NJDEP REAL Rule Review

Graphics References for Comments on the
NJDEP Resilient Environments and Landscapes (REAL) Draft Rule,
Scheduled for publication in the New Jersey Register, August 5, 2024

the LOMAX Consulting group

Environmental Consulting Excellence Since 1975

Table 1. Rutgers University STAP-Predicted Sea Level Rise Probability

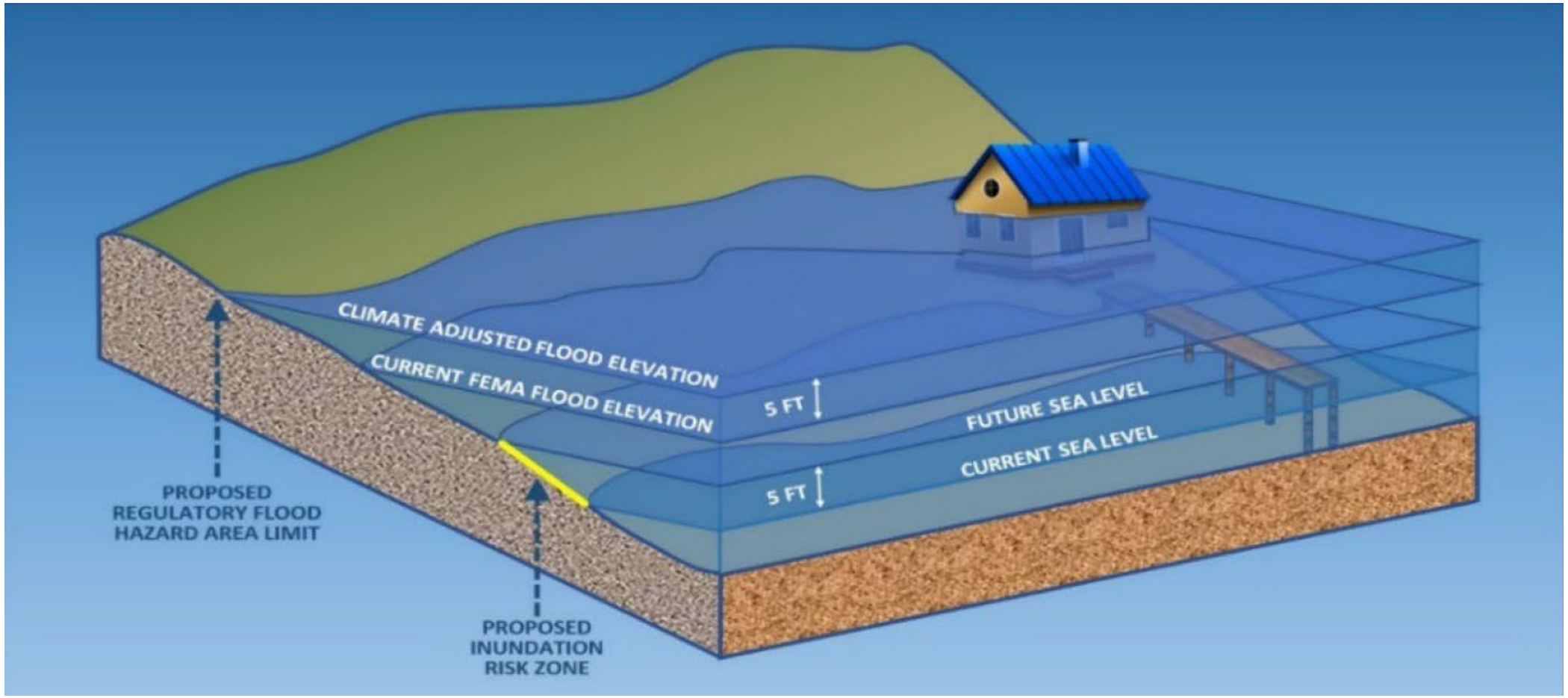
Table ES-1: New Jersey Sea-Level Rise above the year 2000 (1991-2009 average) baseline (ft)*

		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*

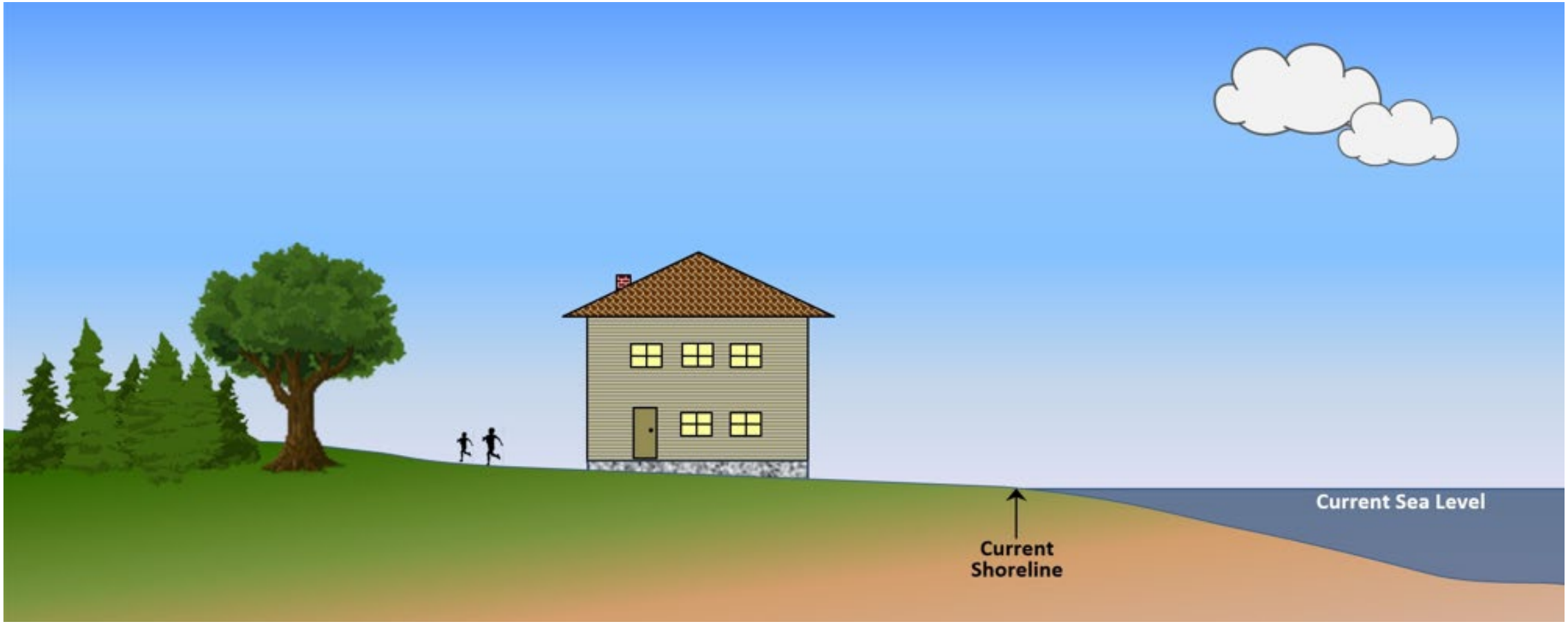
Rutgers University STAP, https://njclimateresourcecenter.rutgers.edu/resources/nj-sea-level-rise-reports/, 2019

Diagram 1. Composite of IRZ and CAFE



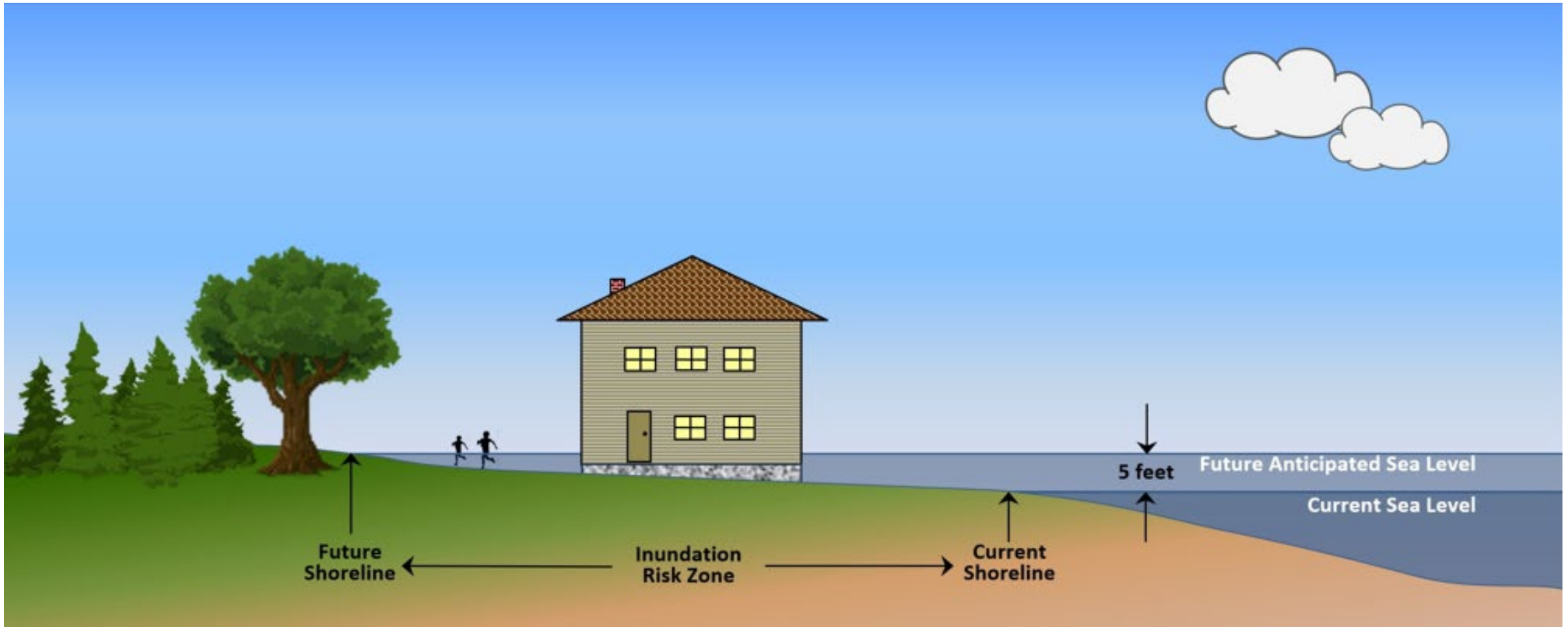
Graphic Excerpt: NJDEP REAL Sea Level Rise & Inundation Risk Zone Fact Sheet, May 20, 2024

Diagram 2. Current Sea Level in MHHW

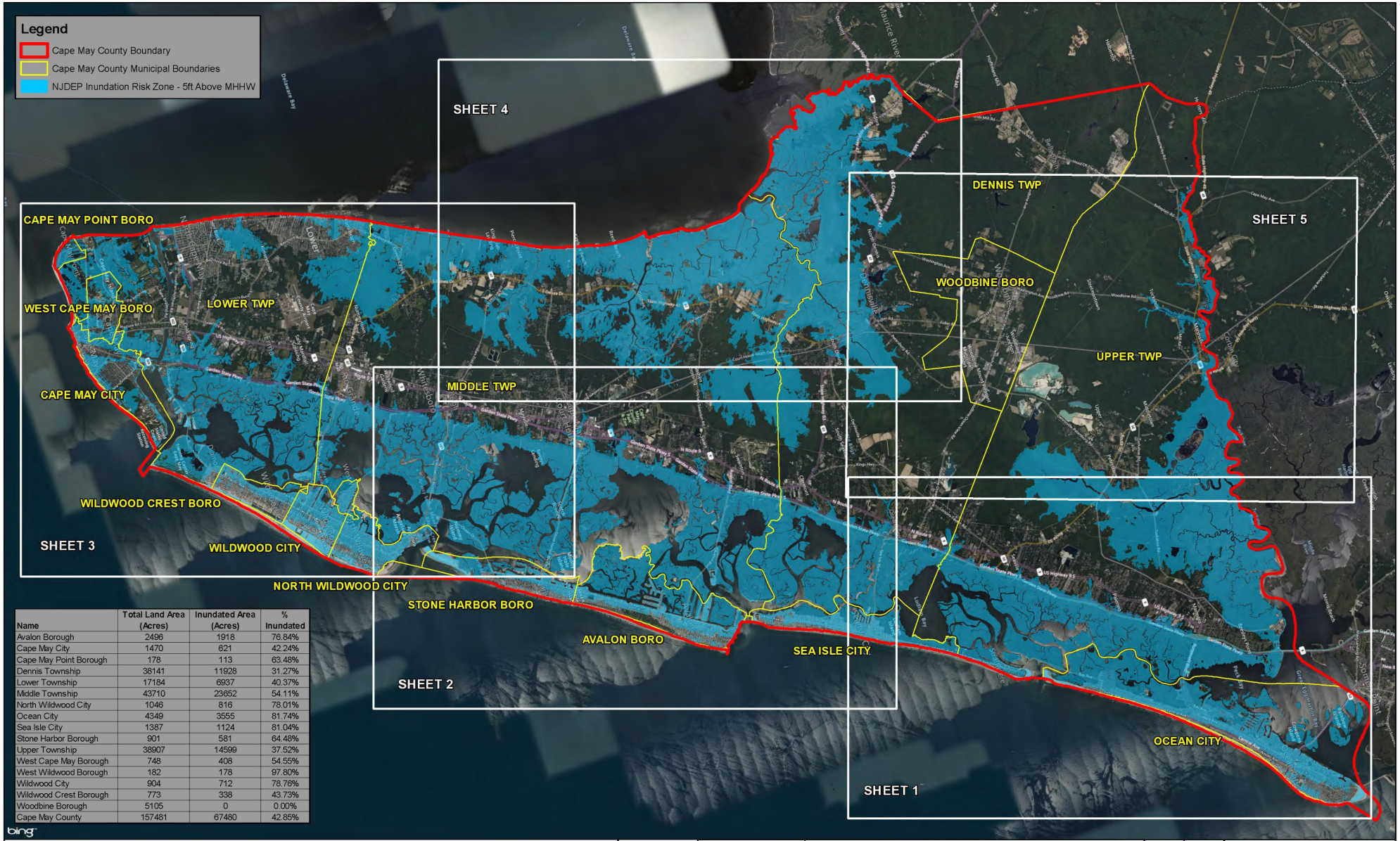


Graphics Excerpts: NJDEP REAL Webinar 1: Sea Level Rise & Inundation Risk Zone, May 20, 2024

Diagram 3. Future Anticipated Sea Level (Year 2100) in MHHW



Graphics Excerpts: NJDEP REAL Webinar 1: Sea Level Rise & Inundation Risk Zone, May 20, 2024



Name	Total Land Area (Acres)	Inundated Area (Acres)	% Inundated
Avalon Borough	2496	1918	76.84%
Cape May City	1470	621	42.24%
Cape May Point Borough	178	113	63.48%
Dennis Township	38141	11928	31.27%
Lower Township	17184	6937	40.37%
Middle Township	43710	23652	54.11%
North Wildwood City	1046	816	78.01%
Ocean City	4349	3555	81.74%
Sea Isle City	1387	1124	81.04%
Stone Harbor Borough	901	581	64.48%
Upper Township	38907	14599	37.52%
West Cape May Borough	748	408	54.55%
West Wildwood Borough	182	178	97.80%
Wildwood City	904	712	78.76%
Wildwood Crest Borough	773	338	43.73%
Woodbine Borough	5105	0	0.00%
Cape May County	157481	67480	42.85%

bing

SHEET 0

PRJ\Act\22-1156\Site Mapping\Lg Fmt\2024 Slr 5ft\CMC Slr 5ft Overview

SCALE: 1 inch = 5,000 feet

0 2,500 5,000 10,000 Feet

SOURCE: AERIAL PHOTOGRAPH BY BINGMAPS, INUNDATION DATA PROVIDED BY NOAA, AND MUNICIPAL BOUNDARIES BY CAPE MAY COUNTY PLANNING DEPARTMENT

CAPE MAY COUNTY

NJDEP/NOAA PREDICTED SEA LEVEL RISE
INUNDATION RISK ZONE - 5FT ABOVE MHHW
CAPE MAY COUNTY, NEW JERSEY

DRAWN BY: NAC | DATE: 6-11-2024
CHECKED BY: ACB | REVISED:
PROJECT # 22-1156

the LOMAX Consulting group

CAPE MAY POINT BORO

WEST CAPE MAY BORO

CAPE MAY CITY

LOWER TWP

SHEET 4 MATCH LINE

MIDDLE TWP

SHEET 2 MATCH LINE

WILDWOOD CREST BORO

WEST WILDWOOD BORO

WILDWOOD CITY

NORTH WILDWOOD CITY

STONE HARBOR BORO

AVALON BORO

Legend

- Cape May County Boundary
- Municipal Boundaries
- NJDEP Inundation Risk Zone - 5ft Above MHHW

Name	Total Land Area (Acres)	Inundated Area (Acres)	% Inundated
Cape May City	1470	621	42.24%
Cape May Point Borough	178	113	63.48%
Lower Township	17184	6937	40.37%
North Wildwood City	1046	816	78.01%
West Cape May Borough	748	408	54.55%
West Wildwood Borough	182	178	97.80%
Wildwood City	904	712	78.76%
Wildwood Crest Borough	773	338	43.73%

bing

SHEET 3

PRJIAct\22-1156\Site Mapping\LgFmt\2024 Slr 5ft\CMC SLR 5FT SHEET 3

SCALE: 1 inch = 2,200 feet

0 1,100 2,200 4,400 Feet

SOURCE: AERIAL PHOTOGRAPH BY BINGMAPS, INUNDATION DATA PROVIDED BY NOAA, AND MUNICIPAL BOUNDARIES BY CAPE MAY COUNTY PLANNING DEPARTMENT

CAPE MAY COUNTY

NJDEP/NOAA PREDICTED SEA LEVEL RISE INUNDATION RISK ZONE - 5FT ABOVE MHHW CAPE MAY COUNTY, NEW JERSEY

DRAWN BY: NAC
CHECKED BY: ACB
PROJECT #: 22-1156
DATE: 6-11-2024
REVISED:

the LOMAX Consulting group

Legend

- Cape May County Boundary
- Municipal Boundaries
- NJDEP Inundation Risk Zone - 5ft Above MHHW

Name	Total Land Area (Acres)	Inundated Area (Acres)	% Inundated
Dennis Township	38141	11928	31.27%
Middle Township	43710	23652	54.11%
Woodbine Borough	5105	0	0.00%

SHEET 3 MATCH LINE

SHEET 5 MATCH LINE

DENNIS TWP

WOODBINE BORO

MIDDLE TWP

SHEET 2 MATCH LINE

bing

SHEET 4

PRJ\Act\22-1156\Site Mapping\LgFmt\2024 Slr 5ft\CMC SLR 5FT SHEET 4

N W E S

SCALE: 1 inch = 2,000 feet

0 1,000 2,000 4,000 Feet

SOURCE: AERIAL PHOTOGRAPH BY BINGMAPS. INUNDATION DATA PROVIDED BY NOAA, AND MUNICIPAL BOUNDARIES BY CAPE MAY COUNTY PLANNING DEPARTMENT

CAPE MAY COUNTY

NJDEP/NOAA PREDICTED SEA LEVEL RISE INUNDATION RISK ZONE - 5FT ABOVE MHHW CAPE MAY COUNTY, NEW JERSEY

DRAWN BY: NAC	DATE: 6-11-2024
CHECKED BY: ACB	REVISED:
PROJECT #: 22-1156	

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SHEET 4 MATCH LINE

SHEET 3 MATCH LINE

SHEET 1 MATCH LINE

MIDDLE TWP

DENNIS TWP

WEST WILDWOOD BORO

NORTH WILDWOOD CITY

STONE HARBOR BORO

AVALON BORO

SEA ISLE CITY

Legend

- NJDEP Inundation Risk Zone - 5ft Above MHHW
- Cape May County Boundary
- Municipal Boundaries

Name	Total Land Area (Acres)	Inundated Area (Acres)	% Inundated
Avalon Borough	2496	1918	76.84%
Dennis Township	38141	11928	31.27%
Middle Township	43710	23652	54.11%
North Wildwood City	1046	816	78.01%
Stone Harbor Borough	901	581	64.48%

bing

SHEET 2

PRJ\Act\22-1156\Site Mapping\LgFmt\2024 Slr 5ft\CMC SLR 5FT SHEET 2

SCALE: 1 inch = 2,000 feet

0 1,000 2,000 4,000 Feet

SOURCE: AERIAL PHOTOGRAPH BY BINGMAPS, INUNDATION DATA PROVIDED BY: NOAA, AND MUNICIPAL BOUNDARIES BY CAPE MAY COUNTY PLANNING DEPARTMENT

CAPE MAY COUNTY

NJDEP/NOAA PREDICTED SEA LEVEL RISE INUNDATION RISK ZONE - 5FT ABOVE MHHW CAPE MAY COUNTY, NEW JERSEY

DRAWN BY: NAC	DATE: 6-11-2024
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PROJECT #: 22-1156	

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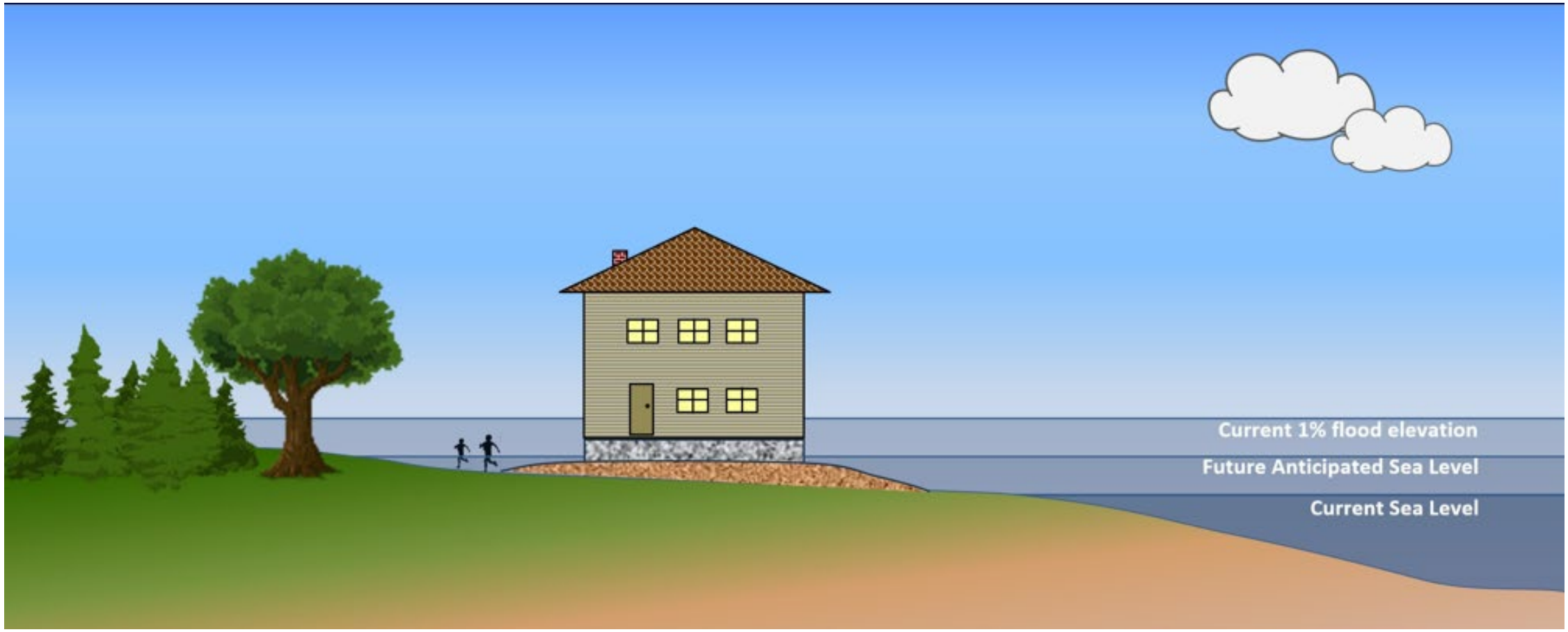
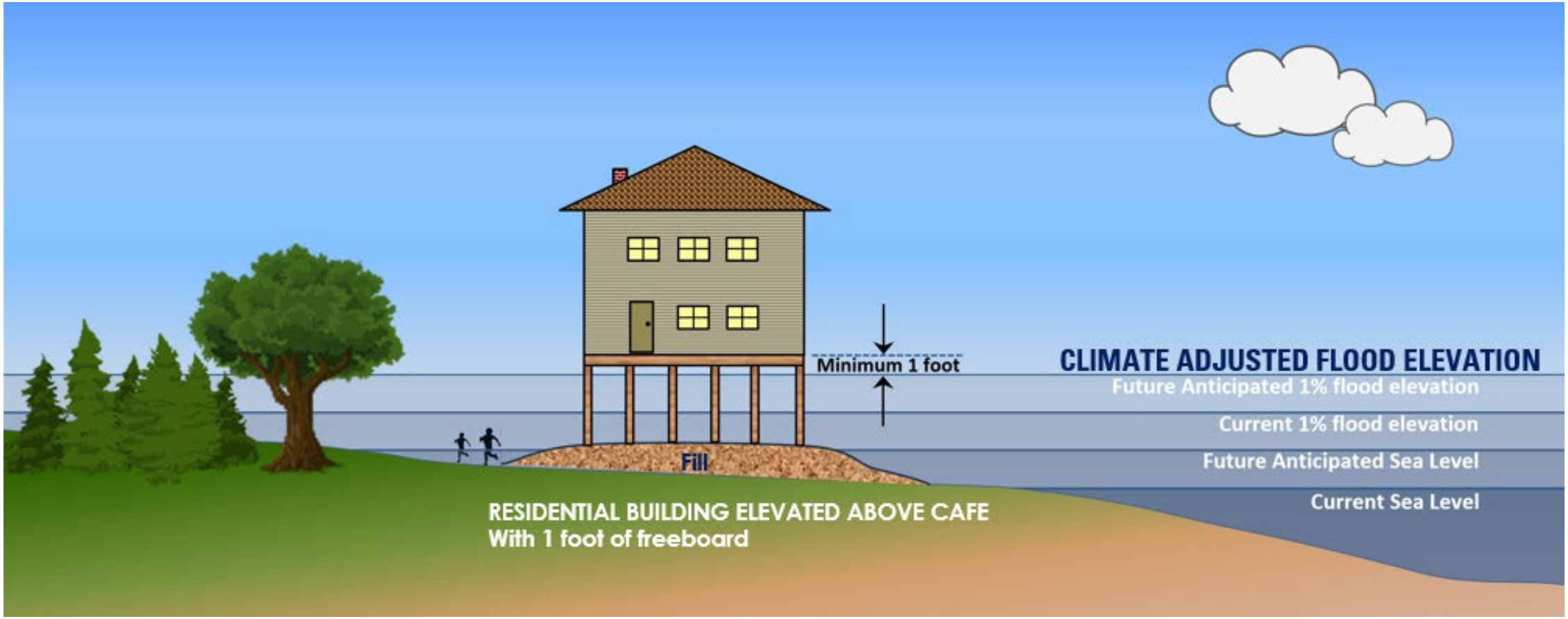
Diagram 4. Current FEMA 100-year (1%) Flood Elevation



Graphics Excerpts: NJDEP REAL Webinar 1: Sea Level Rise & Inundation Risk Zone, May 20, 2024

Diagram 5. Climate Adjusted Flood Elevation (Year 2100)



Graphics Excerpts: NJDEP REAL Webinar 1: Sea Level Rise & Inundation Risk Zone, May 20, 2024

Name	Total Land Area (Acres)	Current FEMA Tidal FHA (Acres)	NJDEP Proposed Climate Adjusted Flood Elevation (Acres)	% of Total Proposed FHA Land Coverage	% Change of FHA Land Coverage - Current vs. Proposed
Avalon Borough	2496	2367	2485	99.56%	4.73%
Cape May City	1470	857	1446	98.37%	40.07%
Cape May Point Borough	178	140	177	99.44%	20.79%
Dennis Township	38141	12197	16932	44.39%	12.41%
Lower Township	17184	7253	11546	67.19%	24.98%
Middle Township	43710	22265	31593	72.28%	21.34%
North Wildwood City	1046	1039	1046	100.00%	0.76%
Ocean City	4349	4135	4345	99.91%	4.83%
Sea Isle City	1387	1340	1386	99.86%	3.24%
Stone Harbor Borough	901	900	900	99.89%	11.10%
Upper Township	38907	15555	20795	53.45%	13.47%
West Cape May Borough	748	413	717	95.86%	40.64%
West Wildwood Borough	182	181	182	100.00%	0.55%
Wildwood City	904	892	903	99.89%	1.22%
Wildwood Crest Borough	773	613	773	100.00%	20.70%
Woodbine Borough*	5105	130	8	0.16%	N/A*
Cape May County	157481	70176	95233	60.47%	15.91%

*NOTE: CURRENT FEMA TIDAL FHA MAPPING FOR WOODBINE BOROUGH DOES NOT INCLUDE BASE FLOOD ELEVATION DATA AND THEREFORE NOT REPRESENTED IN NJDEP PROPOSED CLIMATE

SHEET 4

SHEET 5

SHEET 3

SHEET 2

SHEET 1

CAPE MAY POINT BORO

WEST CAPE MAY BORO

LOWER TWP

CAPE MAY CITY

MIDDLE TWP

DENNIS TWP

WOODBINE BORO

UPPER TWP

WEST WILDWOOD BORO

WILDWOOD CREST BORO

WILDWOOD CITY

NORTH WILDWOOD CITY

STONE HARBOR BORO

AVALON BORO

SEA ISLE CITY

OCEAN CITY

NOTE: NJDEP PROPOSED CLIMATE ADJUSTED FLOOD ELEVATION = CURRENT FEMA TIDAL FHA +5FT

Legend

- Cape May County Boundary
- Cape May County Municipal Boundaries
- Current FEMA Tidal FHA
- NJDEP Proposed Climate Adjusted Flood Elevation

bing

SHEET 0

P:\Acct22-1156\Site Mapping\LgFmt\2024 SI 5ft\CMC FEMA FHA5FT Overview

SCALE: 1 inch = 5,000 feet

0 2,500 5,000 10,000 Feet

SOURCE: AERIAL PHOTOGRAPH BY BINGMAPS, CURRENT TIDAL FLOOD HAZARD AREA BY FEMA, PROPOSED FLOOD HAZARD AREA INCREASE BY NJDEP, MUNICIPAL BOUNDARIES BY CAPE MAY COUNTY PLANNING DEPARTMENT

CAPE MAY COUNTY

NJDEP PROPOSED CLIMATE ADJUSTED FLOOD ELEVATION LAND COVER ANALYSIS CAPE MAY COUNTY, NEW JERSEY

DRAWN BY: NAC	DATE: 6-24-2024
CHECKED BY ACB	REVISED
PROJECT # 22-1156	

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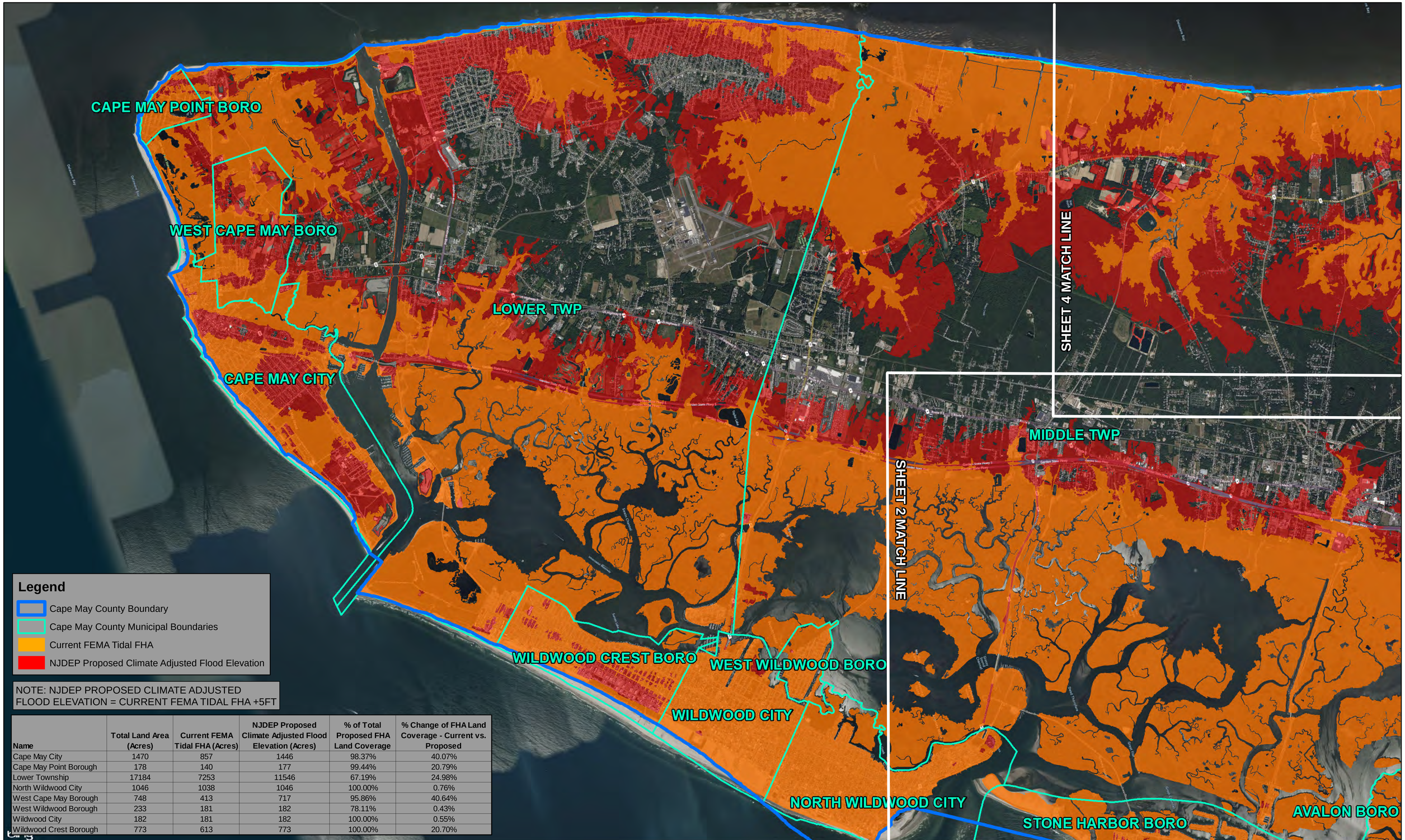

Legend

- Cape May County Boundary
- Cape May County Municipal Boundaries
- Current FEMA Tidal FHA
- NJDEP Proposed Climate Adjusted Flood Elevation

NOTE: NJDEP PROPOSED CLIMATE ADJUSTED FLOOD ELEVATION = CURRENT FEMA TIDAL FHA +5FT

Name	Total Land Area (Acres)	Current FEMA Tidal FHA (Acres)	NJDEP Proposed Climate Adjusted Flood Elevation (Acres)	% of Total Proposed FHA Land Coverage	% Change of FHA Land Coverage - Current vs. Proposed
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Lower Township	17184	7253	11546	67.19%	24.98%
North Wildwood City	1046	1038	1046	100.00%	0.76%
West Cape May Borough	748	413	717	95.86%	40.64%
West Wildwood Borough	233	181	182	78.11%	0.43%
Wildwood City	182	181	182	100.00%	0.55%
Wildwood Crest Borough	773	613	773	100.00%	20.70%

SHEET 3

PRJIAct\22-1156\Site Mapping\LgFmt\2024 Slr 5ft\Tid Cli Adj Fld Ef\CMC FEMA FHA 5FT Sheet 3

SCALE: 1 inch = 2,200 feet

0 1,100 2,200 4,400 Feet

SOURCE: AERIAL PHOTOGRAPH BY BINGMAPS., CURRENT TIDAL FLOOD HAZARD AREA BY FEMA, PROPOSED FLOOD HAZARD AREA INCREASE BY NJDEP, MUNICIPAL BOUNDARIES BY CAPE MAY COUNTY PLANNING DEPARTMENT

CAPE MAY COUNTY

NJDEP PROPOSED CLIMATE ADJUSTED FLOOD ELEVATION LAND COVER ANALYSIS CAPE MAY COUNTY, NEW JERSEY

DRAWN BY: NAC
CHECKED BY: ACB
PROJECT #: 22-1156
DATE: 6-11-2024
REVISED:

the LOMAX Consulting group

Legend

- Cape May County Boundary
- Cape May County Municipal Boundaries
- Current FEMA Tidal FHA
- NJDEP Proposed Climate Adjusted Flood Elevation

NOTE: NJDEP PROPOSED CLIMATE ADJUSTED FLOOD ELEVATION = CURRENT FEMA TIDAL FHA +5FT

Name	Total Land Area (Acres)	Current FEMA Tidal FHA (Acres)	NJDEP Proposed Climate Adjusted Flood Elevation (Acres)	% of Total Proposed FHA Land Coverage	% Change of FHA Land Coverage - Current vs. Proposed
Dennis Township	38141	12197	16932	44.39%	12.41%
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Woodbine Borough*	5105	130	8	0.16%	N/A*

*NOTE: CURRENT FEMA TIDAL FHA MAPPING FOR WOODBINE BOROUGH DOES NOT INCLUDE BASE FLOOD ELEVATION DATA AND THEREFORE NOT REPRESENTED IN NJDEP PROPOSED CLIMATE

SHEET 3 MATCH LINE

SHEET 5 MATCH LINE

DENNIS TWP

WOODBINE BORO

MIDDLE TWP

SHEET 2 MATCH LINE

bing

SHEET 4

PRJ\Act\22-1156\Site Mapping\LgFmt\2024 Slr 5ft\Tidal Climate Adjusted Flood Elevation\CMC FEMA FHA 5FT Sheet 4

SCALE: 1 inch = 2,000 feet

0 1,000 2,000 4,000 Feet

SOURCE: AERIAL PHOTOGRAPH BY BINGMAPS, CURRENT TIDAL FLOOD HAZARD AREA BY FEMA, PROPOSED FLOOD HAZARD AREA INCREASE BY NJDEP, MUNICIPAL BOUNDARIES BY CAPE MAY COUNTY PLANNING DEPARTMENT

CAPE MAY COUNTY

NJDEP PROPOSED CLIMATE ADJUSTED FLOOD ELEVATION LAND COVER ANALYSIS CAPE MAY COUNTY, NEW JERSEY

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SHEET 4 MATCH LINE

SHEET 3 MATCH LINE

SHEET 1 MATCH LINE

MIDDLE TWP

DENNIS TWP

WEST WILDWOOD BORO

NORTH WILDWOOD CITY

STONE HARBOR BORO

AVALON BORO

SEA ISLE CITY

Legend

- Cape May County Boundary
- Cape May County Municipal Boundaries
- Current FEMA Tidal FHA
- NJDEP Proposed Climate Adjusted Flood Elevation

NOTE: NJDEP PROPOSED CLIMATE ADJUSTED FLOOD ELEVATION = CURRENT FEMA TIDAL FHA +5FT

Name	Total Land Area (Acres)	Current FEMA Tidal FHA (Acres)	NJDEP Proposed Climate Adjusted Flood Elevation (Acres)	% of Total Proposed FHA Land Coverage	% Change of FHA Land Coverage - Current vs. Proposed
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Dennis Township	38141	12197	16932	44.39%	12.41%
Middle Township	43710	22265	31593	72.28%	21.34%
North Wildwood City	1046	1038	1046	100.00%	0.76%
Stone Harbor Borough	901	800	900	99.89%	11.10%

SHEET 2

PRJ\Act\22-1156\Site Mapping\LgFmt\2024 Slr 5ft\Tidal Climate Adjusted Flood Elevation\CMC FEMA FHA 5FT SHEET 2

SCALE: 1 inch = 2,000 feet

0 1,000 2,000 4,000 Feet

SOURCE: AERIAL PHOTOGRAPH BY BINGMAPS, CURRENT TIDAL FLOOD HAZARD AREA BY FEMA, PROPOSED FLOOD HAZARD AREA INCREASE BY NJDEP, MUNICIPAL BOUNDARIES BY CAPE MAY COUNTY PLANNING DEPARTMENT

CAPE MAY COUNTY

NJDEP PROPOSED CLIMATE ADJUSTED FLOOD ELEVATION LAND COVER ANALYSIS CAPE MAY COUNTY, NEW JERSEY

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