

FEMA Community Rating System (CRS) Program Activity Credit for Sea Level Rise Projections

**Presented by:
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Coastal Waterways Design & Engineering LLC**



Regulations

CCCL



FEMA
NFIP

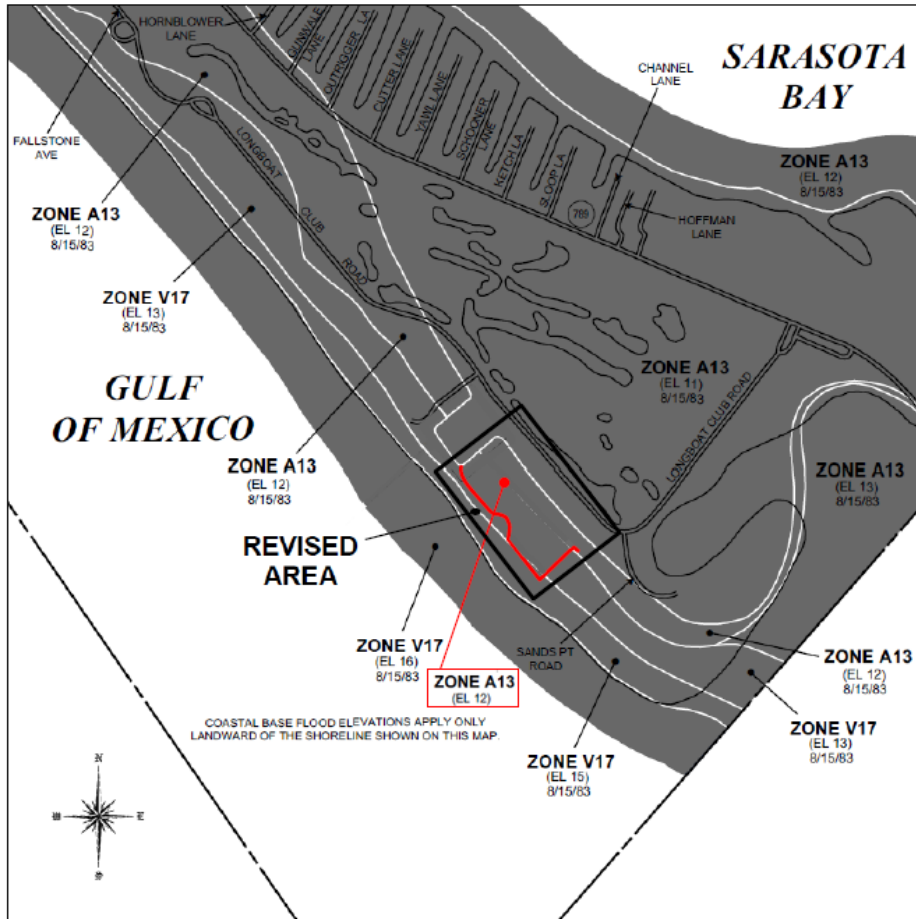


FBC







FEMA NFIP

Flood Insurance Rate Map (FIRM)



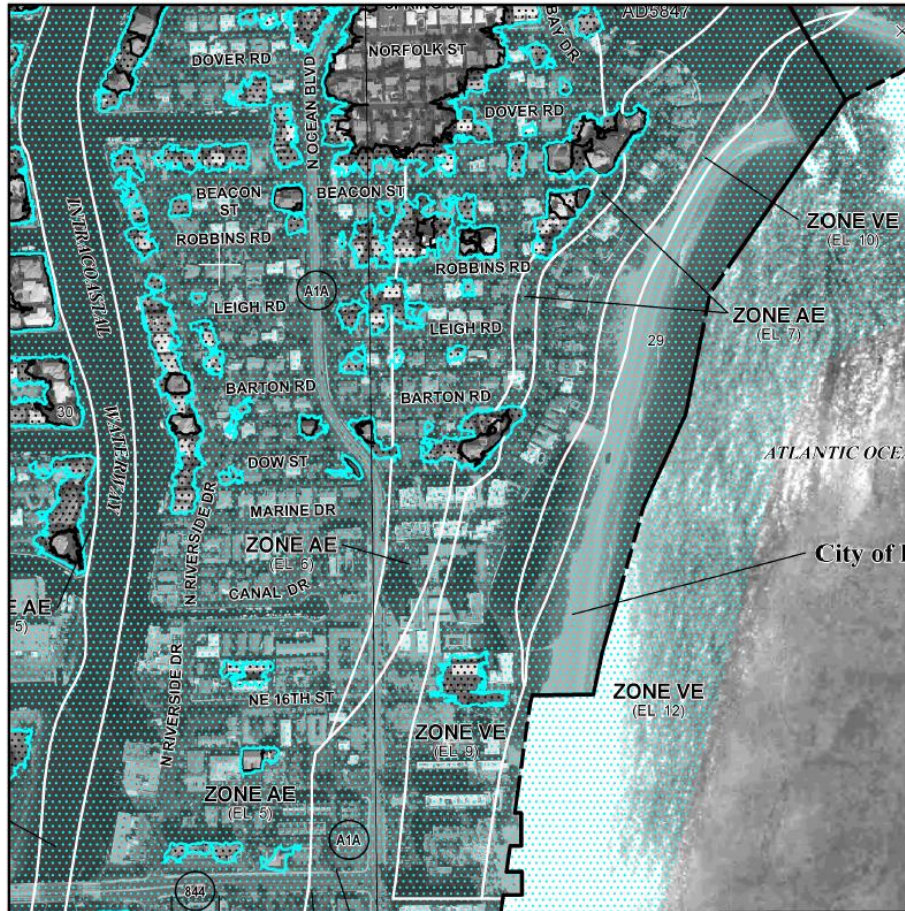
LEGEND

-  SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD
- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.
-  FLOODWAY AREAS IN ZONE AE
-  OTHER FLOOD AREAS
- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
-  OTHER AREAS
- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.



FEMA NFIP

Flood Insurance Rate Map (FIRM)



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.



Florida's CCCL Program



Florida Building Code



Effective Dates

FLORIDA
Build
and

	2001 FBC		2004 FBC			2007 FBC			2010 FBC		5 th Edition (2014)			6 th Edition (2017)	
Effective Date	Original	2003 Supplement	Original	2005 Supplement	2006 Supplement	2007 Supplement	Original	1 st 2009 Supplement	2 nd 2009 Supplement	Original	2012 Supplement	Original	Supplement 1	Supplement 2	December 31, 2017
	March 1, 2002	June 30, 2003	Oct 1, 2005	Dec 16, 2005	Dec 8, 2006	July 1, 2007	March 1, 2009	March 1, 2009	Oct 1, 2009	March 15, 2012	April 15, 2012	June 30, 2015	July 1, 2016	October 8, 2016	

Current
Version

Regulations and Standards

Regulations



NFIP



CCCL



FBC

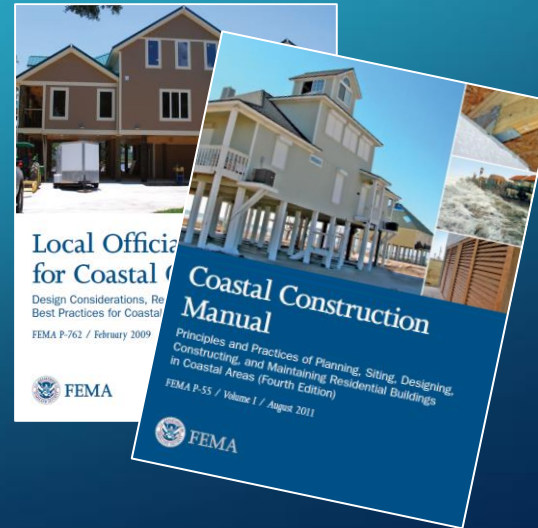


Local

Standards

ASCE

FEMA



Regulations and Standards

Regulations



NFIP



CCCL



FBC



Local

Standards

ASCE

FEMA



HIGHER STANDARD



FEMA NFIP Community Rating System (CRS)

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements.

As a result, **flood insurance premium rates are discounted to reflect the reduced flood risk** resulting from the community actions meeting the three goals of the CRS:

1. Reduce flood damage to insurable property;
2. Strengthen and support the insurance aspects of the NFIP, and
3. Encourage a comprehensive approach to floodplain management.



FEMA NFIP Community Rating System (CRS)



OMB No. 1660-0022
Expires: March 31, 2020

National Flood Insurance Program
Community Rating System

Coordinator's Manual

FIA-15/2017



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FEMA NFIP Community Rating System (CRS)

Table 110-1. CRS classes, credit points, and premium discounts.

CRS Class	Credit Points (cT)	Premium Reduction	
		In SFHA	Outside SFHA
1	4,500+	45%	10%
2	4,000–4,499	40%	10%
3	3,500–3,999	35%	10%
4	3,000–3,499	30%	10%
5	2,500–2,999	25%	10%
6	2,000–2,499	20%	10%
7	1,500–1,999	15%	5%
8	1,000–1,499	10%	5%
9	500–999	5%	5%
10	0–499	0	0

SFHA: Zones A, AE, A1–A30, V, V1–V30, AO, and AH

Outside the SFHA: Zones X, B, C, A99, AR, and D

Preferred Risk Policies are not eligible for CRS premium discounts because they already have premiums lower than other policies. Preferred Risk Policies are available only in B, C, and X Zones for properties that are shown to have a minimal risk of flood damage.

Some minus-rated policies may not be eligible for CRS premium discounts.

Premium discounts are subject to change.



FEMA NFIP Community Rating System (CRS)

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7	1,500–1,999	15%	5%
8	1,000–1,499	10%	5%
9	500–999	5%	5%
10	0–499	0	0

SFHA: Zones A, AE, A1–A30, V, V1–V30, AO, and AH
Outside the SFHA: Zones X, B, C, A99, AR, and D
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\$1,000.00 Flood Insurance Premium

Class 6 = 20% Discount

\$800.00 Discounted Premium

\$200.00 (20%) Savings



FEMA NFIP

Community Rating System (CRS)

Sea Level Rise (SLR) Credit

- Credit is provided in [Section 322.c](#) for communities that provide information about areas (not mapped on the FIRM) that are predicted to be susceptible to flooding in the future because of climate change or sea level rise.
- To become a Class 4 or better community, a community must (among other criteria) demonstrate that it has programs that minimize increases in future flooding.
- To achieve CRS Class 1, a community must receive credit for using regulatory flood elevations in the V and coastal A Zones that reflect future conditions, including sea level rise.
- Credit is provided in [Section 342.d](#) when prospective buyers of a property are advised of the potential for flooding due to climate changes and/or sea level rise.
- Credit is provided in [Section 412.d](#) when the community's regulatory map is based on future-conditions hydrology, including sea level rise.
- Credit is provided in [Section 432.k](#) when a community accounts for sea level rise in managing its coastal A Zones.
- Credit is provided in [Section 452.a](#) if a community's stormwater program regulates runoff from future development.
- Credit is provided in [Section 452.b](#) for a community whose watershed master plan manages future peak flows so that they do not exceed present values.
- Credit is provided in [Section 452.b](#) for a coastal community whose watershed master plan addresses the impact of sea level rise.
- Credit is provided in [Section 512.a](#), Steps 4 and 5, for flood hazard assessment and problem analysis that address areas likely to flood and flood problems that are likely to get worse in the future, including (1) changes in floodplain development and demographics, (2) development in the watershed, and (3) climate change or sea level rise.



FEMA NFIP

Community Rating System (CRS)

Sea Level Rise (SLR) Credit

322.c. Other flood problems not shown on the FIRM (MI3) = 20 point maximum

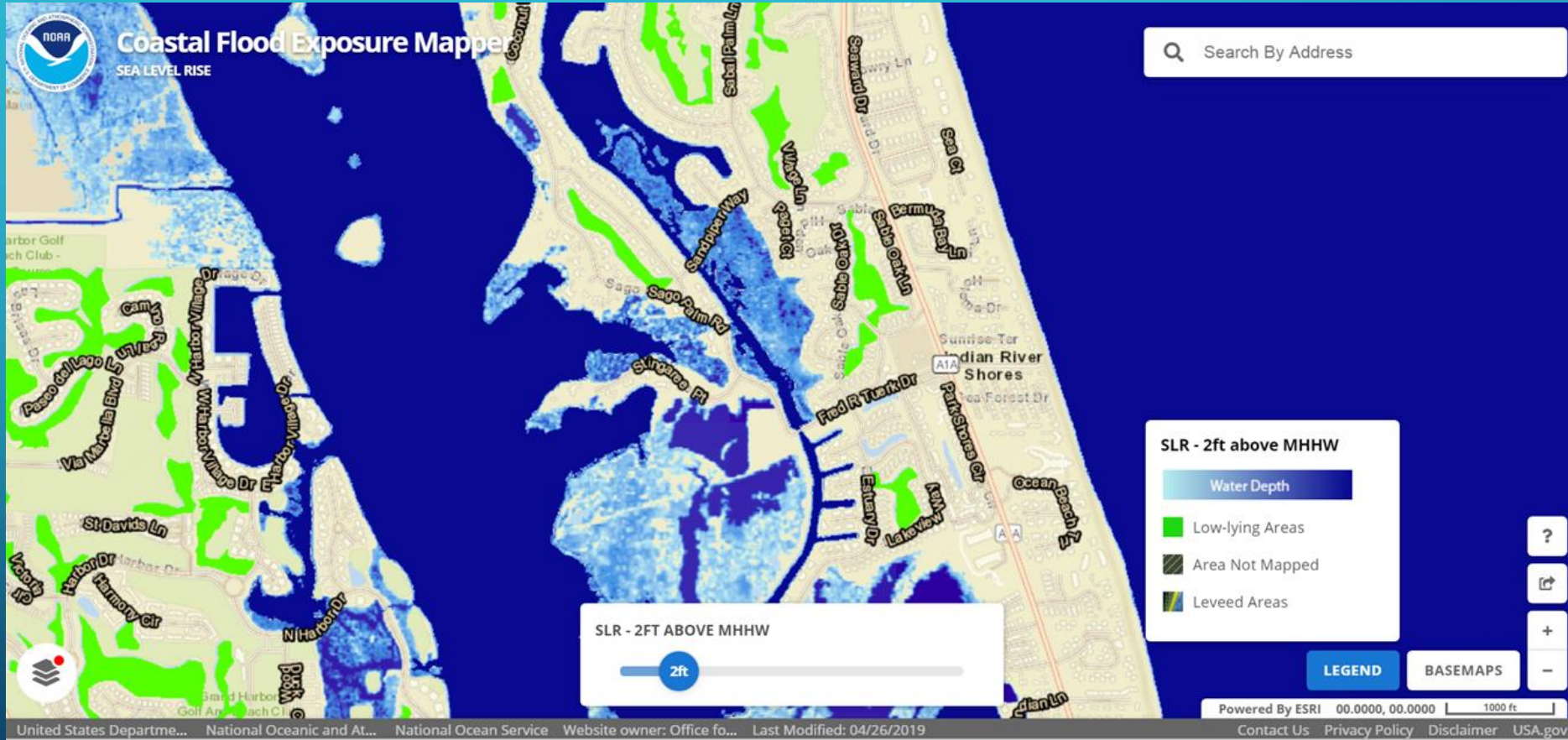
321.b. pre-requisite

342.d. Disclosure of other hazards (DOH) = 8 point maximum

342.a. pre-requisite



FEMA NFIP Community Rating System (CRS) Sea Level Rise (SLR) Credit



322.c.





FEMA NFIP

Community Rating System (CRS)

Sea Level Rise (SLR) Credit

412.d. Higher study standards (HSS) = 200 point maximum

Credit for using future conditions hydrology; at least “intermediate – high” projection for 2100; Required for Class 4

432.k. Coastal A Zone (CAZ) = 500 point maximum

includes a 1.2 multiplier for “intermediate – high” projection for 2100
(1.5 multiplier for “high” projection)

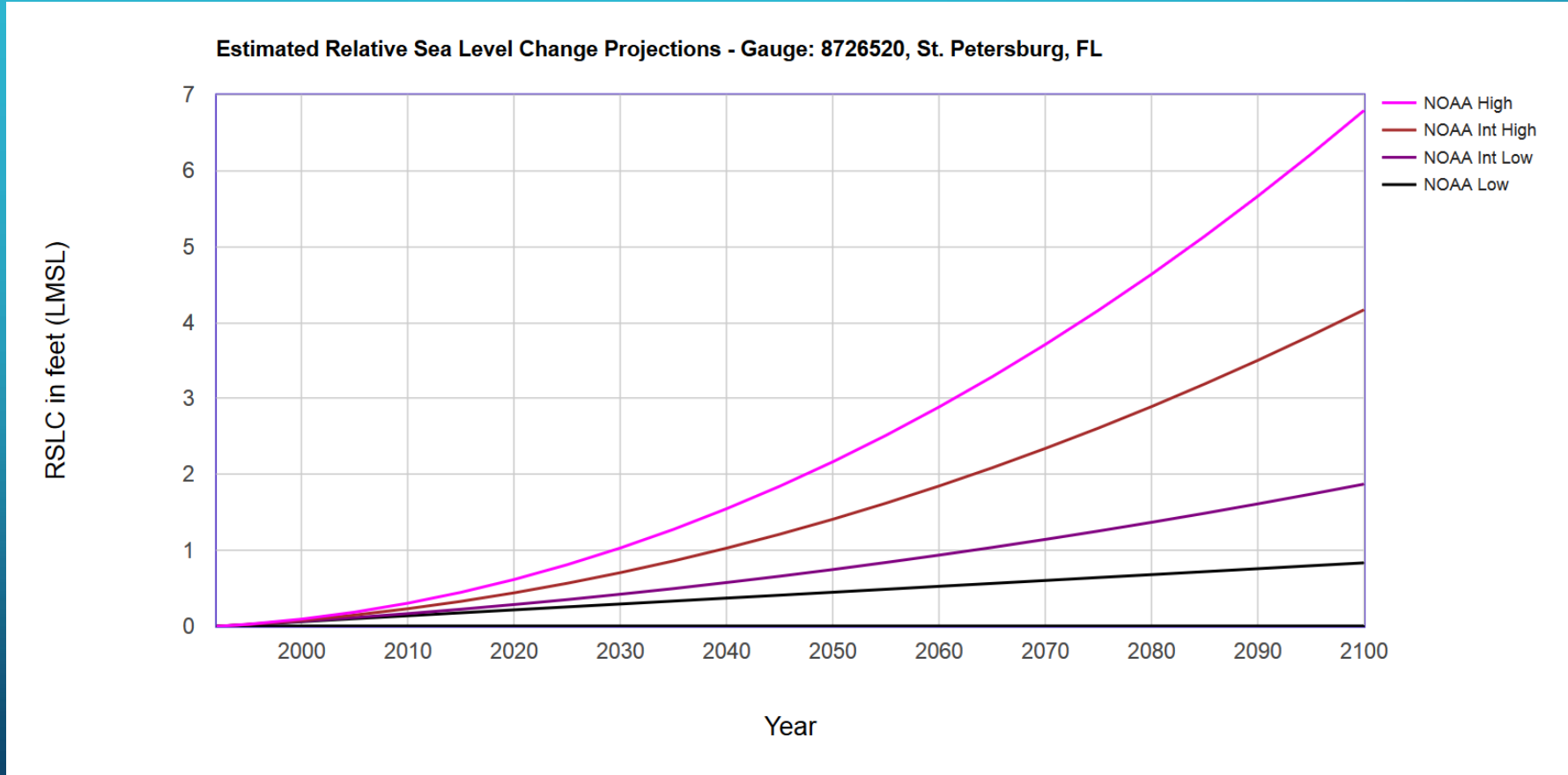
452.b. Watershed master plan (WMP) = 315 point maximum

Required for Class 4

512.a. Floodplain Management Plan (FMP) = 5 point available for SLR



FEMA NFIP Community Rating System (CRS) Sea Level Rise (SLR) Credit





FEMA NFIP Community Rating System (CRS) Sea Level Rise (SLR) Credit

Resilience Planning Grants RPG 2020-2021 (Open Aug. 1, 2019 - Oct. 7, 2019)



The Florida Department of Environmental Protection (DEP), through the Florida Resilient Coastlines Program (FRCP) will provide financial assistance aimed at preparing coastal Florida communities for current effects of rising sea levels, including coastal flooding, erosion, and ecosystem changes. The FRCP Resilience Planning Grants (RPG) is to promote community resilience planning, assessments, address adaptation plans, and comprehensive plan goals, objectives, and coordination, along with environmental justice. These state-funded grants are available through 2021. The total amount awarded will depend on funding available. Individual awards will be up to \$75,000.

Projects must address at least one of the following priority areas:

1. Compliance with "Peril of Flood" statute (Sec. 163.3178(2)(f) F.S.) for communities in their comprehensive plan.
2. Development of Adaptation Action Areas and associated Goals, Objectives, and Management Element in their comprehensive plan.
3. Vulnerability Assessments, Adaptation Plans or Resilience Plans other than that needed to meet the requirements, such as those for historic resources or stormwater management systems.
4. Regional collaboration efforts.

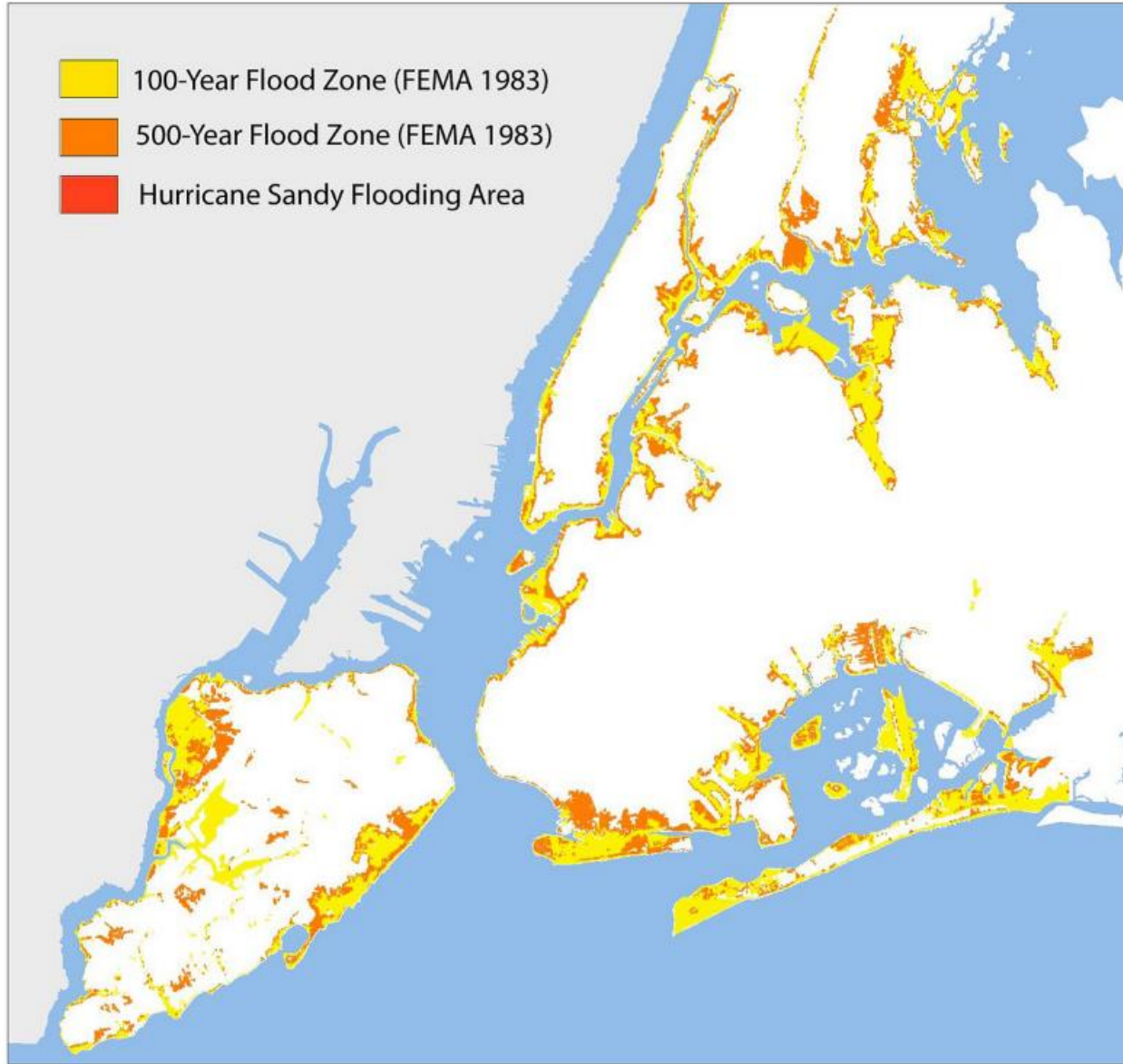
Additionally, the work will conduct analysis and produce materials required to satisfy the Community Rating System Credit (CRS) 452.b and meet the requirement to address the 2100 intermediate high condition for sea level rise (Section 404 Guidance, CRS Coordinator's Manual). Points available in this category are sufficient to improve our CRS rating and will provide a clear near-term, tangible benefit to County residents' flood insurance rates.

Additionally, the vulnerability analysis with a resiliency plan will include an implementation strategy with recommendations that focus on strategies that may be implemented by Comprehensive Plan, Code and policy recommendations. This approach assures that the vulnerability analysis with a resiliency plan will integrate into

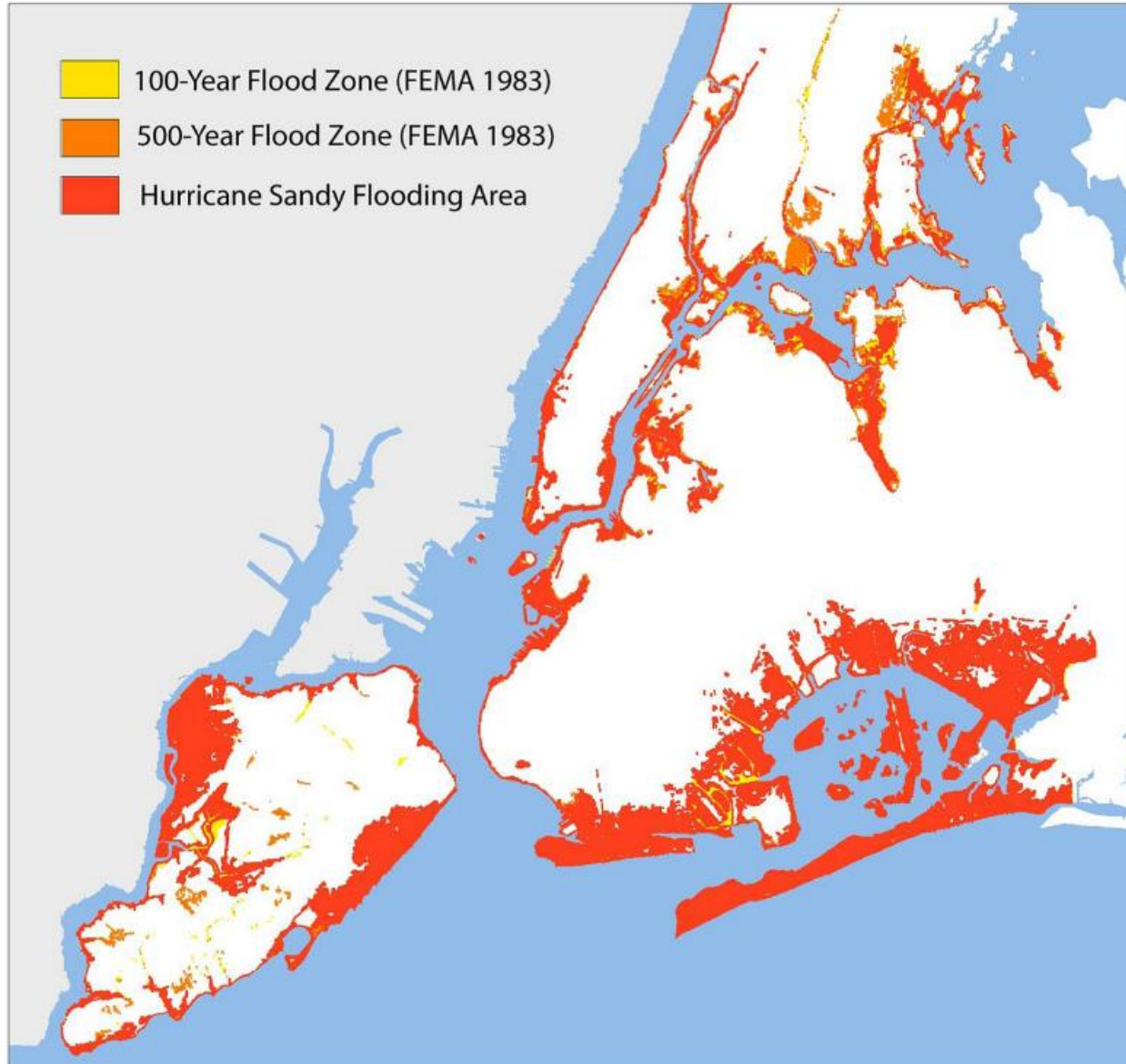
Lunch ?



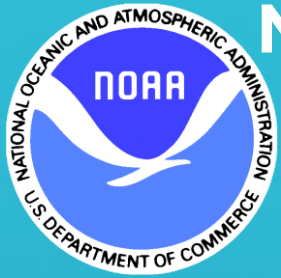
STRINGER/AFP/GETTY IMAGES



Shaping New York City's Future after Hurricane Sandy - FEMA Flood Map 1



Shaping New York City's Future after Hurricane Sandy - FEMA Flood Map 2



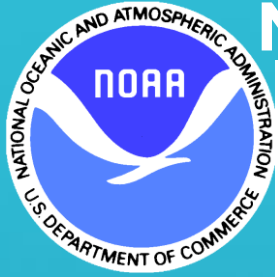
NOAA Digital Coast – Coastal Flood Exposure Mapper

Coastal Flood Exposure Mapper – Training Videos

<https://coast.noaa.gov/ufem/>

Coastal Flood Exposure Mapper

<https://www.coast.noaa.gov/floodexposure/#/splash>

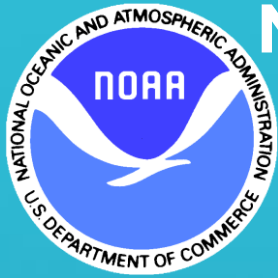


NOAA Digital Coast – Coastal Flood Exposure Mapper

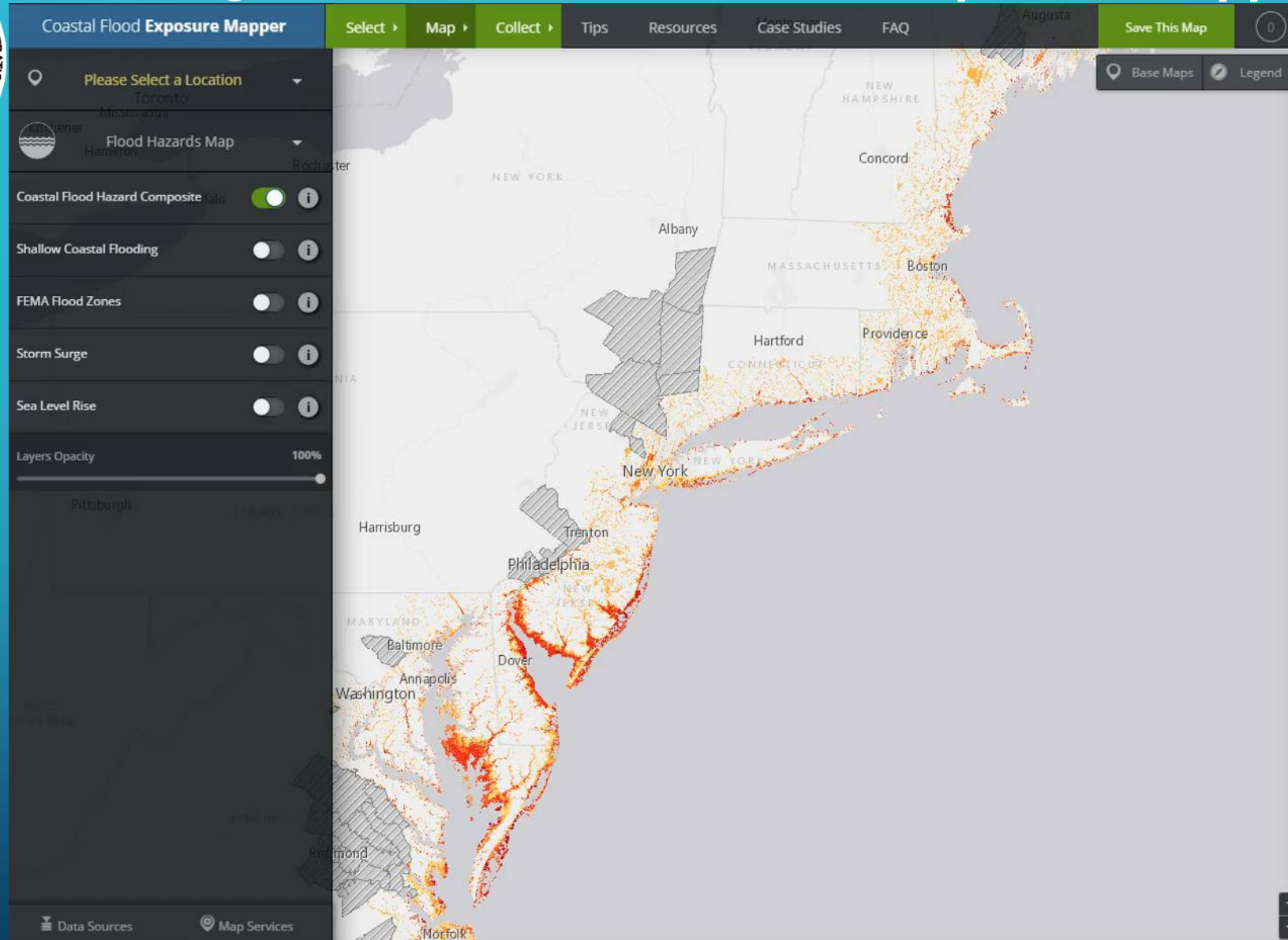


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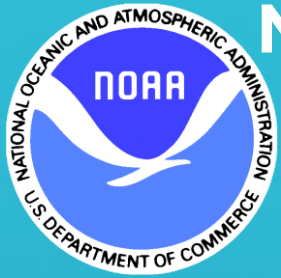


NOAA Digital Coast – Coastal Flood Exposure Mapper

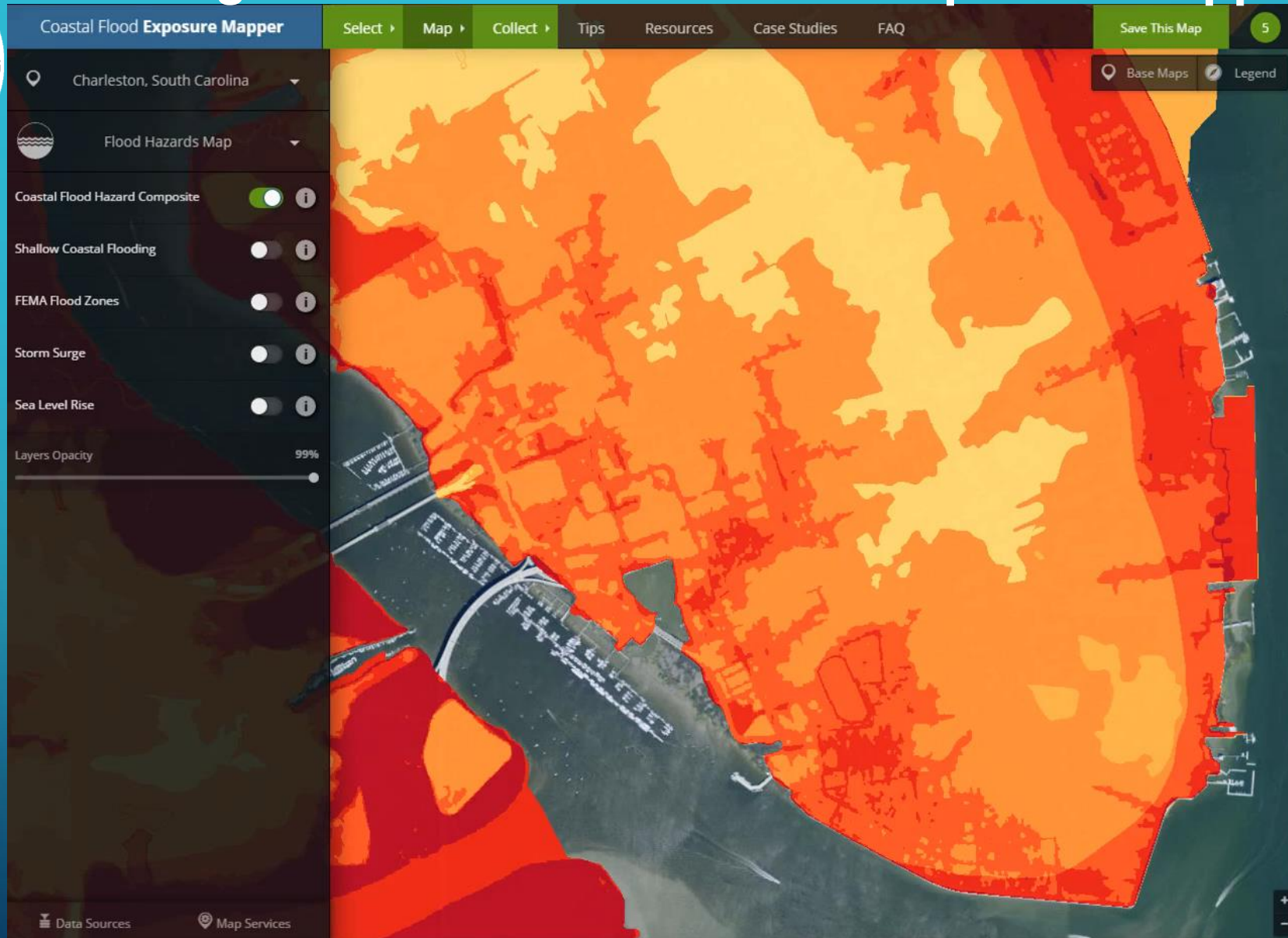


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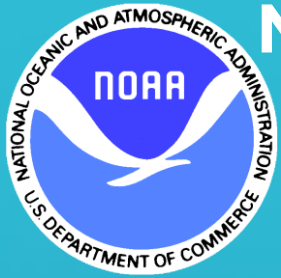


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