions.

- **FEMA Flood Zones:** Geographic areas that FEMA has defined according to varying levels of flood risk. These maps are provided to support the National Flood Insurance Program. The maps depict the Special Flood Hazard Areas or the 100-year flood plain (i.e., Zones A, AE, AH, AO, V, VE) and the 500-year floodplain in both tidal and non-tidal areas. These zones are described in detail below. The maps do not depict actual risk. They are based on past flooding. The age of these maps varies depending on location. Also, FEMA Flood Zones do not reflect future conditions resulting from climate change or changes to the watershed. Due to these limitations, when considering flood potential, the DEP recommends the use of the 500-year flood zone for the non-tidal areas and the DEP's Tidal CAFE layer, to better reflect current and future conditions. These are both described below.

#### Important Notes about FEMA Flood Zones:

- *FEMA Preliminary vs. Effective Flood Zones:* There can be two types of FEMA Flood Zone maps – effective and preliminary. While both maps depict areas with flood potential, maps labeled “preliminary,” which are based on more recent and updated flood data, are not yet used to determine flood insurance rates. Preliminary maps must be adopted by FEMA to replace an effective map for the purposes of flood insurance. While the preliminary maps contain more recent data, both preliminary and effective maps are based on past flooding and do not reflect future conditions resulting from climate change or changes within the watershed. As noted above, to plan for a changing climate, DEP recommends the use of the 500-year flood zone for the non-tidal areas and the Tidal CAFE, both of which are described herein.
- *Limit of Moderate Wave Action (LiMWA):* Post-storm damage shows that even 1.5-foot waves can cause significant damage to buildings that were not built to withstand them. To highlight this risk on flood maps, FEMA developed the LiMWA. This informational line may be identified in the report and appear on the property where wave heights reach between 1.5 feet and 3 feet above tidal stillwater elevations.

#### FEMA Special Flood Hazard Area (SFHA)

The SFHA is the area that has a 1% chance of occurring in any given year. This flood has an equal chance of occurring every year, regardless of whether or not it occurred in previous years.

- **Floodway (FW):** The inner portion of the flood plain, which has an extremely high risk of flood. Development in this area is generally prohibited.
- **Zone A:** Area inundated by the storm that has 1% chance storm of occurring in a year, known as the Base Flood, where Base Flood Elevations (BFE) have not been determined because no detailed analysis have been performed. Because floodplains marked as Zone A do not tell you the flood

elevation, they are not used as a basis for determining compliance with the State's flood hazard regulations.

- **Zone AE:** Area inundated by the Base Flood event with BFE determined. The BFE is the number associated with this zone indicates the elevation of flooding that could occur. Therefore, Zone AE mapping is used to help define jurisdictional limits of the State's flood hazard regulations and to establish design criteria that your project must meet.
- **Zone AH:** Area inundated by the Base Flood with flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **Zone AO:** Area inundated by the Base Flood with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For some areas, (i.e., alluvial fan flooding), velocities are also determined.
- **Zone V:** Coastal flood zone with waves at least 3 feet in height. Base Flood elevations not determined. Because floodplains marked as Zone V do not tell you the flood elevation, they are not used as a basis for determining compliance with the State's flood hazard regulations.
- **Zone VE:** Coastal flood zone with waves at least 3 feet in height. Base Flood elevations determined. Therefore, Zone VE mapping is used to help define jurisdictional limits of the State's flood hazard regulations and to establish design criteria that your project must meet.

#### Additional FEMA Flood Zones

The areas below relate to the 500-year flood, which is the level of flooding that has a 0.2% chance of occurring in any given year. This flood has an equal chance of occurring every year, regardless of whether it has occurred in previous years. FEMA Flood Zone maps are based on past flooding, are based on data of varying age, and do not reflect future conditions resulting from climate change. Therefore, when considering flood potential, in non-tidal areas, DEP recommends the use of Zone X (shaded), wherever available, to better reflect current and future conditions.

- **Zone X (shaded):** Areas within 500-year flood plain; areas in 100-year flood plain with depths of less than 1 foot or drainage areas less than 1 square mile; areas protected from 100-year flood by levees.
  - **Zone X (not shaded):** Areas outside the 500-year flood plain.
- **FEMA Preliminary Flood Zones:** Explained above.
  - **Watercourses:** A channel containing a flowing body of water (e.g., streams, rivers, brooks).
  - **Waterbodies:** A body of water (e.g., lakes, reservoirs).
  - **NJ Flood Plan:** A flood hazard area map, published by New Jersey, that depicts the extent of flood prone areas in proximity to nearby watercourses and waterbodies. These plans show the extent of the area expected to flood during the Base Flood (i.e., the 1% chance in any given year or 100-year flood event) at the time they were adopted. In fluvial (non-tidal) areas, NJ Flood Hazard Mapping is based on a flood that has 25% more floodwaters than a 1% flood. The flood plan also depicts the floodway, which is the inner portion of the flood hazard area.
    - *Note: Should this tool show that the property is located on a flood plan, this does not necessarily mean that the property will be flooded. Flood plans depict limits of known flooding, they also depict areas located outside of, but adjacent to flood*

*prone areas. Therefore, while the property may be shown in a flood plan, this does not automatically mean that the property is currently prone to flooding.*

- **NJ Flood Elevation Profile:** A graph that accompanies the NJ Flood Plan. It depicts the elevation of the New Jersey Flood Hazard Area Design flood. This flood is based on, but typically more severe than the Base Flood (1% flood) because it also accounts for additional flooding caused by the continued development. Specifically, in fluvial (non-tidal) areas, NJ Flood Elevations are based on a flood that has 25% more floodwaters than a 1% flood. If the ground elevation of a property is known, the depth of floodwaters on that property can be determined from the profile.
- **NJ Tidal Climate Adjusted Flood Elevation Map (CAFE):** Depicts the geographic extent of the future flood hazard by adding 5 ft of sea level rise to the Base Flood, which is consistent with sea-level rise projections for 2100 as recommended in the [DEP's Sea-level Rise Guidance](#).

All layers that intersect with the buffer will be identified on the report and the area of the buffer that intersects these areas is calculated. So, for example, if the entire buffer is in the AE zone the buffer area will equal the report area.

**Important Note:** Flooding can happen anywhere. There may be a risk of flood even when flood indicators are not present. Onsite factors must be evaluated to understand actual risk. Consider contacting your municipality or [DEP](#) to understand other factors which may impact flood risk, including storm sewer surcharging, clogged inlets, unstudied watercourses, waterbodies, unmapped flood plains, flooding that will occur in new places that may have never flooded before due to climate change, etc.

## TAKE ACTION

Using this tool is an important first step to understanding and planning for potential flooding. Here are some additional steps you can take:

1. **Sign up for local flood alerts on**
  - [USGS Water Alert](#) provides real-time alerts when surface water levels of the watercourse exceed a certain threshold identified by the user.
  - [Nixle](#) to get emergency advisories on your phone.
  - If you're located along the coast and want more robust flood alerts by email, sign up for [Steven's Flood Advisor System](#).
2. **Be prepared before floods happen.**
  - Know your [evacuation route](#) and leave when told.
  - If you are under a flood warning, follow the [ready.gov flood guidelines](#).
3. **Stay Safe.**
  - Remember: [Turn around, don't drown!](#)
  - Do not drive, walk, or swim through floodwaters.
4. **Know your risk.**
  - Use existing flood risk calculators from trusted sources.
  - If you're located along the coast use [NJFloodMapper.org](#).
5. **Consider buying flood insurance.**
  - Remember that most homeowner's insurance doesn't cover flooding. Purchasing flood insurance ensures that you aren't leaving your home or business unprotected.

- Find out more about [flood insurance](#).
- 6. **Make sure you have a family plan and an emergency kit.**
  - A plan and emergency kit help you to be ready for the unexpected and reduce your stress in a flood - or in any other kind of emergency. [Learn more here](#).
- 7. **Keep stormwater drains clean.**
  - If you have a drain in front of your property, keep the grate free from leaves and debris to allow the stormwater to enter the system. NEVER enter into a storm drain.
  - Contact your municipality if you see a drain, basin or any other stormwater infrastructure that needs attention or is malfunctioning.
- 8. **Inform others.**
  - Help everyone understand where flooding happens by sharing your photos and information from anywhere in New Jersey using the [MyCoast](#) portal.

If there are flood indicators identified on or near a property, it may be in a regulated Flood Hazard Area. Certain activities (e.g., construction, vegetation removal, or filling) undertaken in this area are regulated by the DEP. Please contact [DEP](#) to learn more or to request a Flood Hazard Area Applicability Determination which will identify whether a permit is required. Consult the [applicability determination checklist](#) for more information. While there is no fee for DEP to process an applicability determination, the services of an engineer, land surveyor, or architect licensed by the State may be required to prepare the application.

Actual flood risk should be determined by a flood professional who can delineate the limits of the Flood Hazard Area on a property given the site-specific conditions like, topography, location, and condition of local infrastructure. This process requires the fee and rates determined by the consultant and is the responsibility of the homeowner.