

NEW JERSEY'S  
REGULATORY RESPONSE  
TO A CHANGING CLIMATE

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**NJPACT REAL**

**NJ Protecting Against Climate Threats  
Resilient Environments and Landscapes  
3 March 2026**

**Vincent Mazzei, P.E.  
NJ State Floodplain Administrator**



## **NJPACT: Resilient Environment And Landscapes (REAL) Reforms**

To address the unavoidable impacts of climate change, such as sea-level rise, extreme weather, and chronic flooding, NJDEP is pursuing targeted regulatory reforms that will modernize the land use rules and focus on increased resilience throughout the State.

- ▶ Developed in response to Governor Murphy's EO
- ▶ 100+ stakeholder sessions since 2020
- ▶ Purpose:
  - ▶ Address impacts of climate change on land use regulations
  - ▶ Improve land and water resource protection
- ▶ **Two components**
  - ▶ Precipitation-driven (fluvial) flooding
    - ▶ Increasing atmospheric temperatures causes increased rainfall intensity and more severe riverine flooding
  - ▶ Tidal flooding
    - ▶ Exacerbated by rising sea levels



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## ▶ **Inland Flood Protection Rules (fluvial)**

### ▶ **Adopted July 17, 2023**

- ▶ Raises fluvial flood elevations by 2 feet (to FEMA+3)
- ▶ Requires stormwater management designs to be based on projected year 2100 precipitation

## ▶ **REAL (tidal)**

### ▶ **Proposed: August 5, 2024**

### ▶ **Notice of Substantial Change: July 21, 2025**

### ▶ **Adopted: January 20, 2026**

### ▶ **All aspects of rule in effect: July 20, 2026**

- ▶ Raises tidal flood elevations by 4 feet
- ▶ Creates “inundation risk zone”



# NJPACT: Resilient Environment And Landscapes (REAL) Reforms

To address the unavoidable impacts of climate change, such as sea-level rise, extreme weather, and chronic flooding, NJDEP is pursuing targeted regulatory reforms that will modernize the land use rules and focus on increased resilience throughout the State.



Protect against chronic inundation, sea-level rise, and flood damage



Protect critical facilities and infrastructure



Protect land and water resources



Improve stormwater management



Encourage nature-based solutions



Support renewable energy deployment



Improve DEP permitting processes



# Scope of Rulemaking

- **New standards apply only to:**
  - New development
  - Redevelopment
  - Substantial improvements to buildings
- **Rulemaking does not:**
  - Affect existing development unless improvements are made
  - Affect flood insurance rates or the need for flood insurance
  - Create “no-build” zones
  - Require roads and buildings to be elevated when doing so is impracticable

# GRACE PERIOD

## SIX MONTH GRACE PERIOD

- ▶ Applicants can use prior rules for:
  - ▶ **Verifications**
  - ▶ **General permits**
  - ▶ **Individual permits**
- ▶ Must submit a complete application to DEP by July 20<sup>th</sup>

## EFFECTIVE NOW

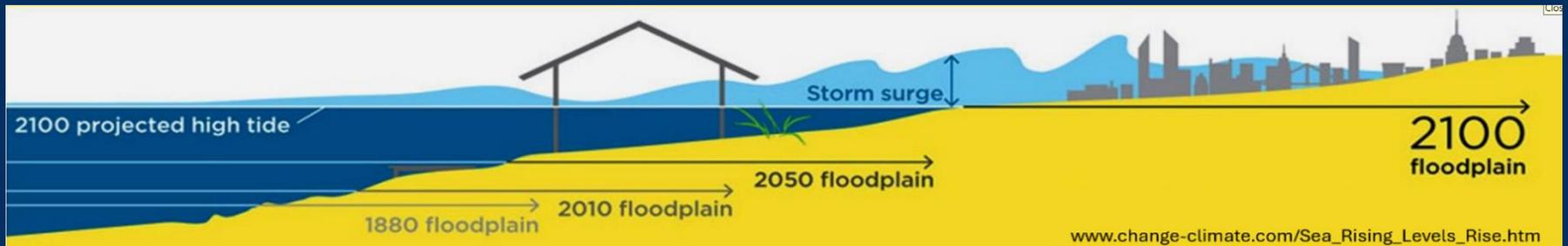
- ▶ **Exemptions**
- ▶ **Permits-by-Registration**
- ▶ **General Permits-by-Certification**

# “LEGACY” PROVISIONS

- ▶ **No approval needed:** If project was outside FHA and didn't need a FHA or CZM permit before adoption, and you have certain local approvals or started construction
- ▶ **“Old rules” apply:** Where a public transportation entity reaches a “preferred alternative” prior to adoption



# Effects of Sea Level Rise





**$\frac{2}{3}$**

**of NJ coastline  
already at high  
or very high risk  
to coastal  
erosion**

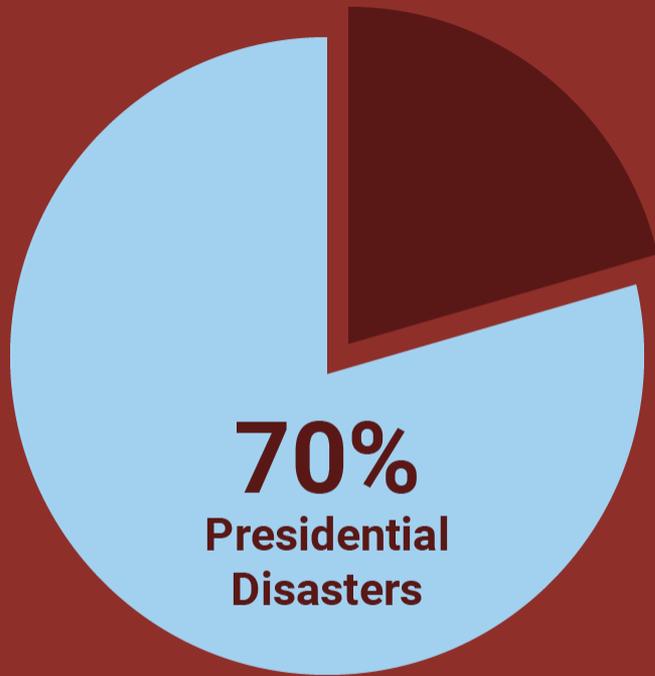
**98%**

**of the coastline  
at medium or  
very high risk to  
sea-level rise**

**500,000**

**acres of NJ  
land highly  
vulnerable to  
coastal hazards.**





**2008-2017**

According to Pew Charitable Trusts, flood-related natural disasters accounted for over **70%** of **presidential disaster declarations** from the years between **2008-2017**.

# Coastal Inundation & Flood Damage

Rutgers University's 2019 Science and Technical Advisory Panel (STAP) Report indicates a 50% probability that sea level rise will exceed 3.3 feet and a 17% probability that sea level rise will exceed 5.1 feet by 2100 assuming moderate emissions.

## Sea-level rise:

Table ES-1: New Jersey Sea-Level Rise above the year 2000 (1991-2009 average) baseline (ft)\*

		2030	2050	2070			2100			2150		
		Emissions										
Chance SLR Exceeds				Low	Mod.	High	Low	Mod.	High	Low	Mod.	High
Low End	> 95% chance	0.3	0.7	0.9	1	1.1	1.0	1.3	1.5	1.3	2.1	2.9
Likely Range	> 83% chance	0.5	0.9	1.3	1.4	1.5	1.7	2.0	2.3	2.4	3.1	3.8
	~50 % chance	0.8	1.4	1.9	2.2	2.4	2.8	3.3	3.9	4.2	5.2	6.2
	<17% chance	1.1	2.1	2.7	3.1	3.5	3.9	5.1	6.3	6.3	8.3	10.3
High End	< 5% chance	1.3	2.6	3.2	3.8	4.4	5.0	6.9	8.8	8.0	13.8	19.6

\*2010 (2001-2019 average) Observed = 0.2 ft

<https://njclimateresourcecenter.rutgers.edu/resources/nj-sea-level-rise-reports/>

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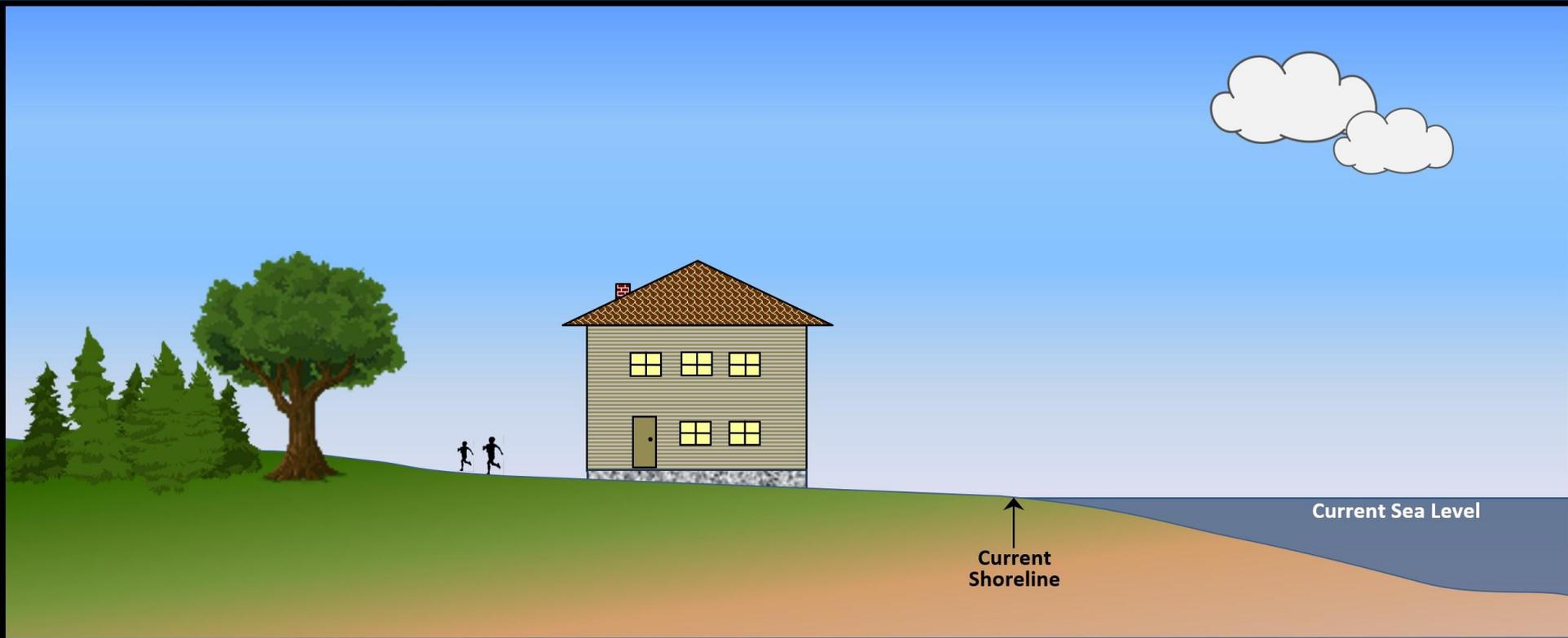
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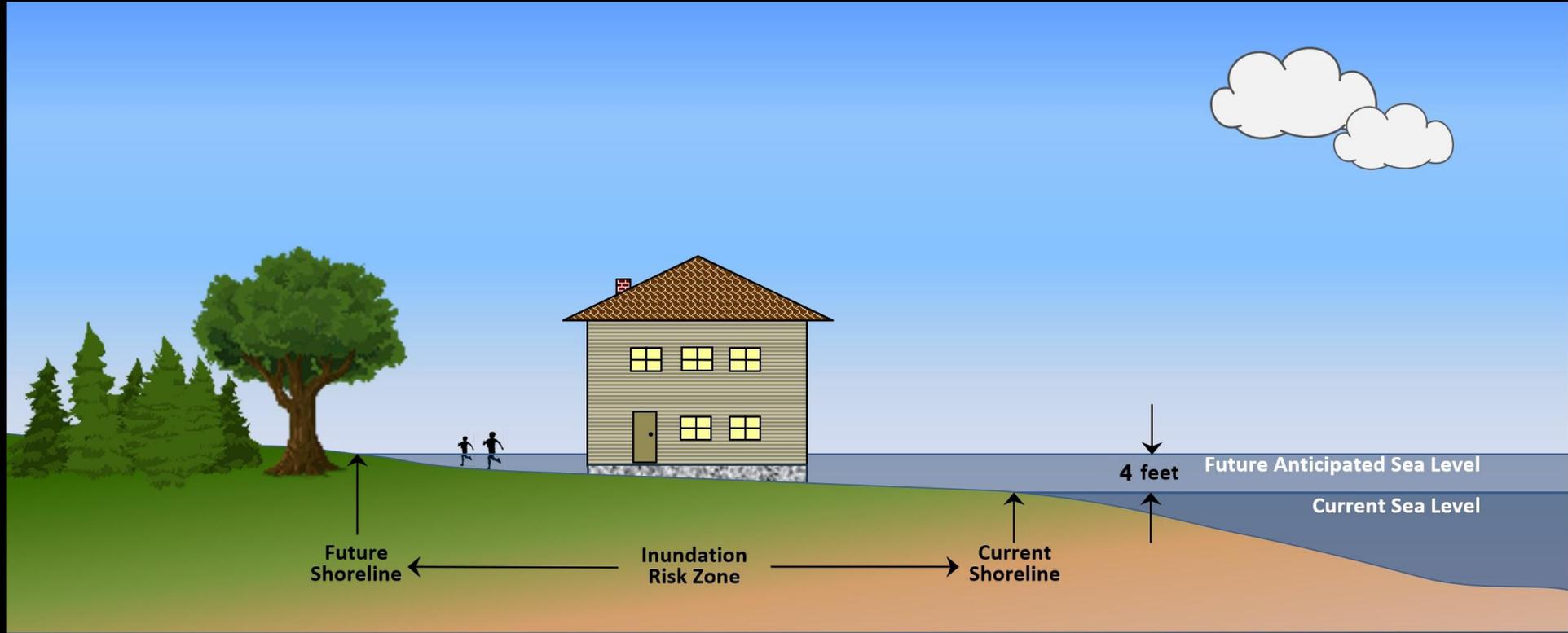
- **Best-available NJ-specific information published after REAL proposal indicates a difference in the likely global temperature increase used in the 2019 STAP Report.**
- **Moderate emissions scenario now anticipates an increase in sea level rise of 4.4 feet by 2100 instead of 5.1 feet.**
- **Inundation IRZ and tidal CAFE are therefore based on a four-foot increase in sea level rather than the originally proposed five-foot rise.**
- **NJDEP will review available climate change data every five years and adjust rules as needed.**



# Inundation Risk Zone

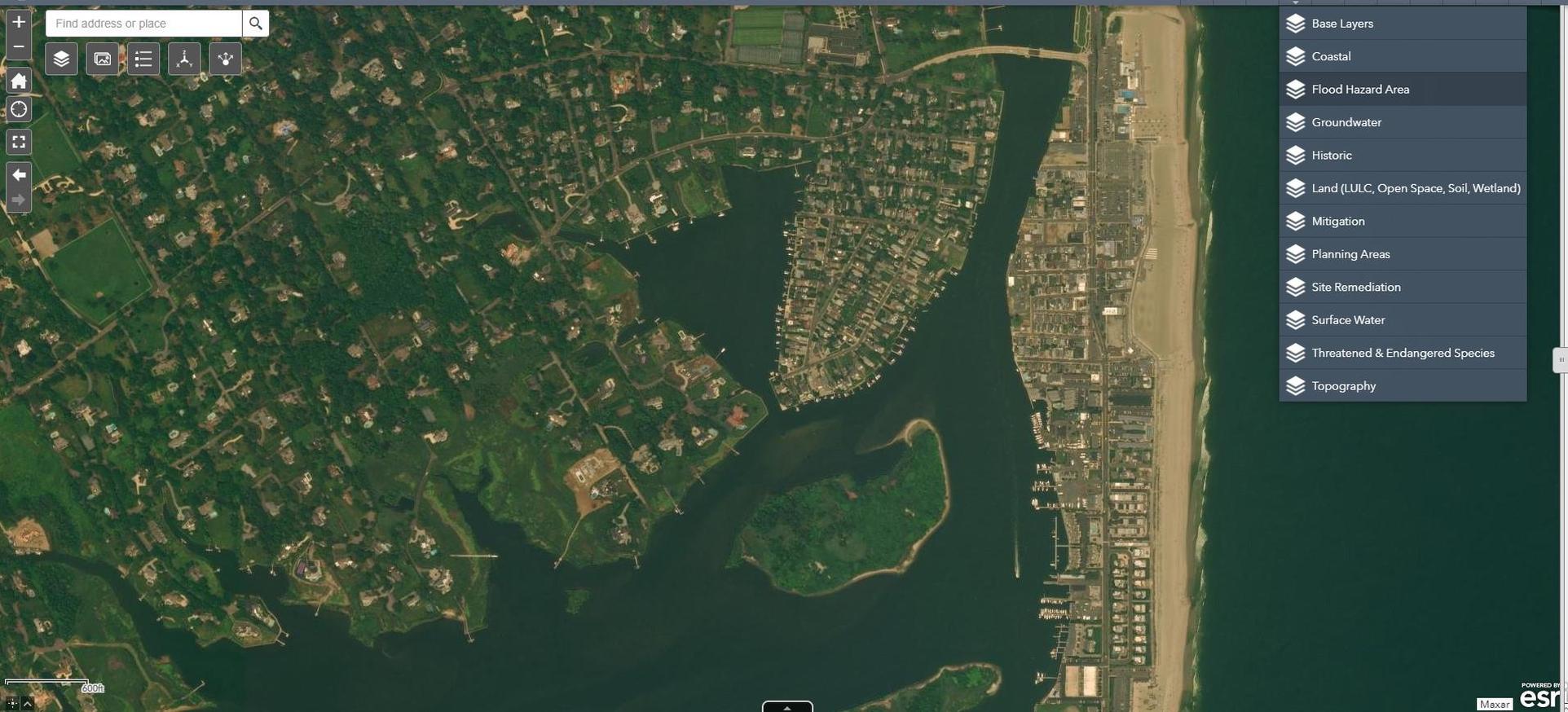


# Inundation Risk Zone





Find address or place



- Base Layers
- Coastal
- Flood Hazard Area
- Groundwater
- Historic
- Land (LULC, Open Space, Soil, Wetland)
- Mitigation
- Planning Areas
- Site Remediation
- Surface Water
- Threatened & Endangered Species
- Topography

600ft



Find address or place



### Flood Hazard Area

Layers

- Flood Plan Locator ...
- NJPDES Combined Sewer Overflow (CSO) ...
- Tidal Climate Adjusted Flood Elevation (CAFE SLR 4ft) ...
- Tidal Climate Adjusted Flood Elevation (CAFE SLR 5ft) ...
- Sea Level Rise Inundation - 4 ft (referred to as "IRZ" in NJPACT-REAL) ...
- Sea Level Rise Inundation - 5 ft ...
- FEMA (Effective) Flood Hazard Area Maps ...
- FEMA (Preliminary) Flood Hazard Area Maps ...

# INUNDATION RISK ZONE

- **New standards apply to new/reconstructed/improved:**

## **Residential buildings**

### **Critical buildings**

- ▶ ASCE Flood Design Class 3 and 4 buildings.
- ▶ Includes schools, fire and police stations, medical facilities, correctional facilities, power generating stations, critical aviation facilities.

### **Critical infrastructure**

- ▶ Infrastructure necessary for emergency response and recovery during and after a flood, or that poses a risk to public health, safety, and welfare should it be damaged or unable to perform its intended functions.

### **Inundation Risk Zone standards do not apply to:**

**Commercial development**

**Industrial development**

**Buildings that are not “residential” or “critical”**

**Infrastructure that is not “critical”**

# INUNDATION RISK ZONE

## EXCEPTIONS

### Residential buildings

- Repair and maintenance activities that do not alter the building's footprint or increase its habitable area

### Critical buildings

- Repair and maintenance activities that do not alter the building's footprint or increase its habitable area

### Critical infrastructure

- Certain drainage improvements
- Safety or state of good repair improvements
- Any public transportation entity project that reached a preferred alternative or equivalent milestone prior to January 20, 2026

# INUNDATION RISK ZONE

## PERMANENT STANDING WATER DUE TO SEA-LEVEL RISE

### ▶ **Inundation Risk Assessment**

- ▶ Narrative response to risk of loss/damage questions
- ▶ How much inundation is to be expected
- ▶ What are the potential impacts if/when site is inundated

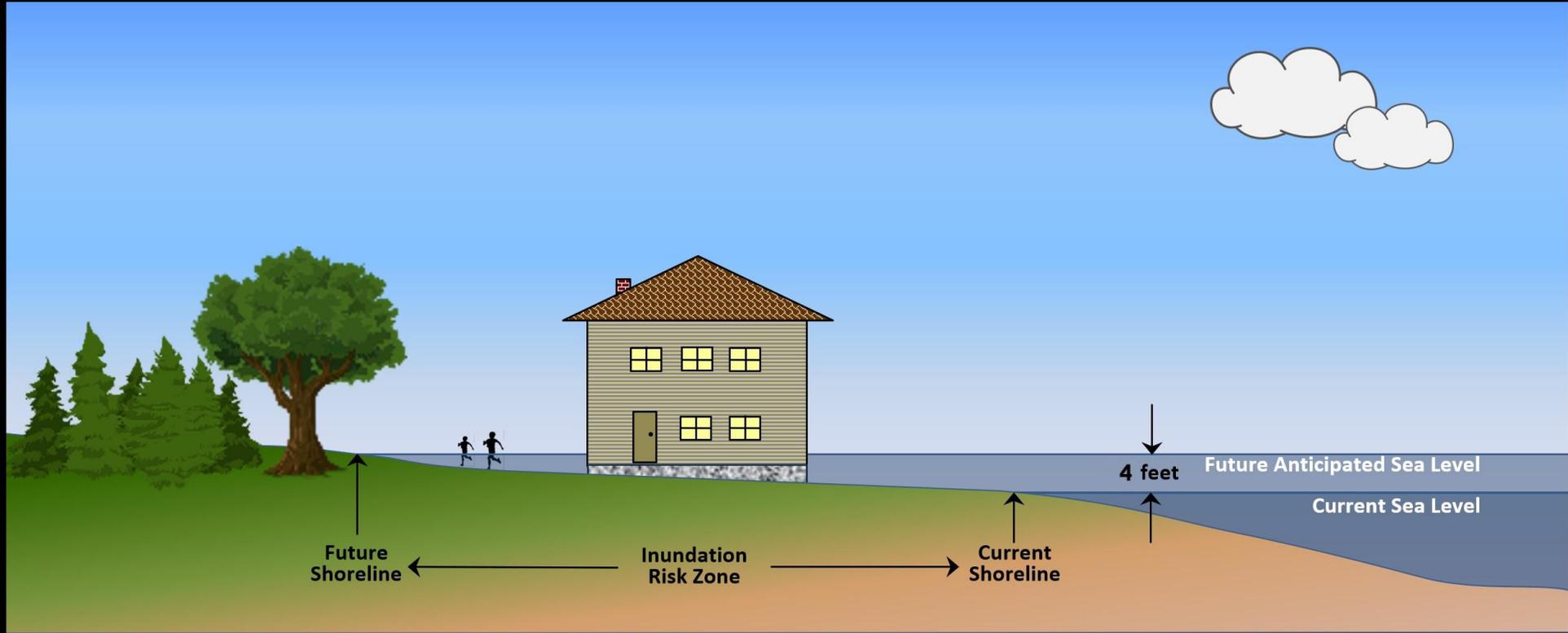
### ▶ **On-Site Alternatives Analysis**

- ▶ Examines on-site design alternatives to avoid or minimize risks for residential and critical buildings

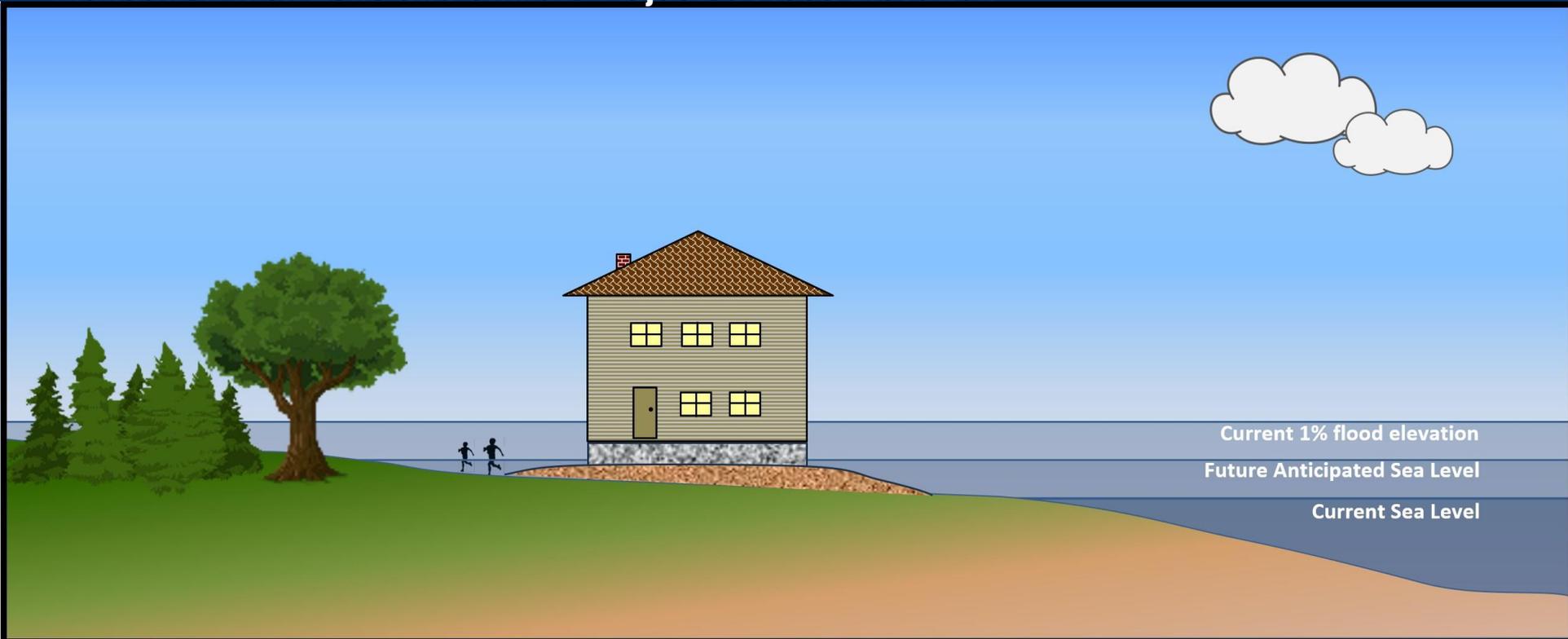
### ▶ **Risk Acknowledgement**

- ▶ Adds narrative disclosure based on Inundation Risk Assessment
- ▶ Recorded in title/deed

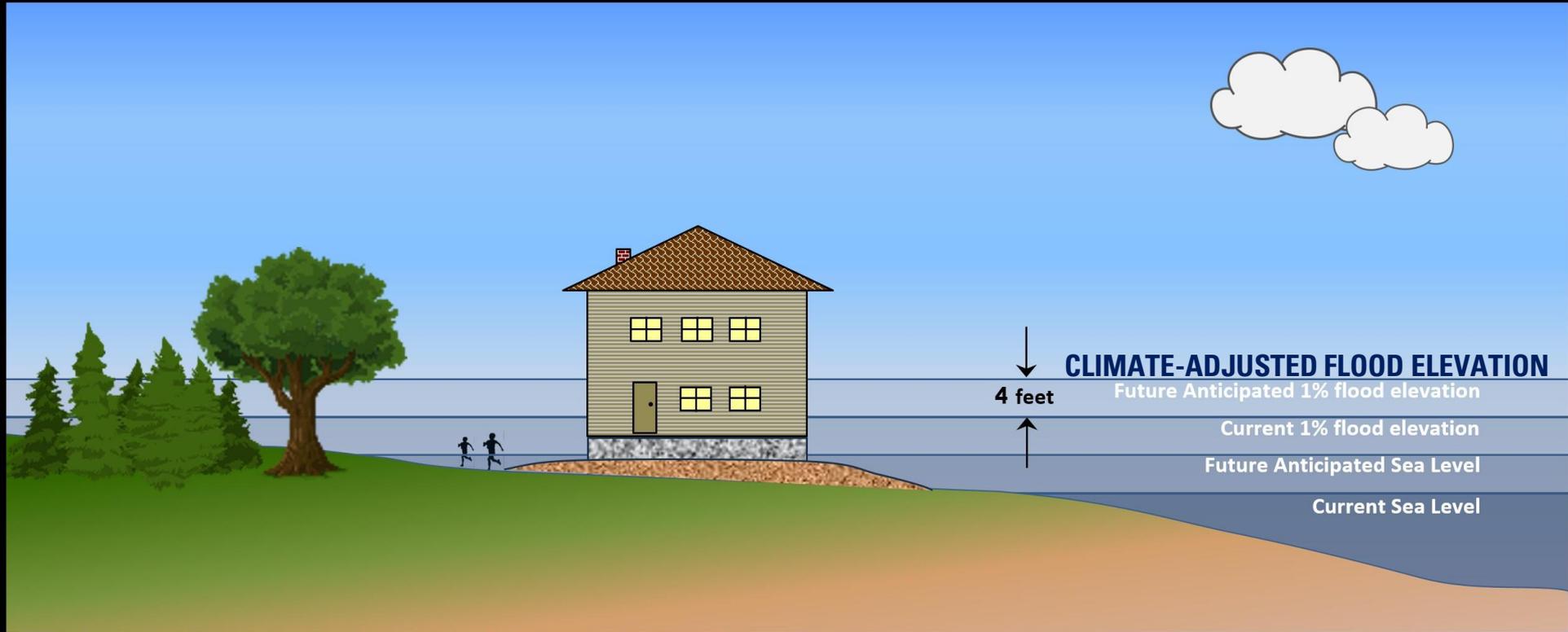
# Inundation Risk Zone



# Inundation Risk Zone and Climate-Adjusted Flood Elevation



# Inundation Risk Zone and Climate-Adjusted Flood Elevation



Find address or place

Navigation icons: Home, Refresh, Full Screen, Back, Forward



### Flood Hazard Area

- Layers
- Flood Plan Locator ...
  - NJPDES Combined Sewer Overflow (CSO) ...
  - Tidal Climate Adjusted Flood Elevation (CAFE SLR 4ft) ...
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Find address or place



### Flood Hazard Area

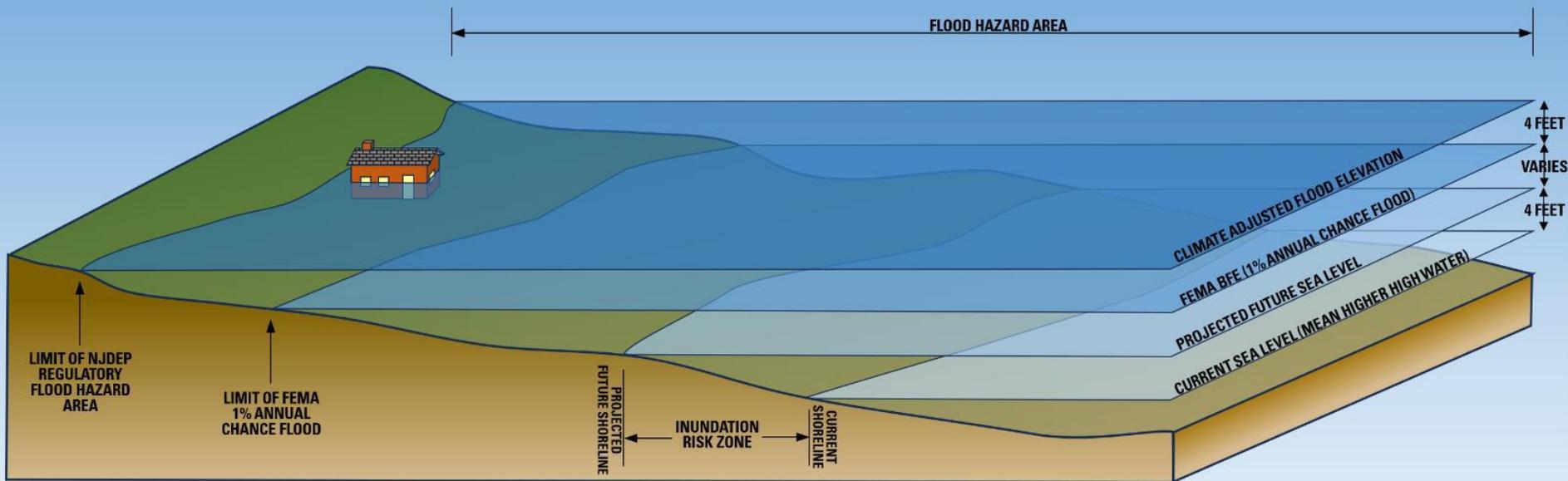
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600ft

# CROSS-SECTION OF A TIDAL FLOOD HAZARD AREA

NOTE: DRAWING NOT TO SCALE



# CLIMATE ADJUSTED FLOOD ELEVATION (CAFE) IN COASTAL FLOOD HAZARD AREAS

## PRIOR RULES

Approximately 16% of NJ lies in a FEMA-mapped floodplain

- ▶ NJDEP's regulatory flood was equal to FEMA's 100-year (1%) base flood elevation (BFE)
- ▶ One-foot of freeboard added for roads and buildings

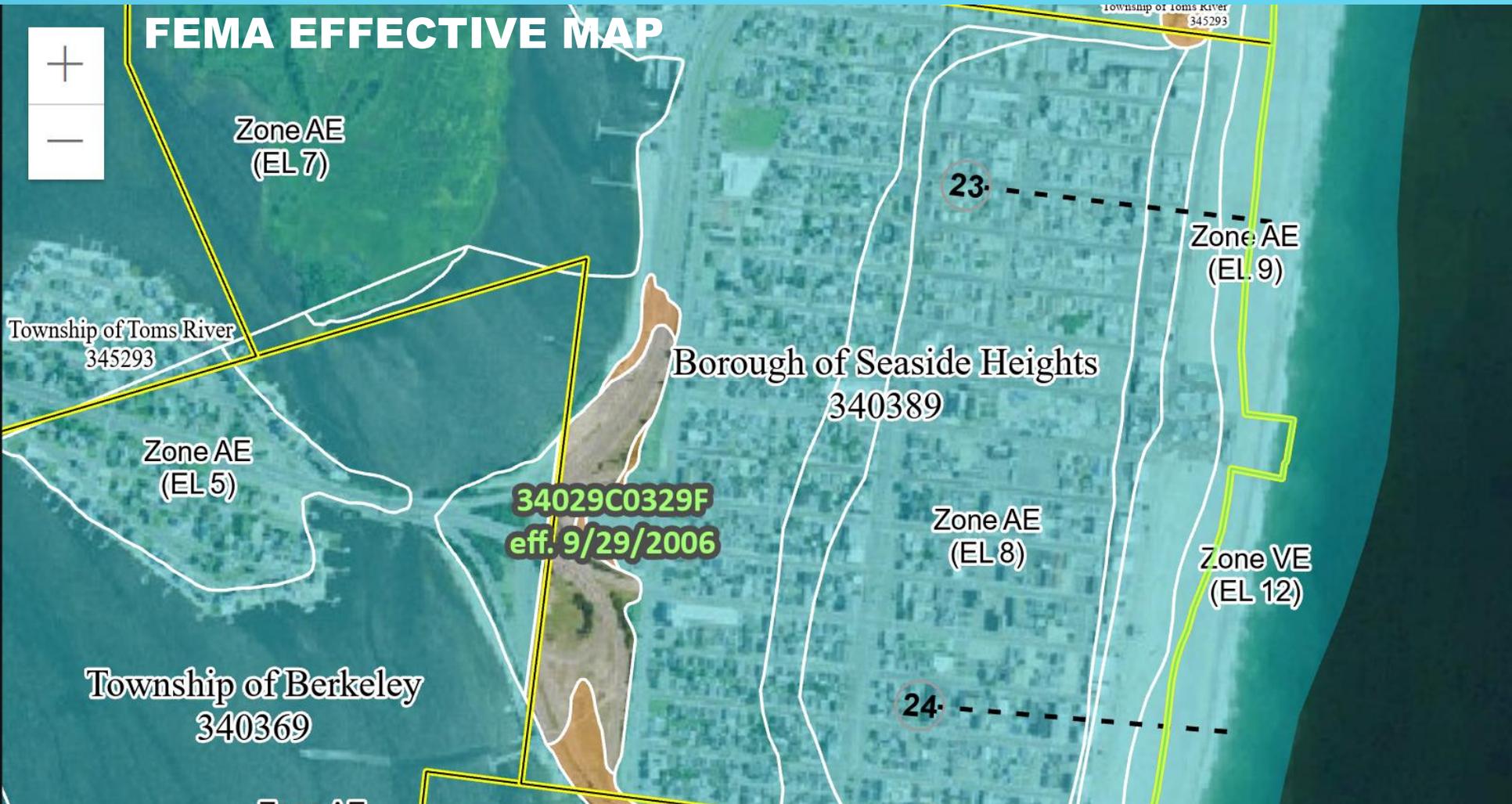
## CURRENT RULES

Adds about 1.5% more land area into NJDEP's regulatory floodplain

- ▶ Climate-adjusted flood elevation along the coast is equal to FEMA+4
- ▶ One-foot of freeboard added for roads and buildings

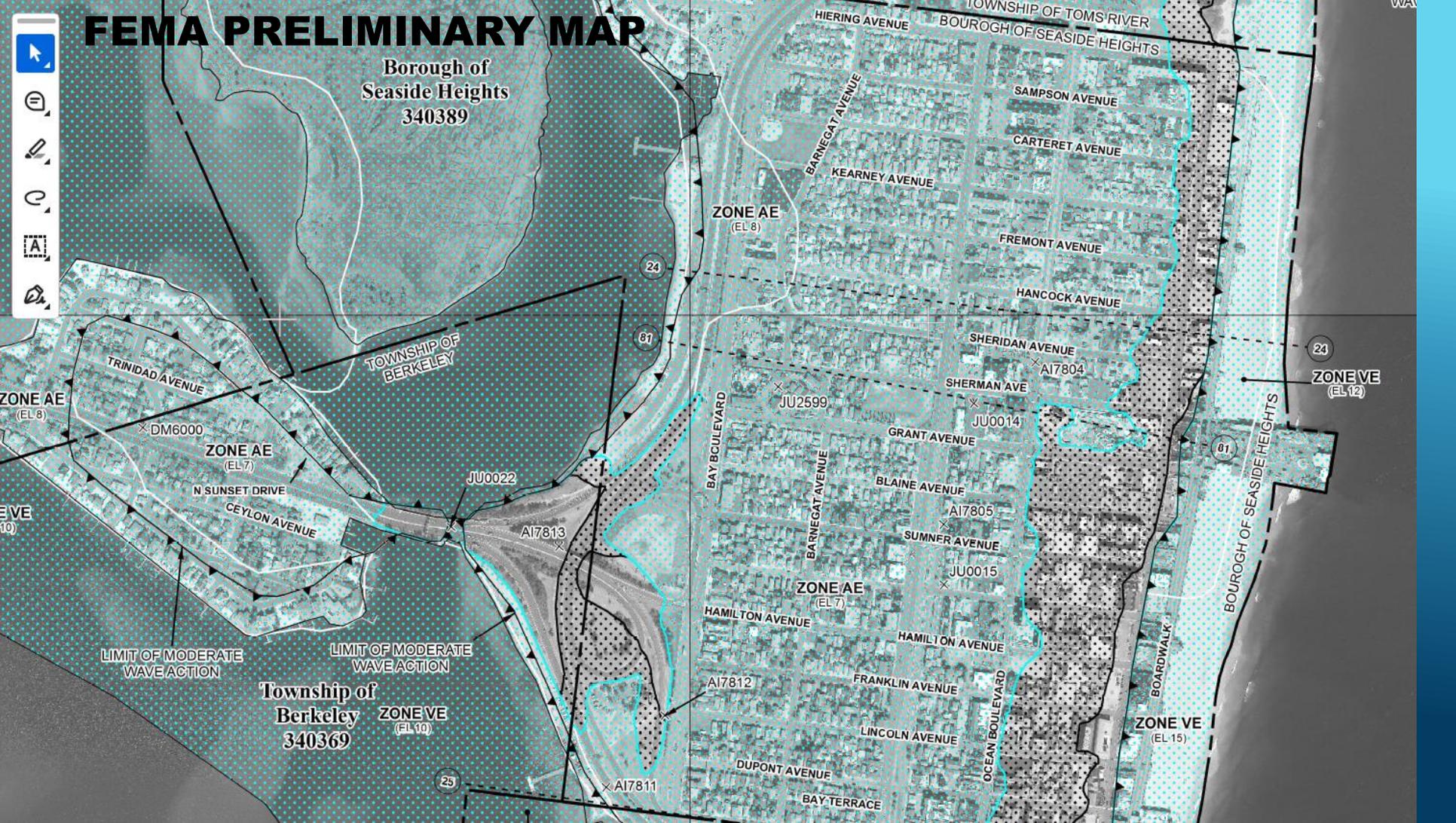
# CAFE = FEMA+4 FEET

## FEMA EFFECTIVE MAP



# FEMA PRELIMINARY MAP

Borough of  
Seaside Heights  
340389



ZONE AE  
(EL 8)

ZONE AE  
(EL 7)

ZONE AE  
(EL 8)

ZONE AE  
(EL 7)

ZONE VE  
(EL 12)

ZONE VE  
(EL 10)

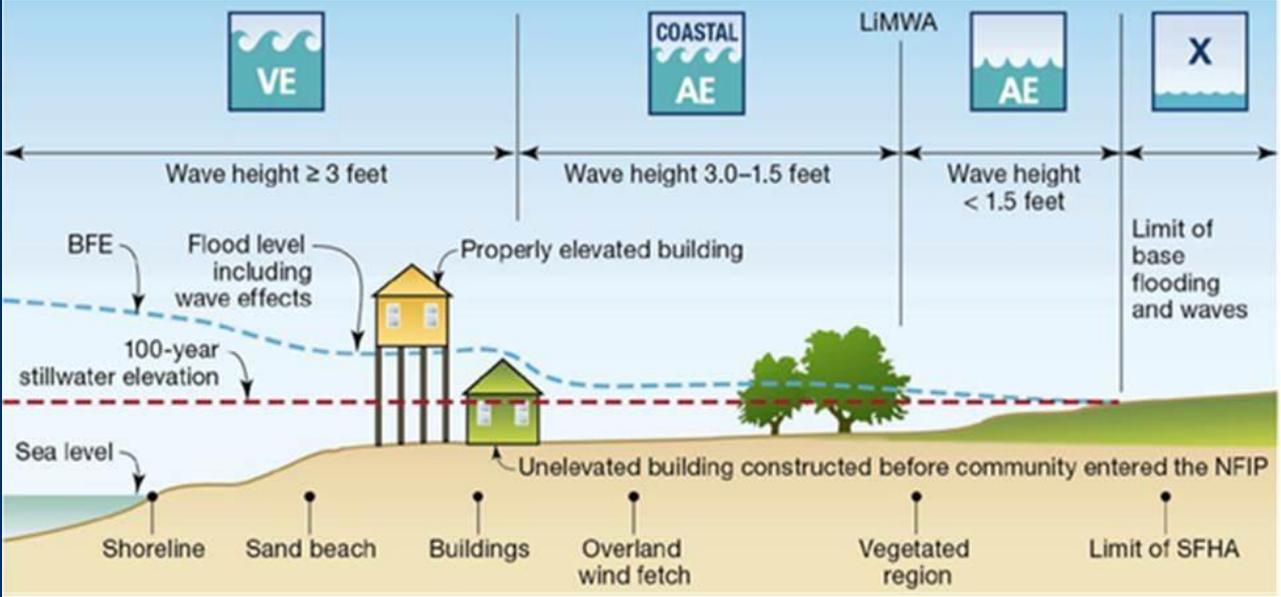
ZONE VE  
(EL 15)

LIMIT OF MODERATE  
WAVE ACTION

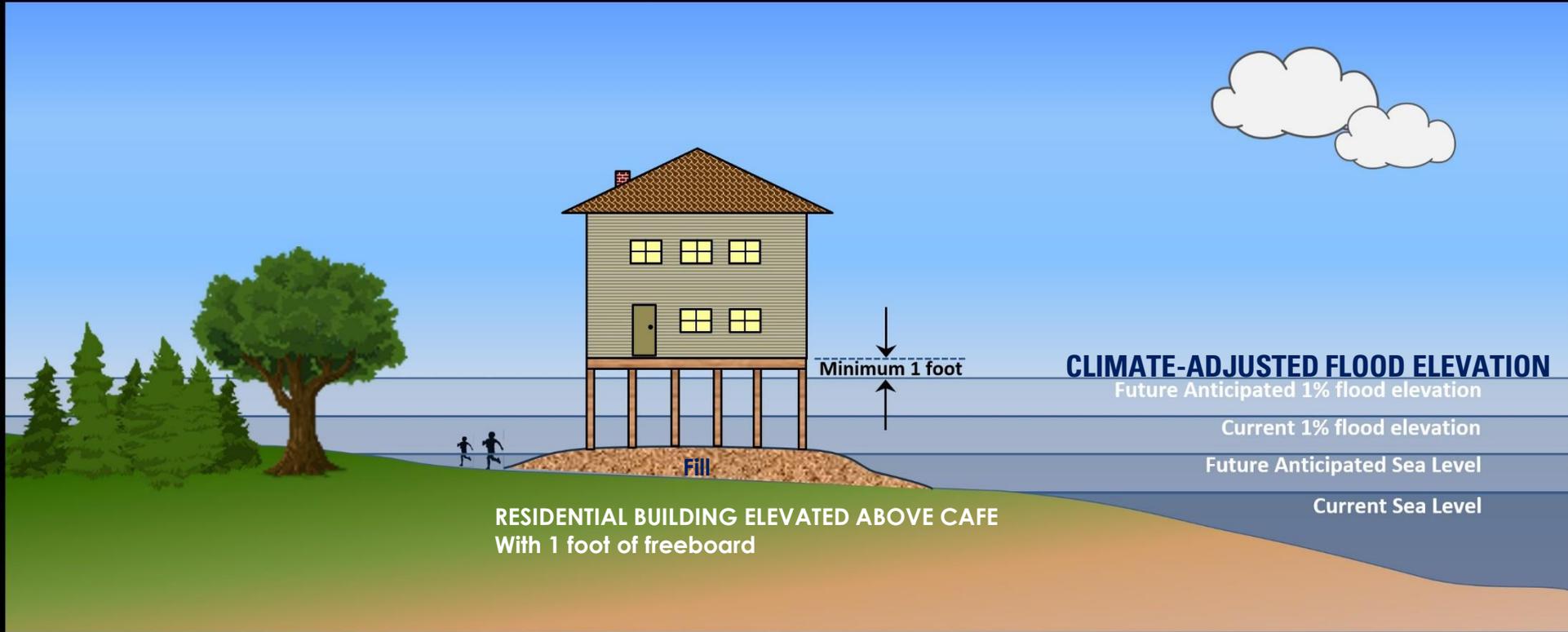
LIMIT OF MODERATE  
WAVE ACTION

Township of  
Berkeley  
340369

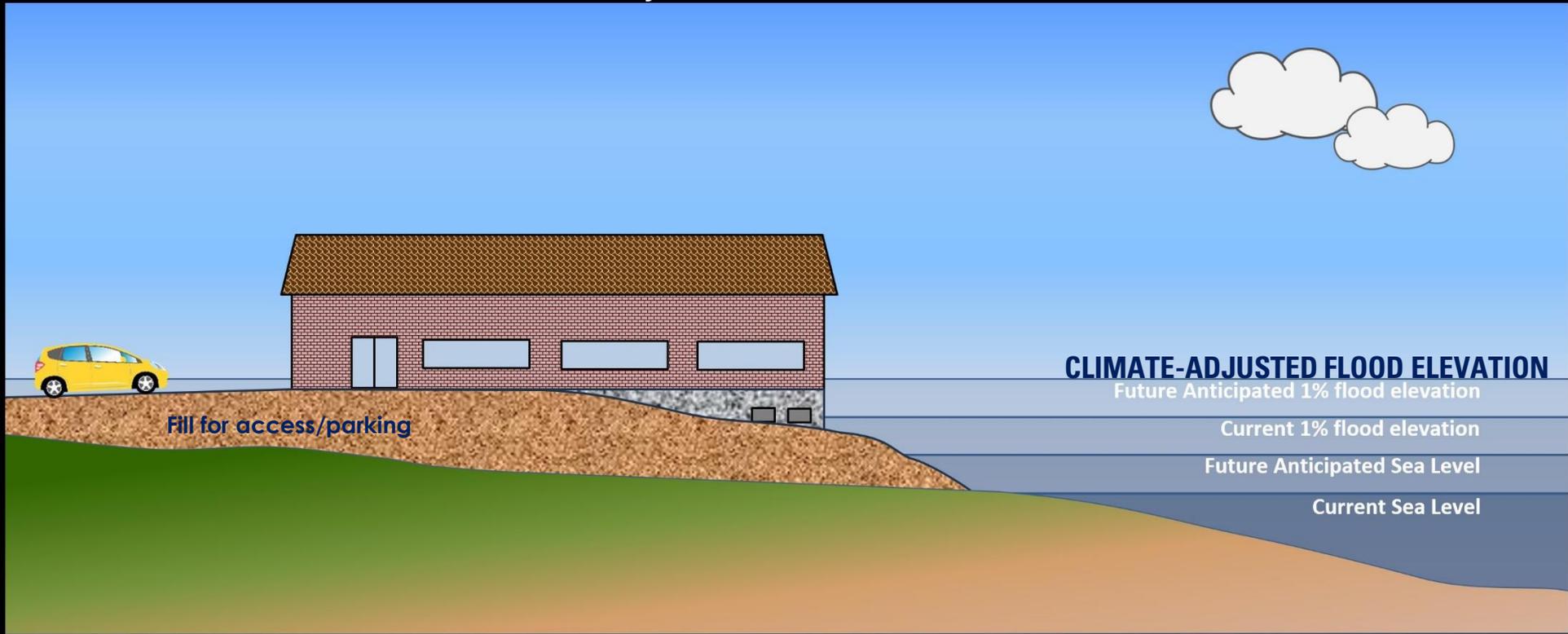
# V-Zone and Coastal A-Zone



# Inundation Risk Zone and Climate-Adjusted Flood Elevation



# Inundation Risk Zone and Climate-Adjusted Flood Elevation

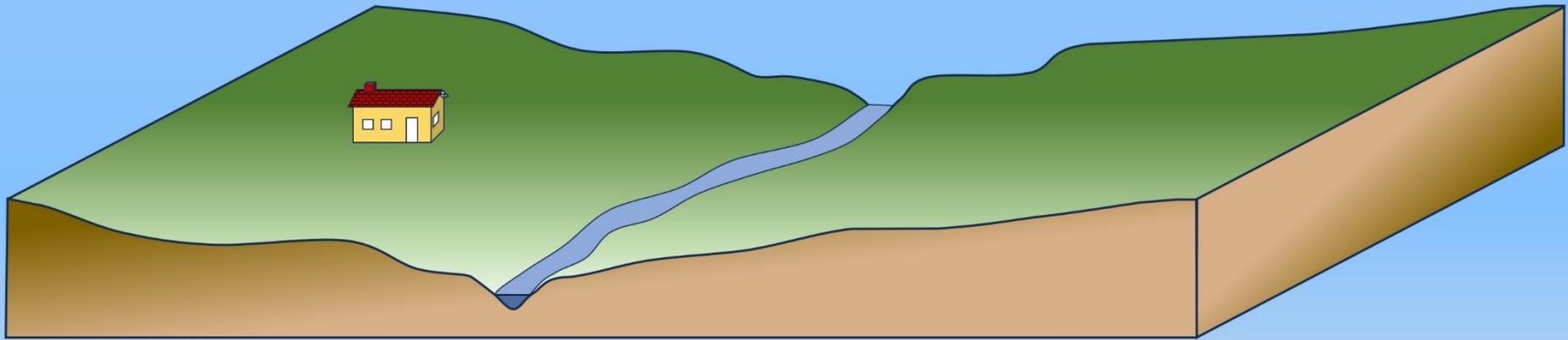


# TIDAL/FLUVIAL OVERLAP

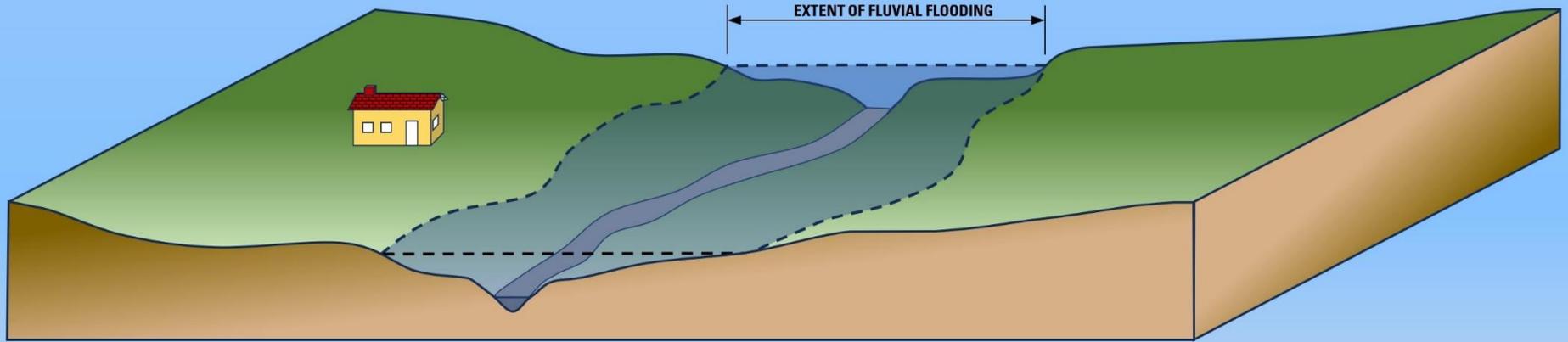
- In some cases, an area can be subject to both fluvial flooding and tidal flooding.
- Especially the case with the proposed climate adjusted flood elevation.
- Implications where fluvial flooding is present:
  - **Flood Storage Displacement (Net-Fill)**
  - **Dry Access (Access to buildings during a flood event)**



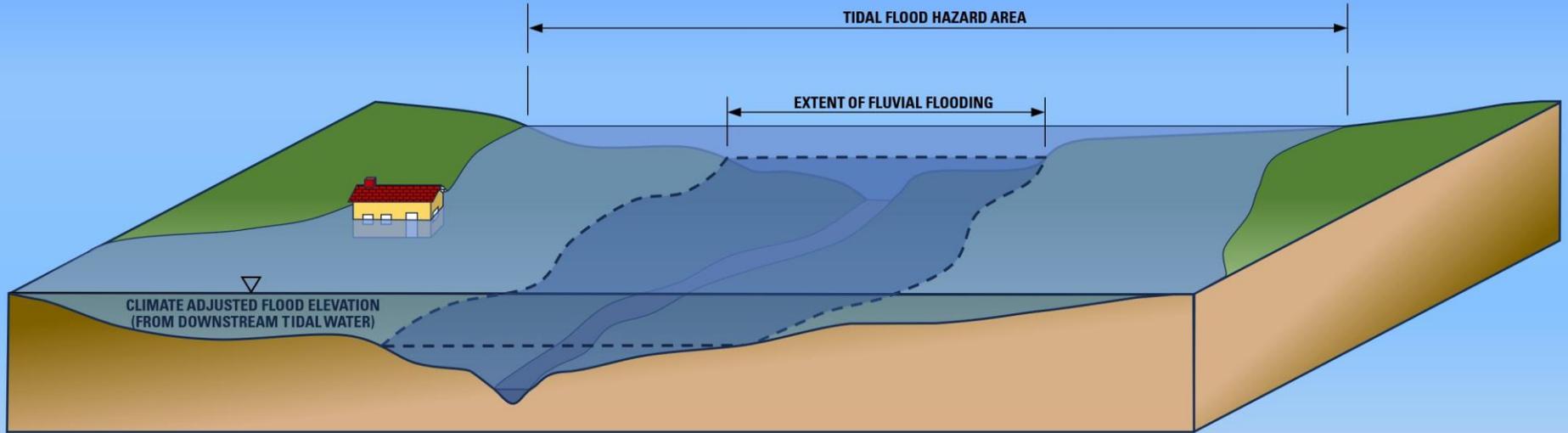
## Tidal/Fluvial Overlap



# Tidal/Fluvial Overlap



# Tidal/Fluvial Overlap



# DRY ACCESS

N.J.A.C. 7:13-12.5(m) & 12.6(b)

As of 2020, 63% of flood fatalities nationwide are due to individuals being trapped in vehicles on roadways during a flood event.

Many of these deaths occur in cars swept downstream.

Six inches of fast-moving flood water can knock over an adult.

It takes just 12 inches of rushing water to carry away most cars and just two feet of rushing water can carry away SUVs and trucks.



# DRY ACCESS

N.J.A.C. 7:13-12.5(m) & 12.6(b)

IN FLUVIAL AREAS, MULTI-RESIDENCE BUILDINGS, RESIDENTIAL SUBDIVISIONS, AND CRITICAL BUILDINGS MUST HAVE “DRY ACCESS” SO THAT OCCUPANTS CAN EVACUATE AND EMERGENCY RESPONDERS CAN ACCESS THE BUILDING



ROADS ACCESSING THESE BUILDINGS MUST BE ELEVATED AS HIGH AS PRACTICABLE AND CANNOT BE BELOW THE 100-YEAR FLOOD ELEVATION

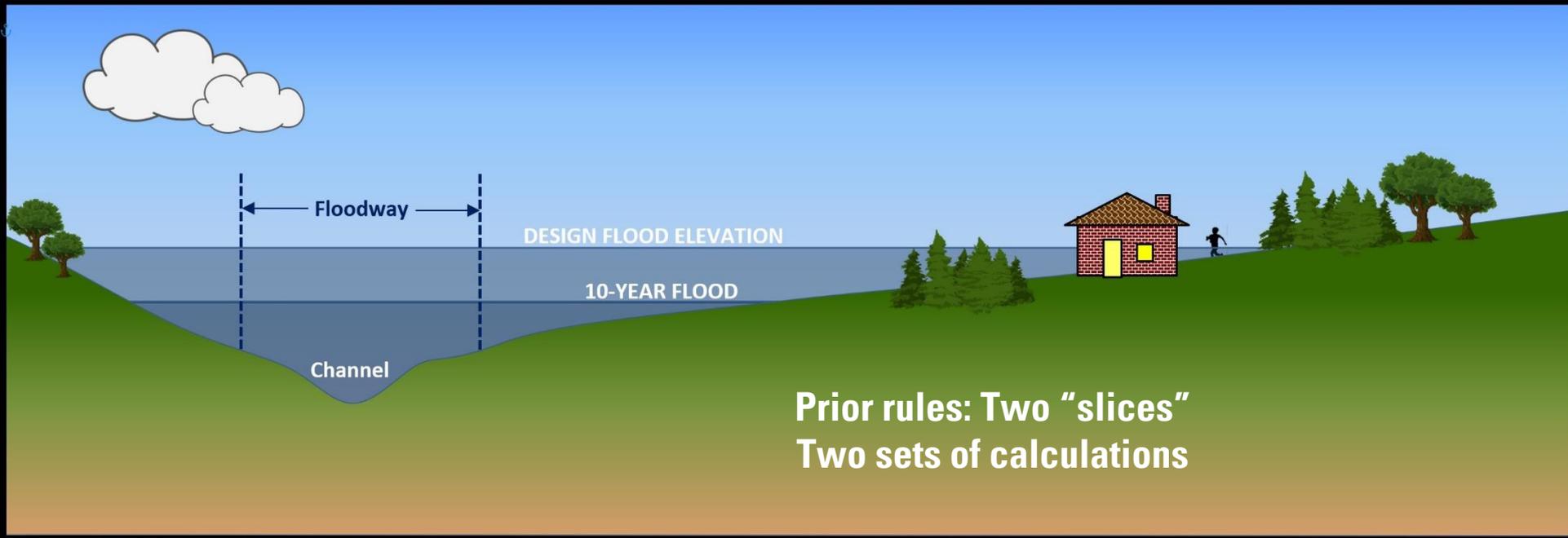
ALL OTHER ROADS, RAILROADS, PARKING AREAS, AND AIRPORTS MUST BE ELEVATED ONE FOOT ABOVE THE CLIMATE-ADJUSTED FLOOD ELEVATION EXCEPT IN CERTAIN CASES



FHA RULES RECOGNIZE THAT IT IS NOT PRACTICABLE TO ELEVATE ALL OF THESE STRUCTURES

# FLOOD STORAGE DISPLACEMENT

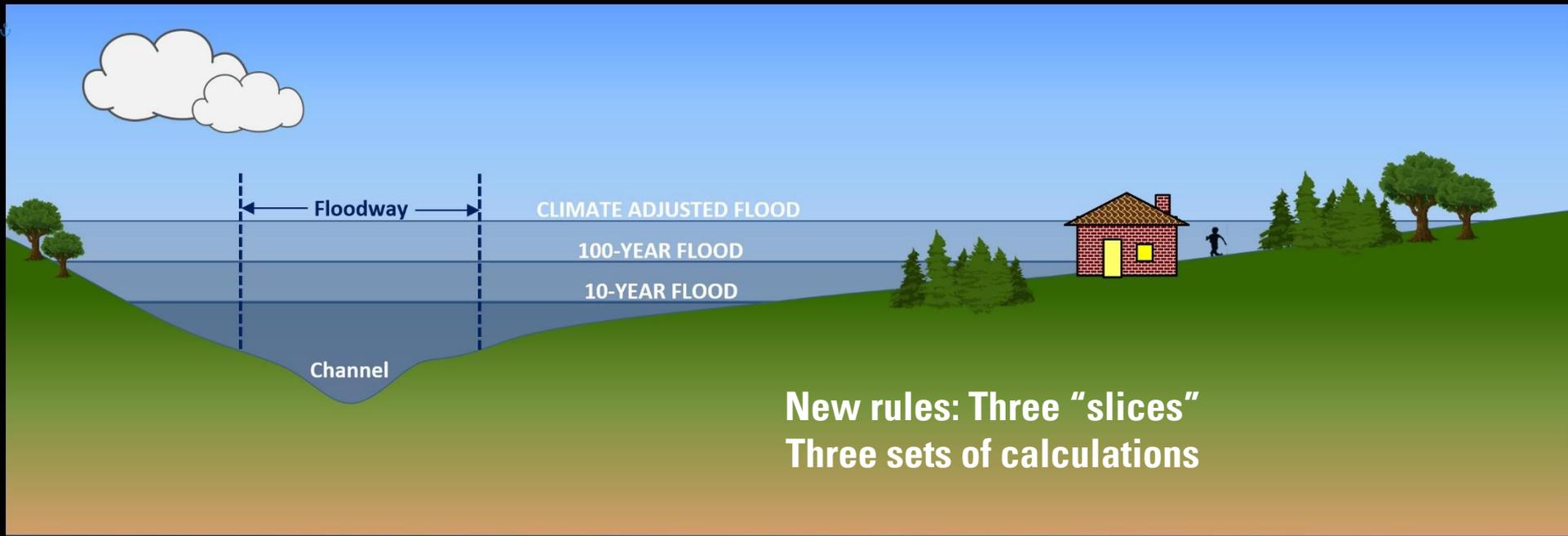
N.J.A.C. 7:13-11.4



**Prior rules: Two "slices"**  
**Two sets of calculations**

# FLOOD STORAGE DISPLACEMENT

N.J.A.C. 7:13-11.4



**New rules: Three "slices"**  
**Three sets of calculations**

# Riparian Zone Mitigation

## 300-ft RZ

- Mitigation required for all RZ disturbance on-site

## 150-ft RZ

- Mitigation required where RZ disturbance is cumulatively 2,000 ft<sup>2</sup> or more

## 50-ft RZ

- Mitigation required where RZ disturbance is cumulatively 0.10 acres (4,356 ft<sup>2</sup>) or more

# Riparian Zone Mitigation

## Temporary vs Permanent

Restoration of temporary disturbance is required for all exempt and regulated activities.

Mitigation for permanent disturbance is required only under individual permits and only in certain cases.

Mitigation for permanent disturbance is not required for activities under:

- An exemption
- A permit-by-registration
- A general permit-by-certification
- A general permit



# Riparian Zone Mitigation Exceptions

Any regulated activity covered  
under N.J.A.C. 7:13-11.2(f)

Reconstruction, replacement,  
repair, or maintenance of an  
existing aboveground or  
underground utility line that  
meets N.J.A.C. 7:13-11.2(l)

Construction associated with  
one single-family home or  
duplex, provided disturbance  
does not exceed:

**3,500 ft<sup>2</sup> in a 50-ft RZ**  
**7,000 ft<sup>2</sup> in a 150 or 300-ft RZ**

Construction of a trail or  
boardwalk that meets the  
requirements at N.J.A.C. 7:13-  
11.2(t)

## Permits-by-Registration

- New type of authorization that replaces permits-by-rule.
- Applicants will log on to NJDEP's online permitting portal, enter basic information.
- Registration will enable WLM to track cumulative impacts on a watershed-wide basis and adjust standards to address 303(d) impaired waters and TMDLs and/or to reflect the State's planning goals.
- Allows more accurate tracking of regulated activities and better aligns with FEMA's requirement to record and track approvals under the NFIP.





## Permits-by-Certification

- Many were rarely used; some have been folded into general permits so that range of activities can be broadened.
- Now requires a NJ licensed professional engineer or architect to apply for and certify each item in an FHA permit-by-certification.



## For All Permits

### Establish improved noticing requirements such as:

- Online notice of start of construction.
- Online notice of deed restriction filing (permittee can upload a copy of deed notice).
- Online notice of completion (permittee can upload photos and as-built drawings as available).
- Automatic response if the above aren't received in a timely manner.



For more  
information see  
REAL website:

<https://dep.nj.gov/njreal>

email:  
[vincent.mazzei@dep.nj.gov](mailto:vincent.mazzei@dep.nj.gov)