



3.0 Vulnerability Analysis

3.1 Purpose

The primary purpose of the vulnerability analysis is to identify the areas, populations, and facilities that are vulnerable to storm surge and to wind damage. Storm surge data from the hazards analysis were used to map inundation areas; to develop evacuation scenarios and evacuation zones; to quantify the vulnerable population; and to identify major facilities that are potentially vulnerable to storm surge.

Mobile homes also have been proven to be particularly susceptible to wind damage, and they should be considered vulnerable under any storm category. Other types of construction are potentially vulnerable to damage from high winds, but they are not included in this study.

3.2 Hurricane Surge Inundation and Mapping

Due to unavoidable inaccuracies in hurricane forecasting, the exact track or timing of an approaching hurricane cannot be predicted. Within a few hours, a hurricane can change its forward speed, intensity and direction, which will create quite different flooding scenarios in a given location. Because of this uncertainty, hurricane surge mapping depicts the "worst-case" by delineating the maximum expected extent of storm surge flooding at high tide, regardless of the location of hurricane landfall. Hurricane Surge Inundation maps showing peak surge flooding for the MOMs discussed in Chapter 2 have been produced for each storm category. The maps depict the limits of inundation from peak storm surge heights that could be generated by the four categories of storm intensity.

The Hurricane Surge Inundation maps were produced with the use of ArcGIS Spatial Analyst, which is a raster-based analysis. The best available topographic data was overlaid with the SLOSH water surface elevations to determine which areas were flooded and which areas were dry. The surge limits were then draped over the best available statewide basemap data and printed at an appropriate scale. The estimated depth of flooding at a selected location can be determined by subtracting the known ground elevation from the surge elevation at that point.

The Hurricane Surge Inundation maps were used as a reference when creating the Hurricane Evacuation Zone maps shown in Figures 3-1 through 3-24 in the following section.



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3.3 Hurricane Evacuation Scenarios and Zones

Hurricane evacuation zones are sub-areas of each scenario that should be evacuated to protect residents from flooding. They sometimes include non-flood areas that could be cut off or completely surrounded by flooding.

Hurricanes with unlike parameters can have very similar implications for hurricane evacuation. Evacuation scenarios are developed to simplify evacuation decision-making by comparing areas of potential surge flooding for each hurricane category. Where there is no significant difference, surge areas flooded by storms of different categories may be treated the same and evacuated as one scenario.

Evacuation zones are based to some degree on U.S. Census tracts, traffic analysis zones, or prominent features, and are a key basis for the transportation analysis. Evacuation Zones were developed by the USACE, New England District; FEMA Region I; and the Rhode Island Emergency Management Agency, in coordination with local emergency management officials, and were finalized before use in the transportation modeling process. These evacuation zones were used to estimate the evacuating population and number of evacuating vehicles.

Figure 3-1 through Figure 3-20 depicts the hurricane evacuation scenarios for the study area. Table 3-1 shows the evacuation zones in each area to be evacuated based on the storm category. The following figures illustrate the zones and surge areas developed for the study area. These images are also available in the File Bank section as interactive maps.

- Figure 3-1: Hurricane Evacuation Zones – Bristol County / Barrington
- Figure 3-2: Hurricane Evacuation Zones – Bristol County / Bristol
- Figure 3-3: Hurricane Evacuation Zones – Bristol County / Warren
- Figure 3-4: Hurricane Evacuation Zones – Kent County / East Greenwich
- Figure 3-5: Hurricane Evacuation Zones – Kent County / Warwick
- Figure 3-6: Hurricane Evacuation Zones – Newport County / Jamestown
- Figure 3-7: Hurricane Evacuation Zones – Newport County / Little Compton
- Figure 3-8: Hurricane Evacuation Zones – Newport County / Middletown
- Figure 3-9: Hurricane Evacuation Zones – Newport County / Newport
- Figure 3-10: Hurricane Evacuation Zones – Newport County / Portsmouth
- Figure 3-11: Hurricane Evacuation Zones – Newport County / Tiverton
- Figure 3-12: Hurricane Evacuation Zones – Providence County / Cranston
- Figure 3-13: Hurricane Evacuation Zones – Providence County / East Providence
- Figure 3-14: Hurricane Evacuation Zones – Providence County / Pawtucket



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- Figure 3-15: Hurricane Evacuation Zones – Providence County / Providence
- Figure 3-16: Hurricane Evacuation Zones – Washington County / Charlestown
- Figure 3-17: Hurricane Evacuation Zones – Washington County / Narragansett
- Figure 3-18: Hurricane Evacuation Zones – Washington County / New Shoreham
- Figure 3-19: Hurricane Evacuation Zones – Washington County / North Kingstown
- Figure 3-20: Hurricane Evacuation Zones – Washington County / South Kingstown
- Figure 3-21: Hurricane Evacuation Zones – Washington County / Westerly



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Table 3-1: Evacuation Zones

County	Evacuation Zones ¹	County	Evacuation Zones ¹
Bristol County	Barrington	Providence County	Cranston
	Bristol		East Providence
	Warren		Pawtucket
Kent County	East Greenwich	Washington County	Providence
	Warwick		
Newport County	Jamestown	Narragansett	
	Little Compton	Charlestown	
	Middletown	Narragansett	
	Newport	New Shoreham	
	Portsmouth	North Kingstown	
	South Kingstown		
	Tiverton		
	Westerly		

1. Key:
- Zone A (Category 1 & 2)
 - Zone B (Category 3 & 4)
 - Zone C (Category 3 & 4/Fox Point Hurricane Barrier Failure, Providence County Only)
 - Inland Area (Non-Surge)

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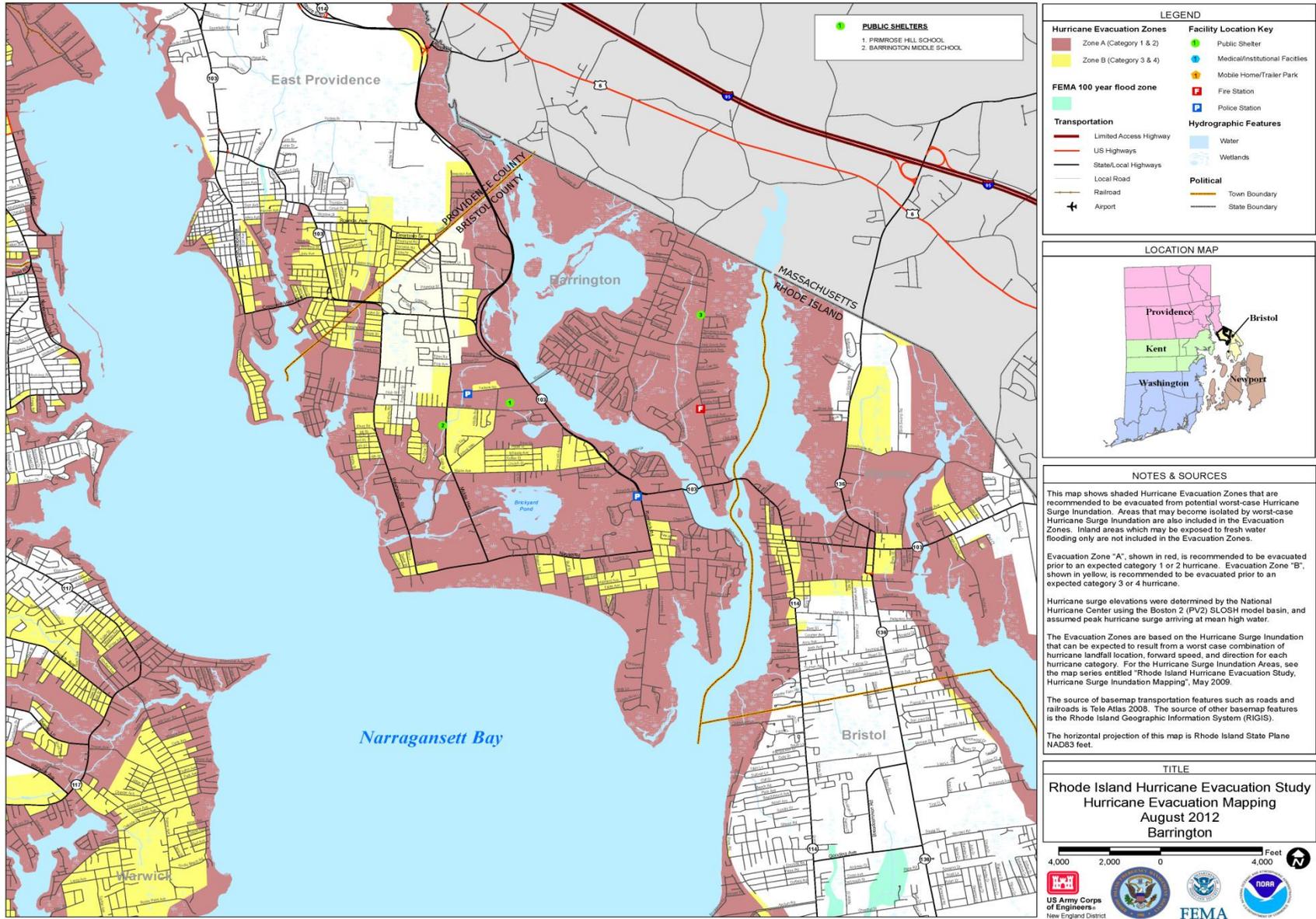


Figure 3-1: Hurricane Evacuation Zones – Bristol County / Barrington

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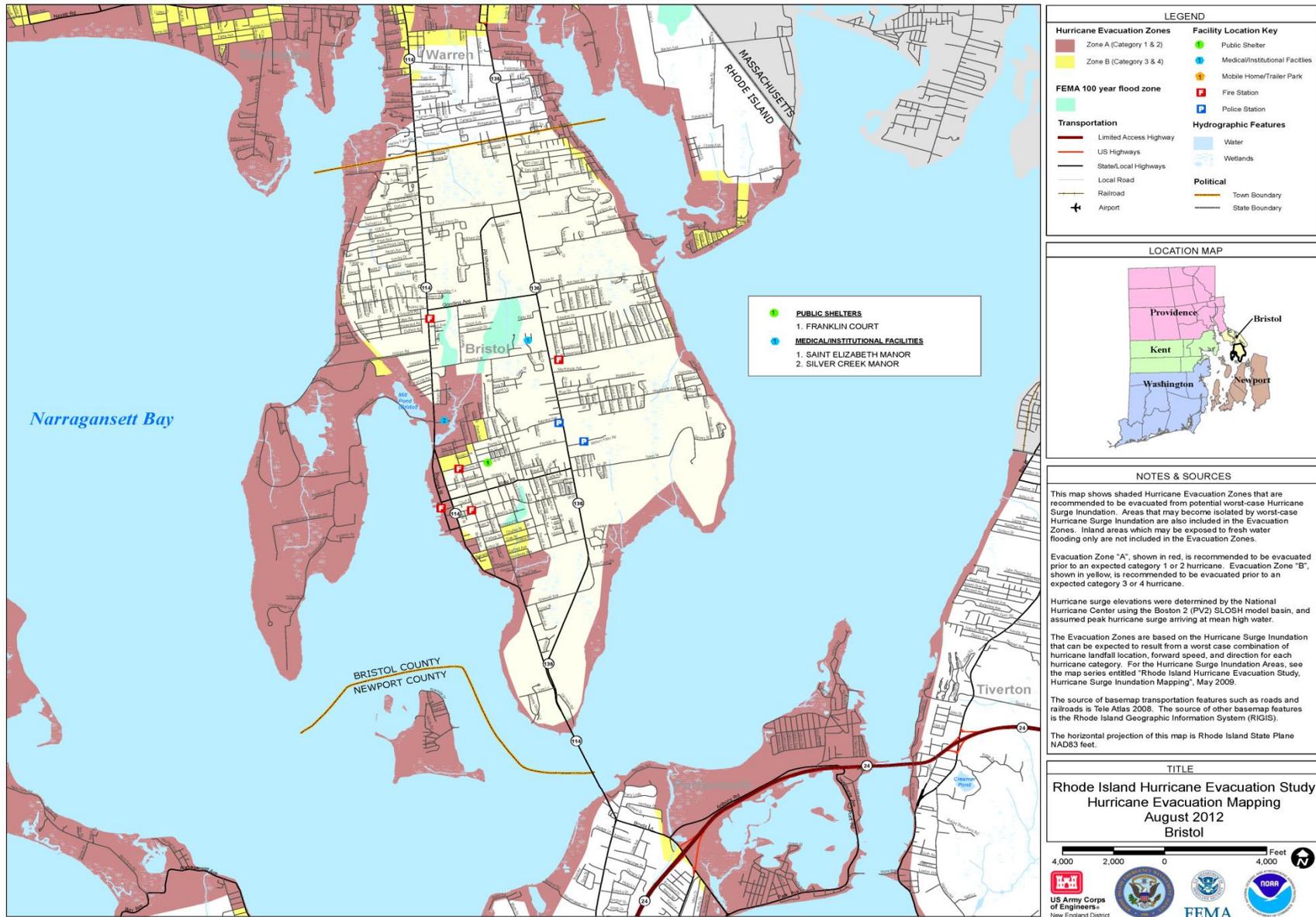


Figure 3-2: Hurricane Evacuation Zones – Bristol County / Bristol

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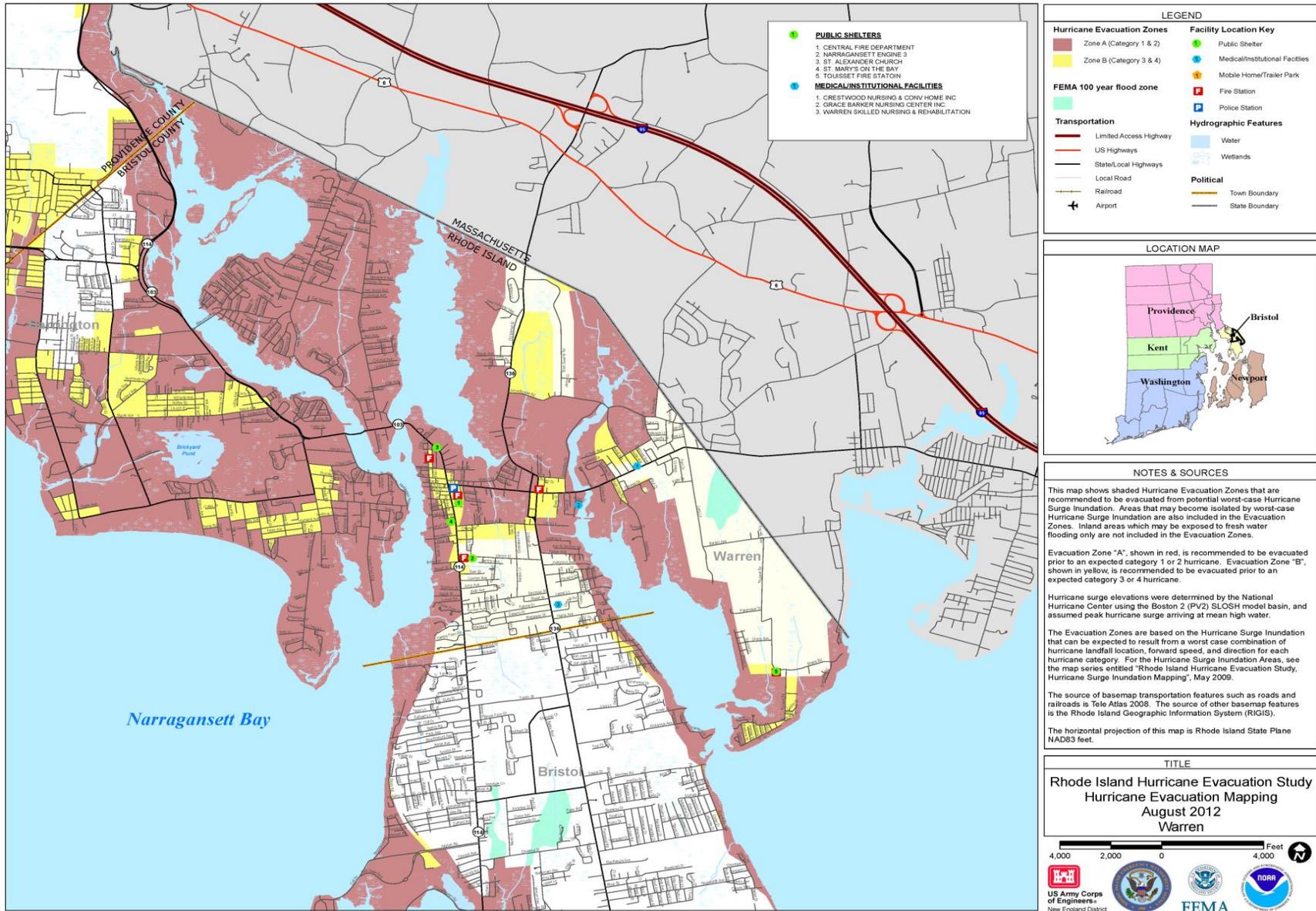


Figure 3-3: Hurricane Evacuation Zones – Bristol County / Warren



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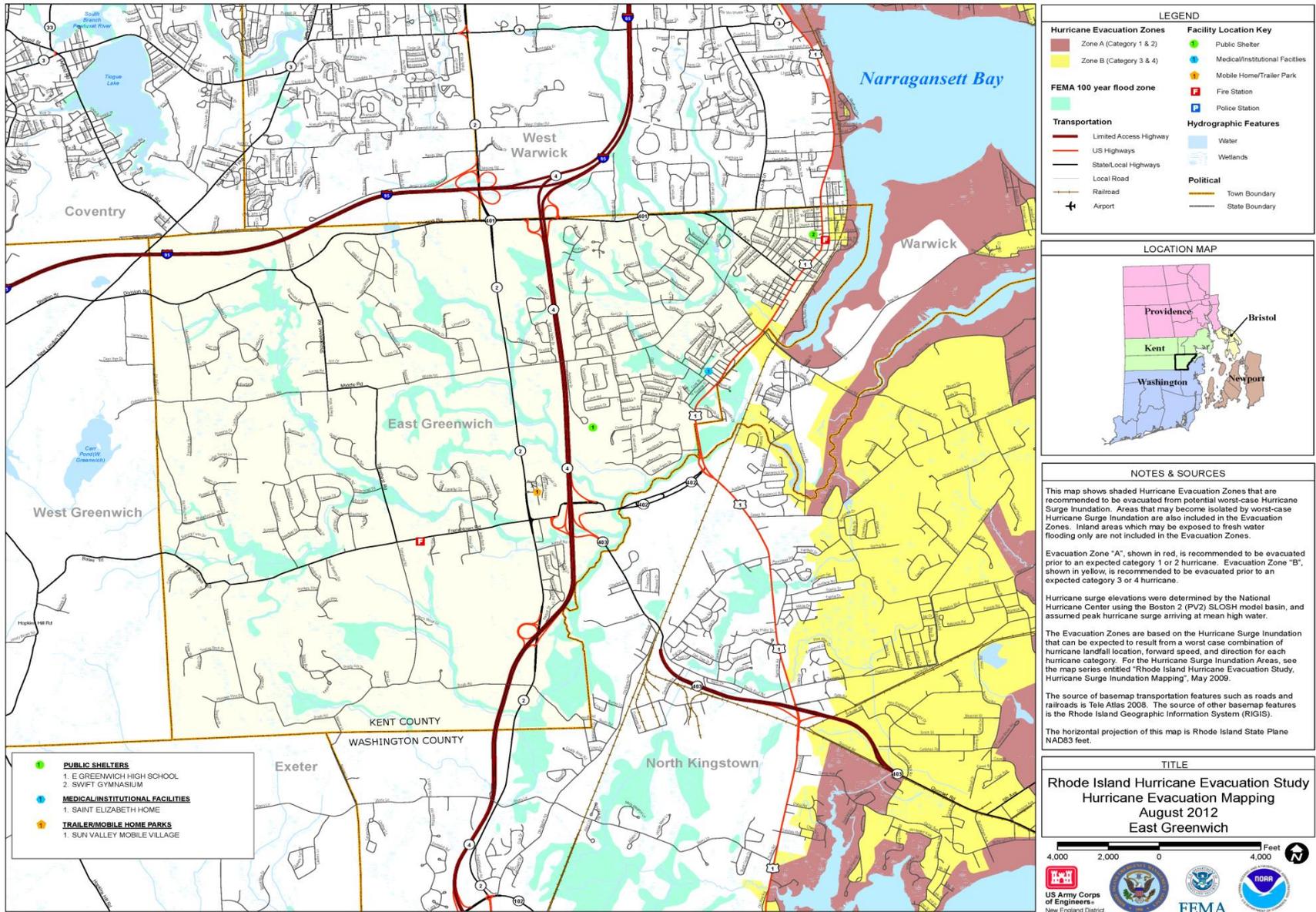


Figure 3-4: Hurricane Evacuation Zones – Kent County / East Greenwich



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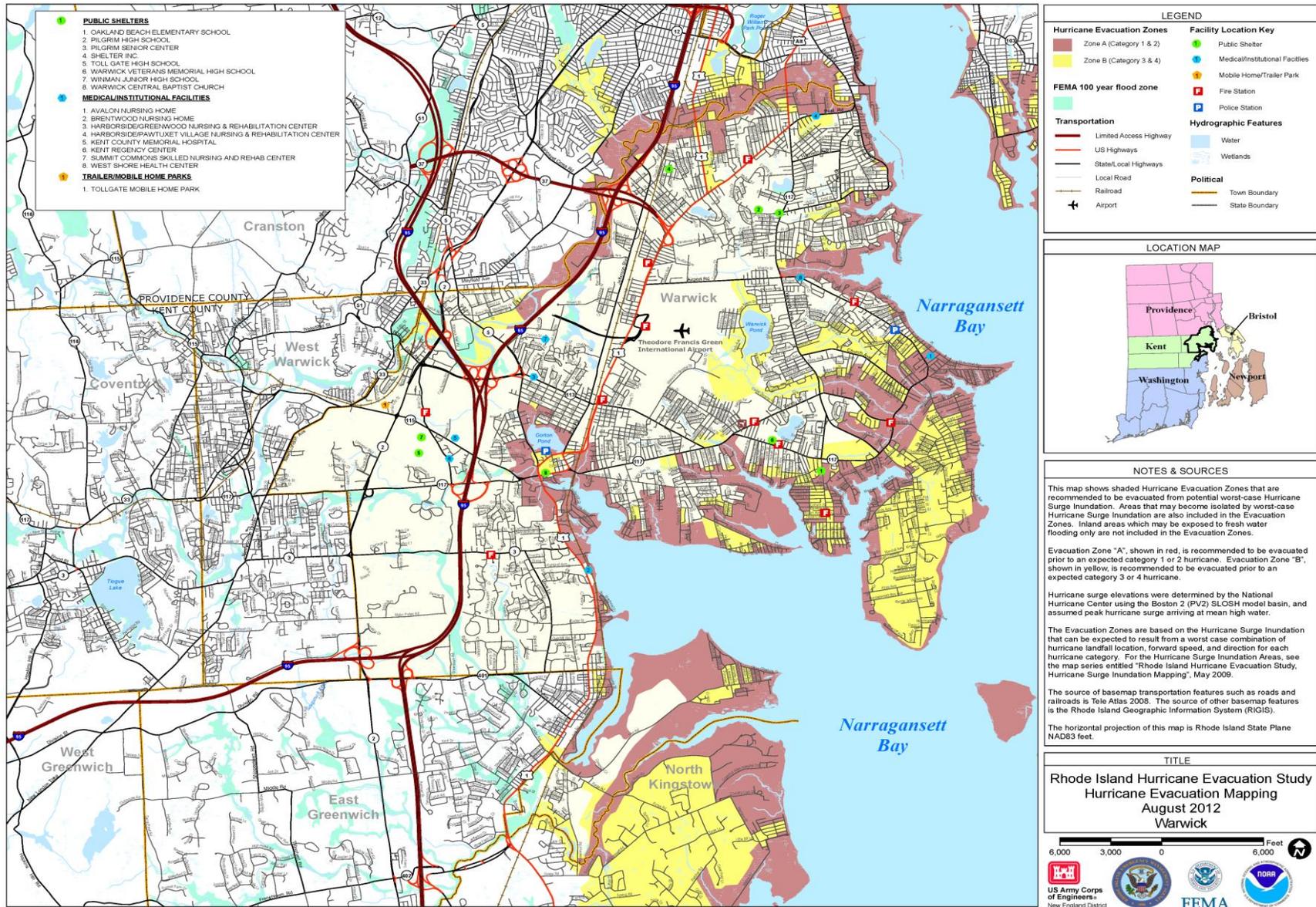


Figure 3-5: Hurricane Evacuation Zones – Kent County / Warwick

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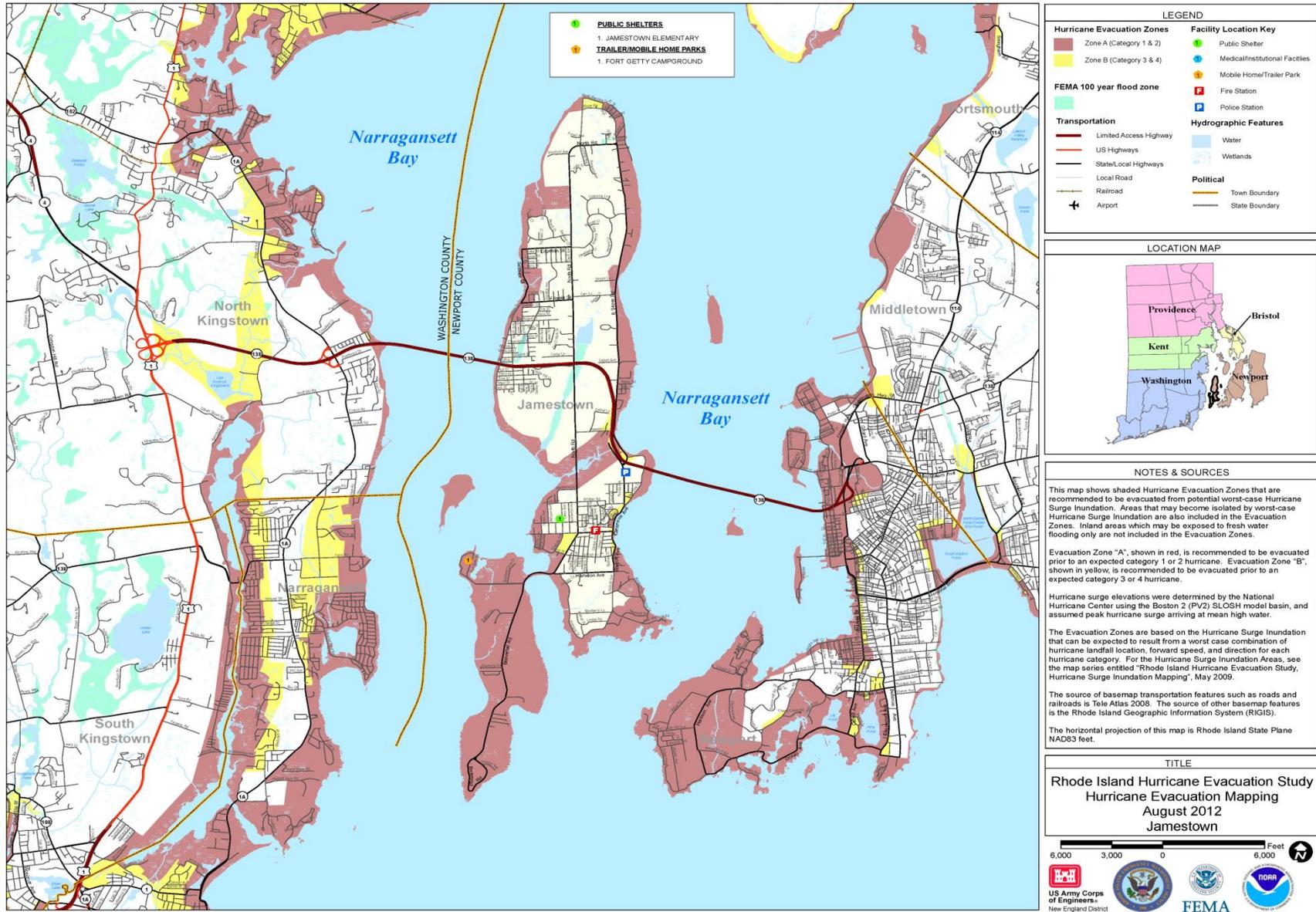


Figure 3-6: Hurricane Evacuation Zones – Newport County / Jamestown

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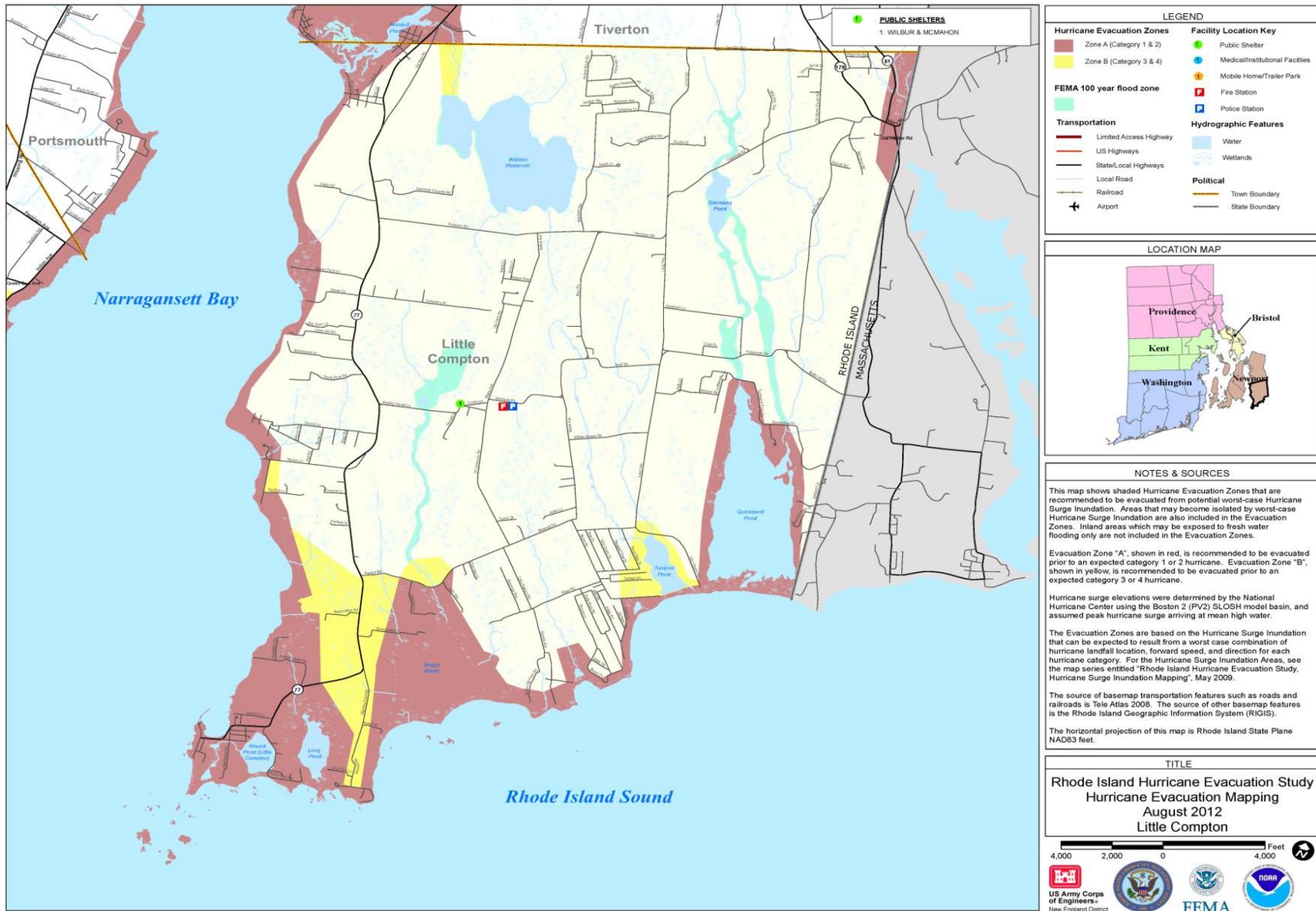


Figure 3-7: Hurricane Evacuation Zones – Newport County / Little Compton

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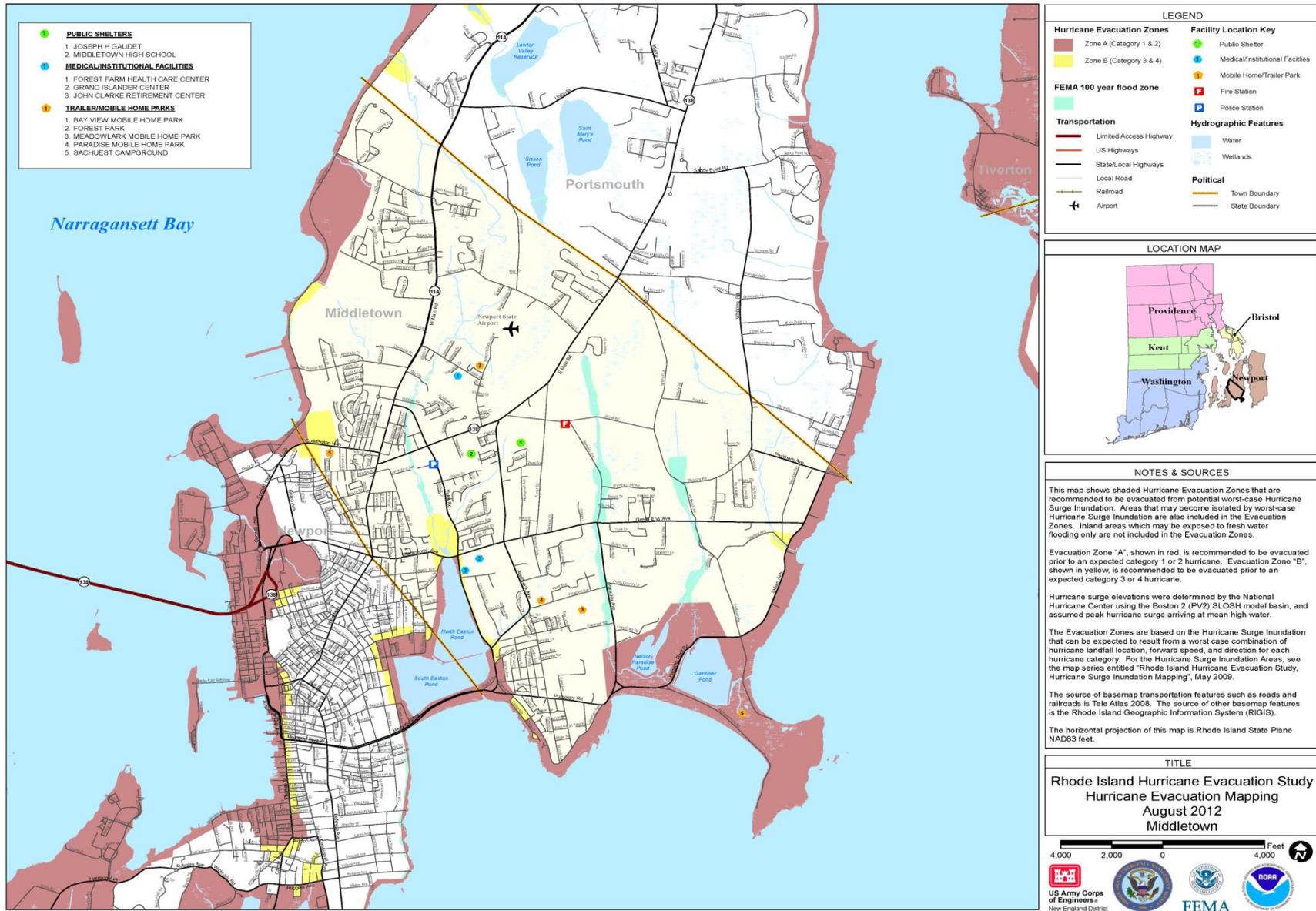


Figure 3-8: Hurricane Evacuation Zones – Newport County / Middletown

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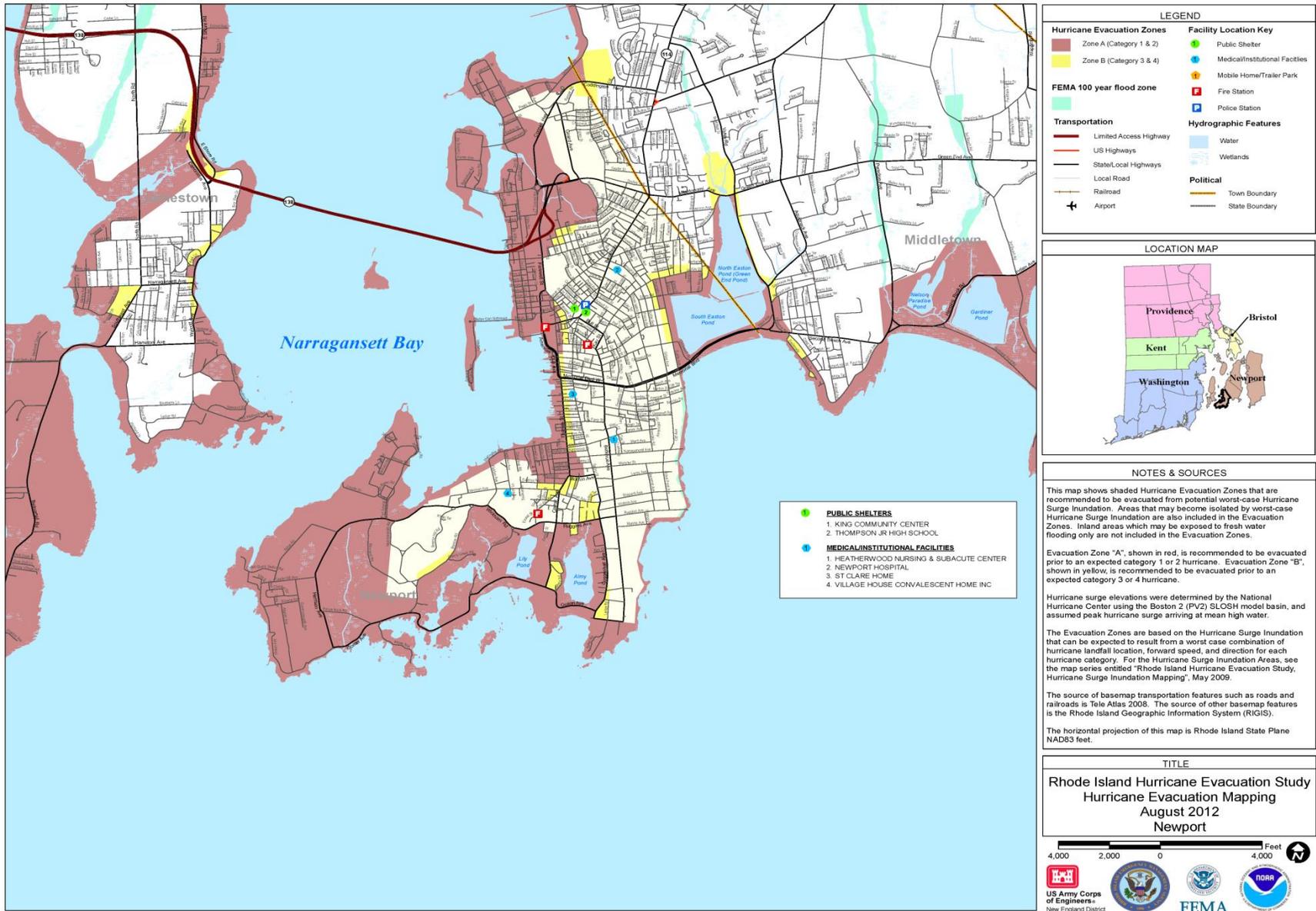


Figure 3-9: Hurricane Evacuation Zones – Newport County / Newport

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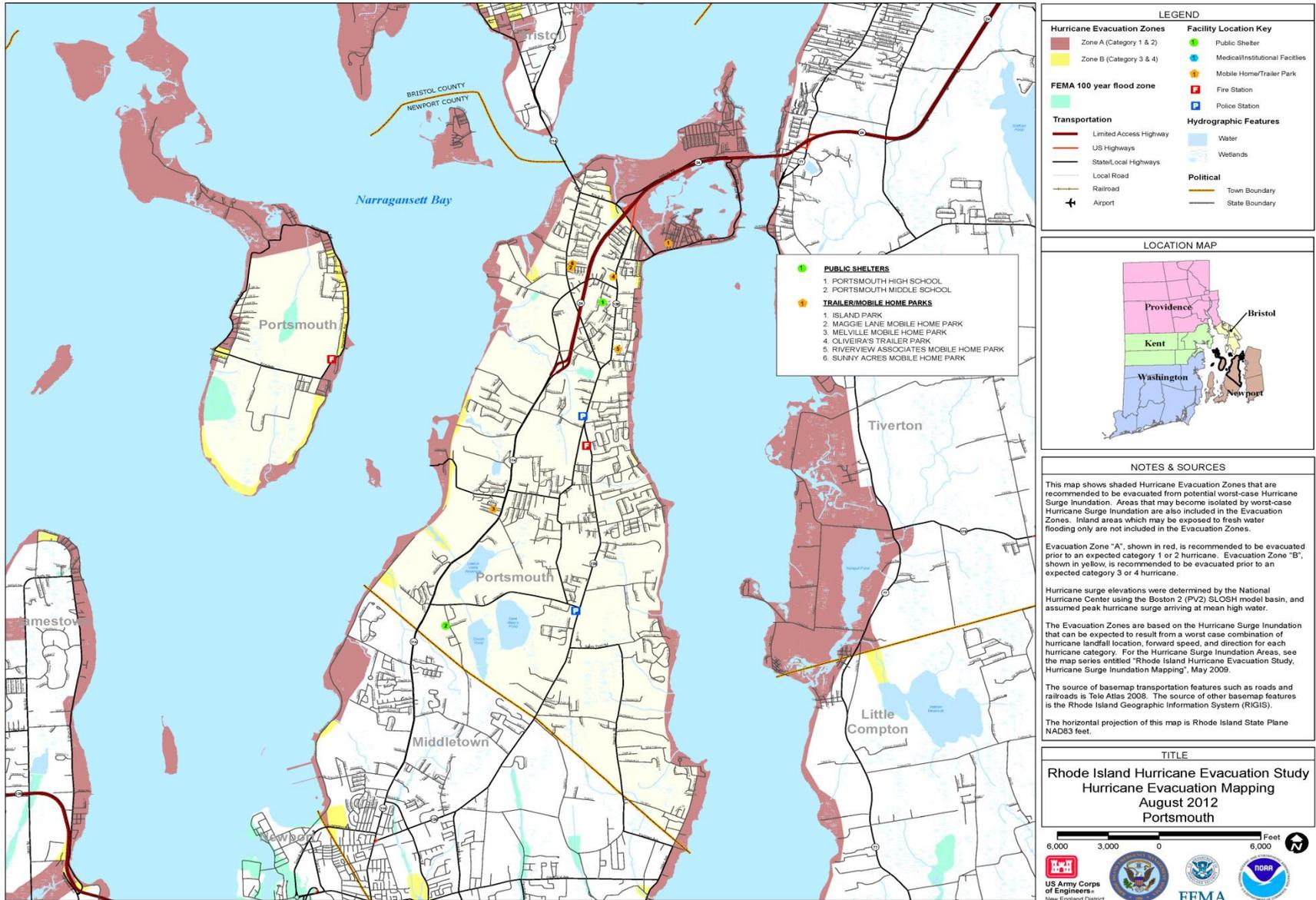


Figure 3-10: Hurricane Evacuation Zones – Newport County / Portsmouth

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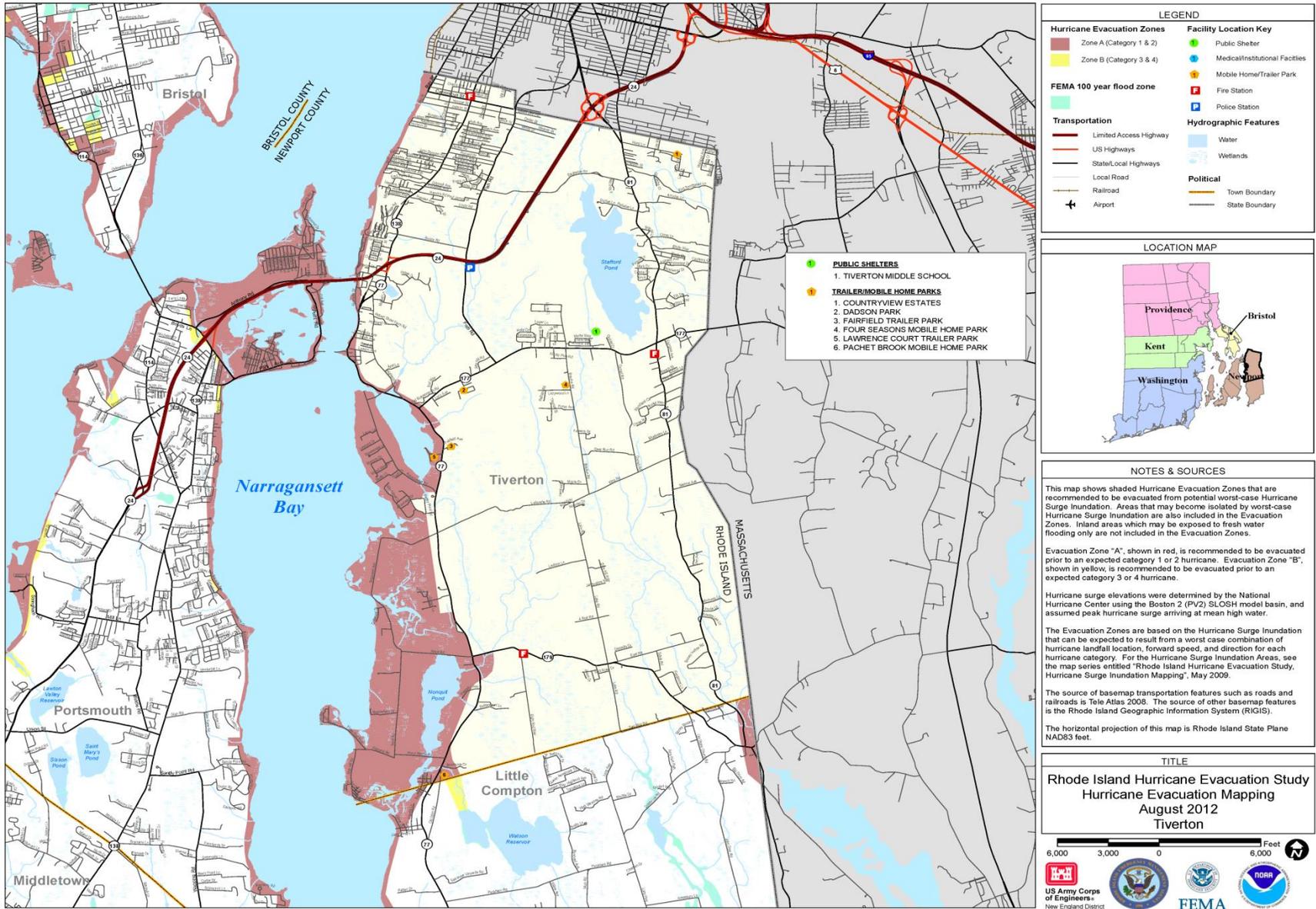


Figure 3-11: Hurricane Evacuation Zones – Newport County / Tiverton



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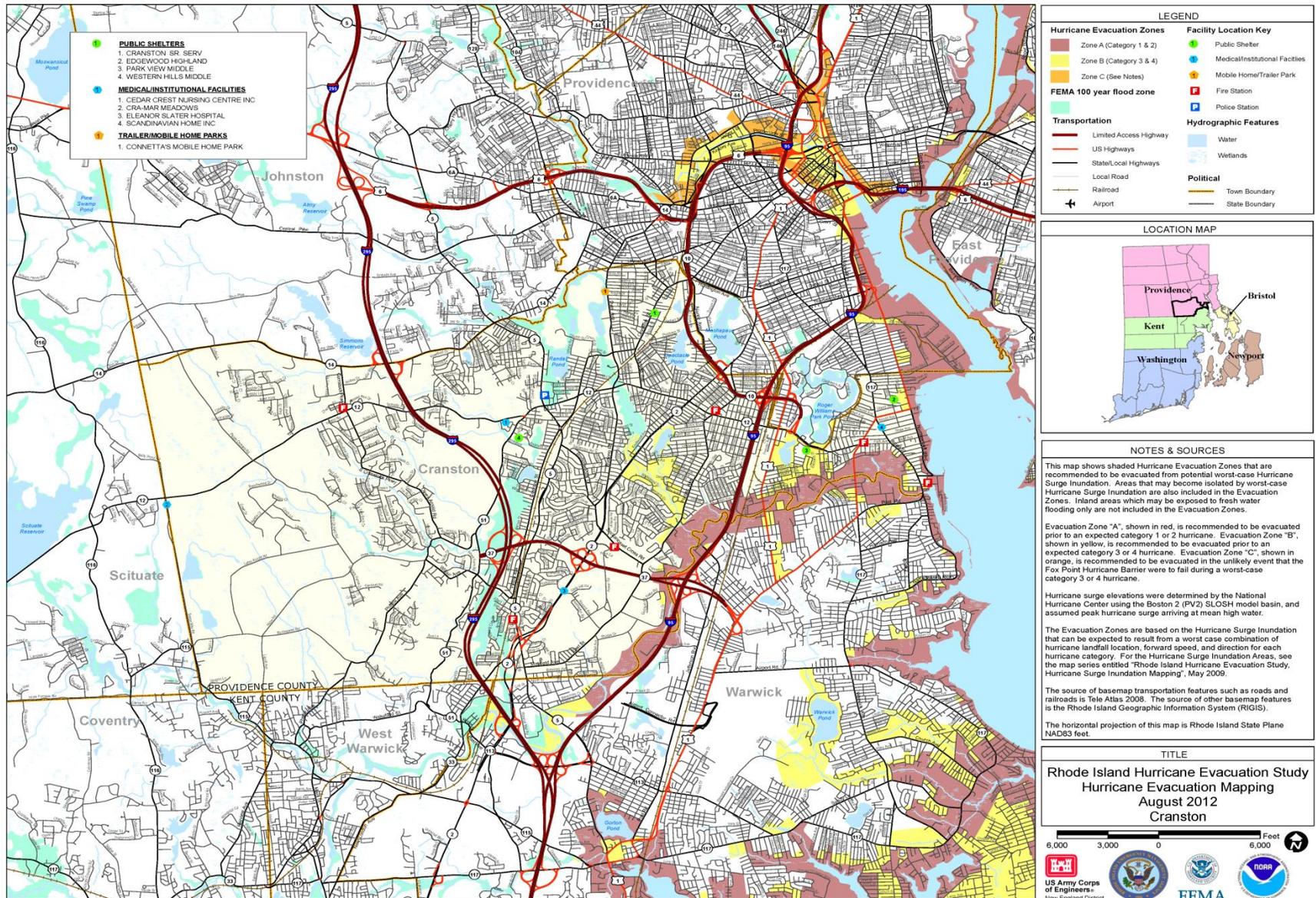


Figure 3-12: Hurricane Evacuation Zones – Providence County / Cranston

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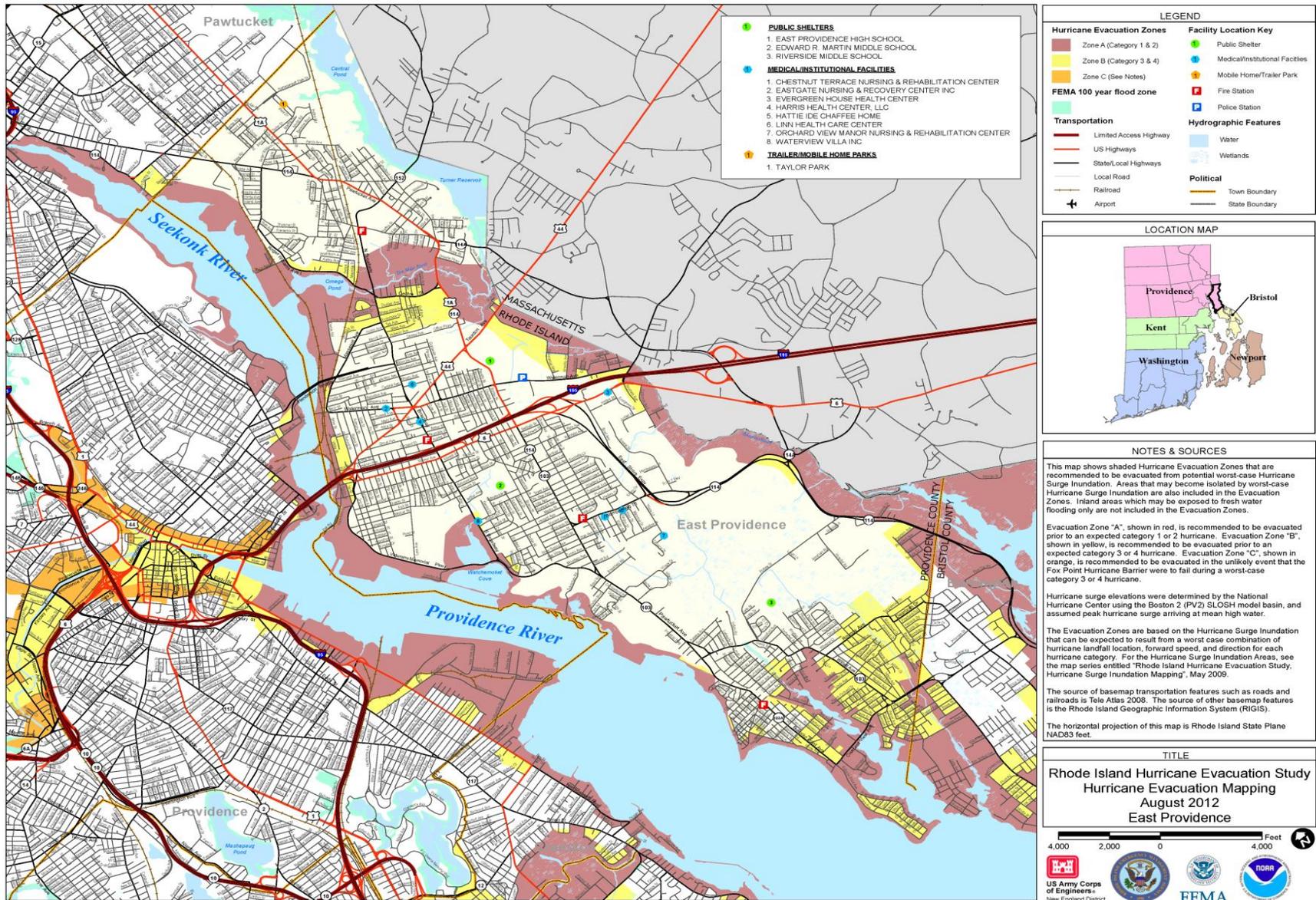


Figure 3-13: Hurricane Evacuation Zones – Providence County / East Providence



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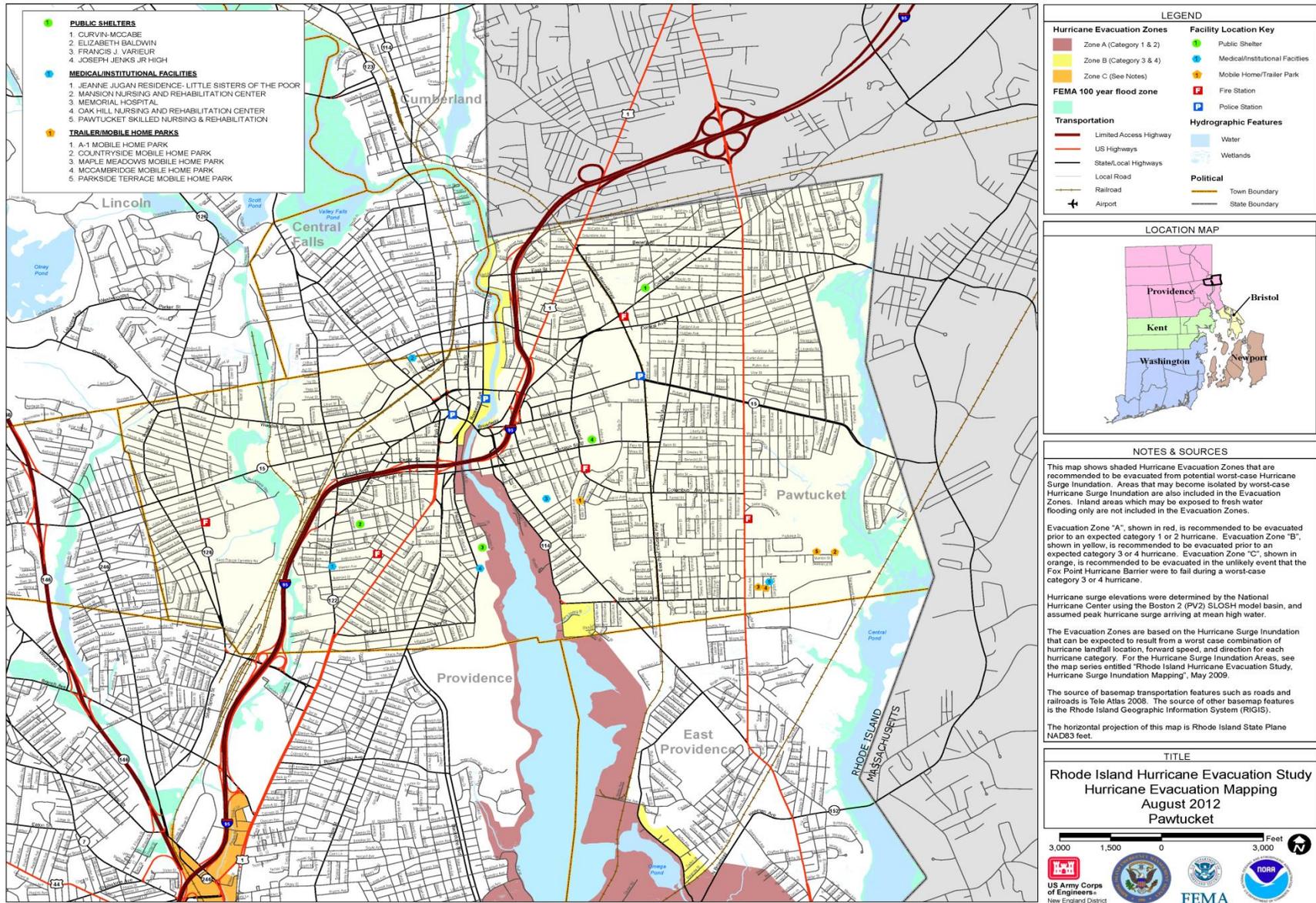


Figure 3-14: Hurricane Evacuation Zones – Providence County / Pawtucket

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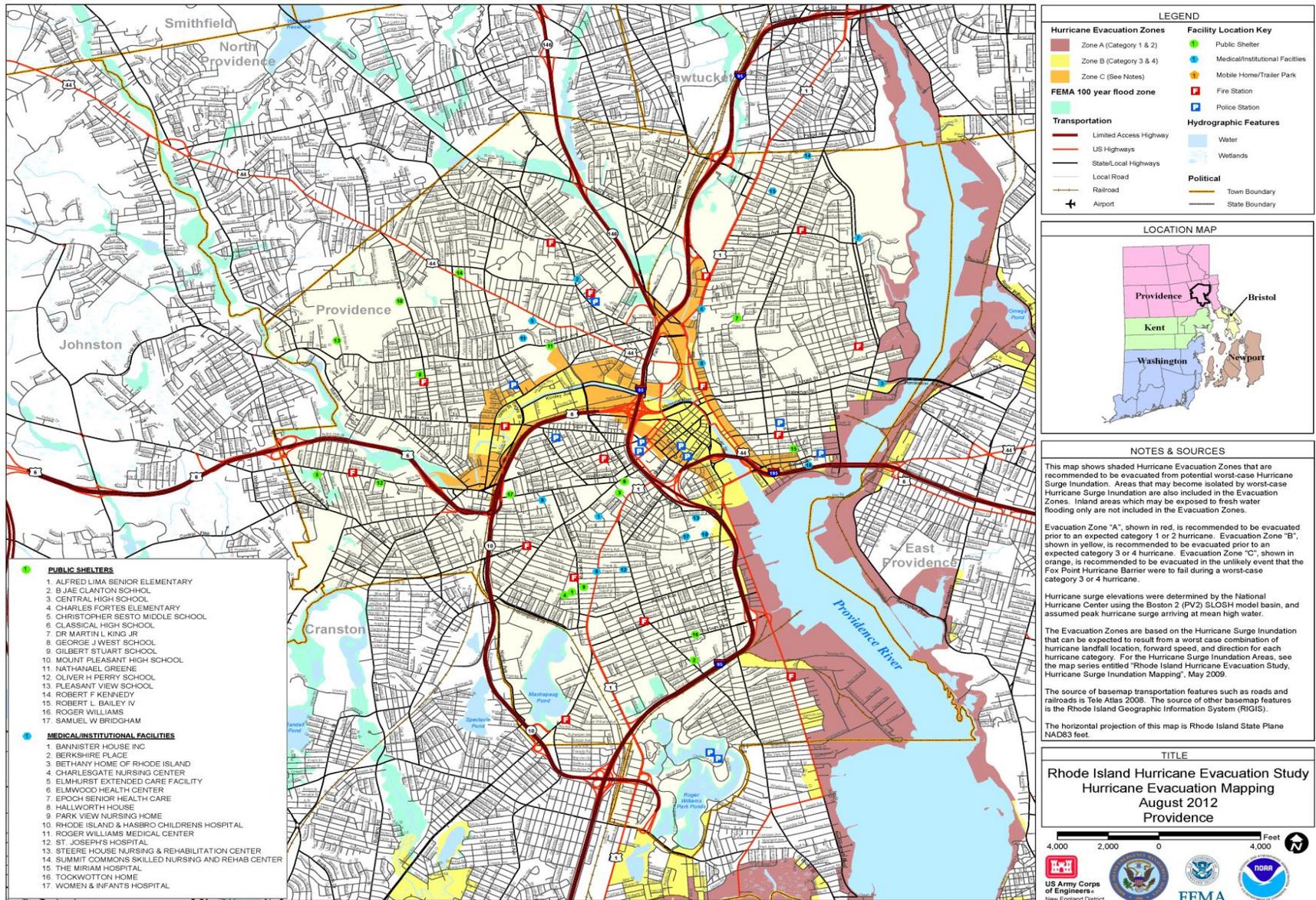


Figure 3-15: Hurricane Evacuation Zones – Providence County / Providence



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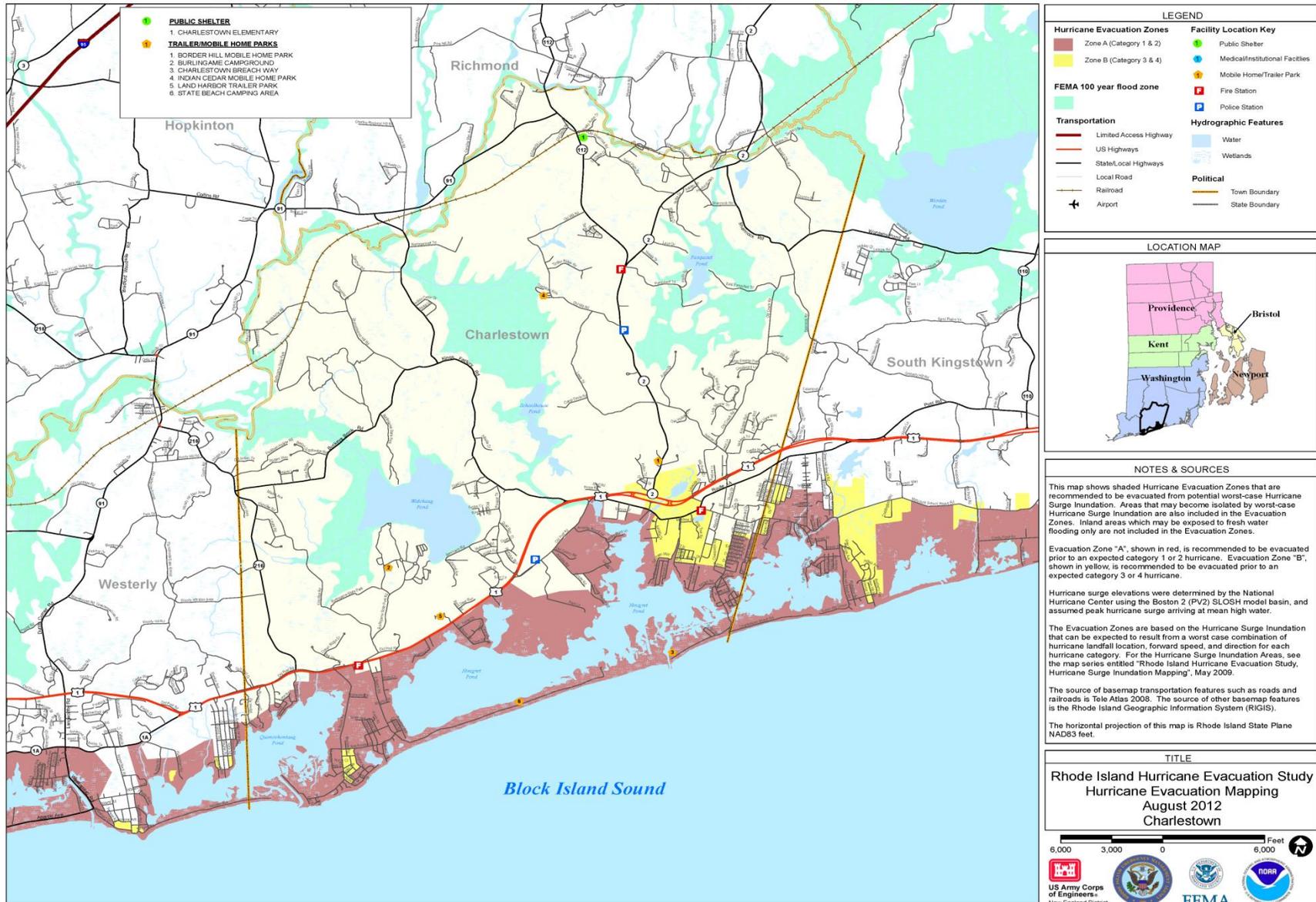


Figure 3-16: Hurricane Evacuation Zones – Washington County / Charlestown

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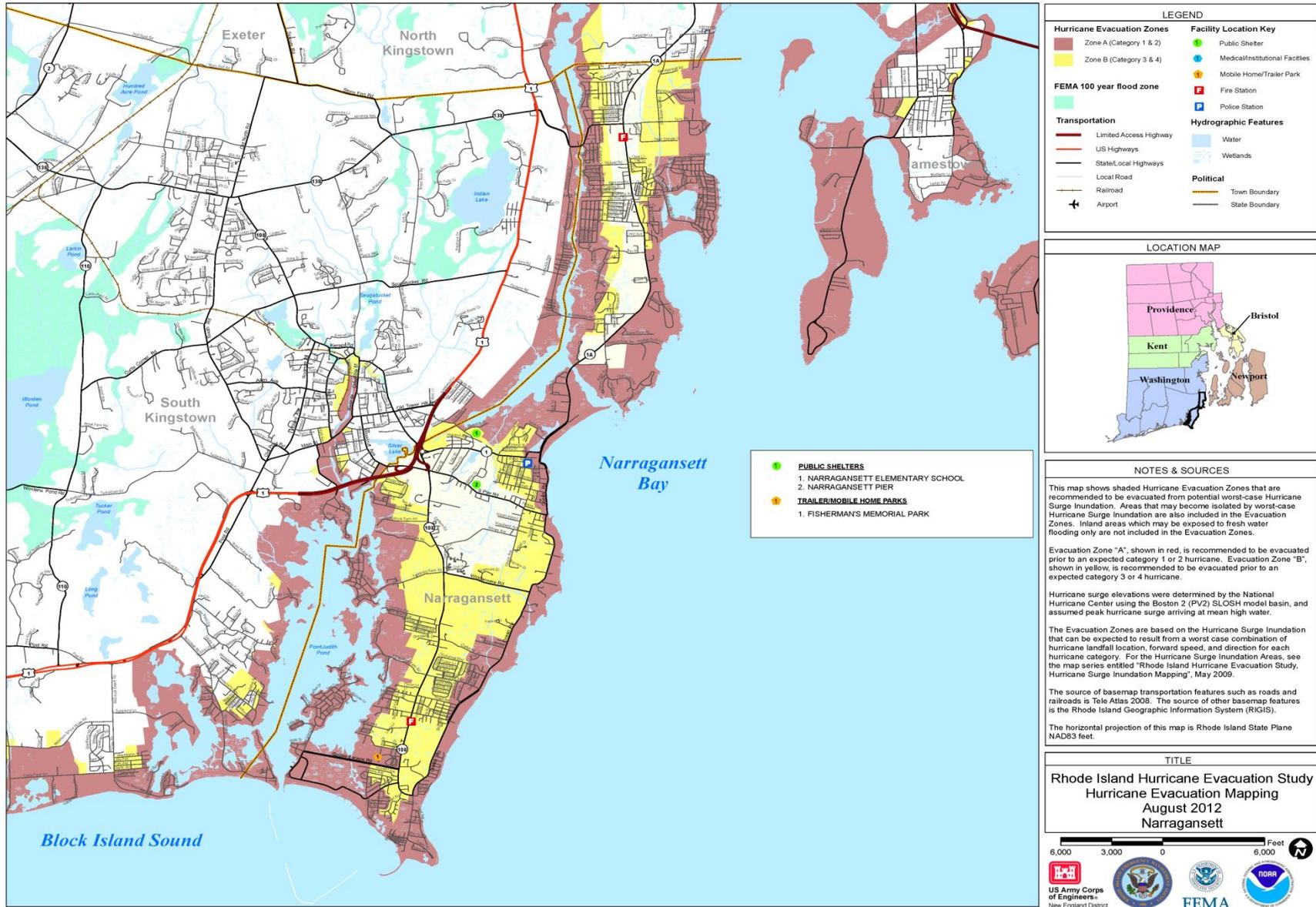


Figure 3-17: Hurricane Evacuation Zones – Washington County / Narragansett

3.0 Vulnerability Analysis

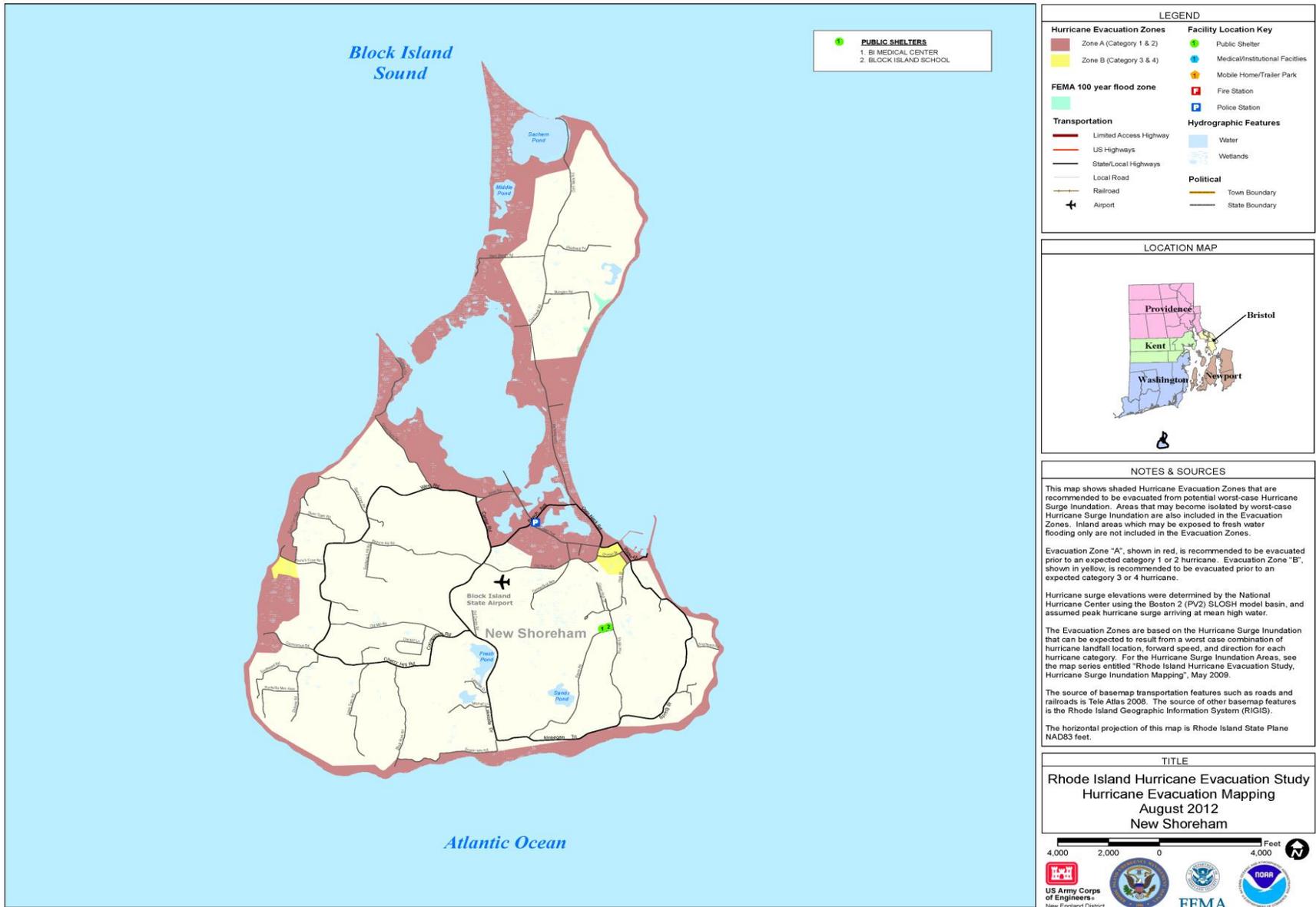


Figure 3-18: Hurricane Evacuation Zones – Washington County / New Shoreham

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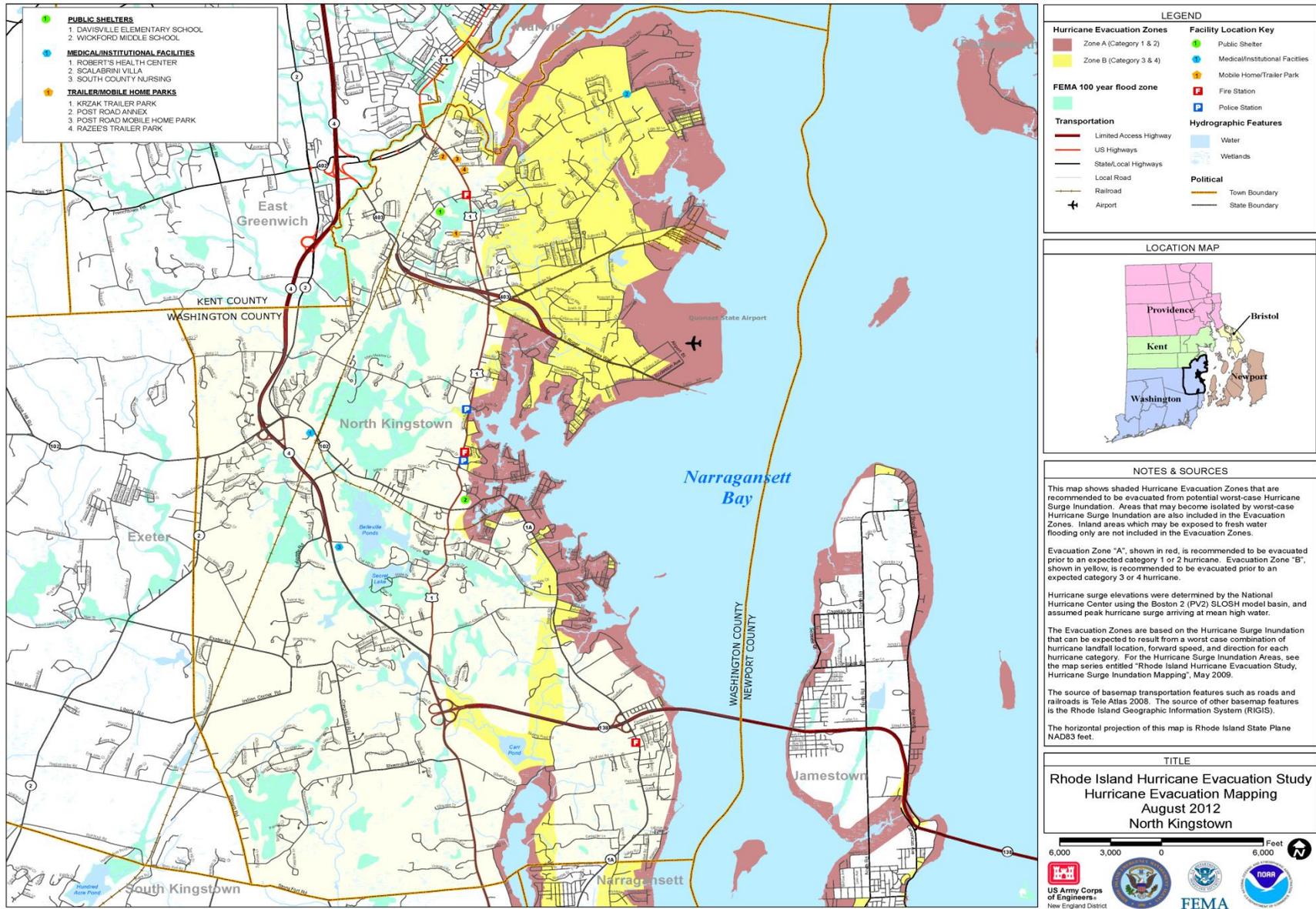


Figure 3-19: Hurricane Evacuation Zones – Washington County / North Kingstown

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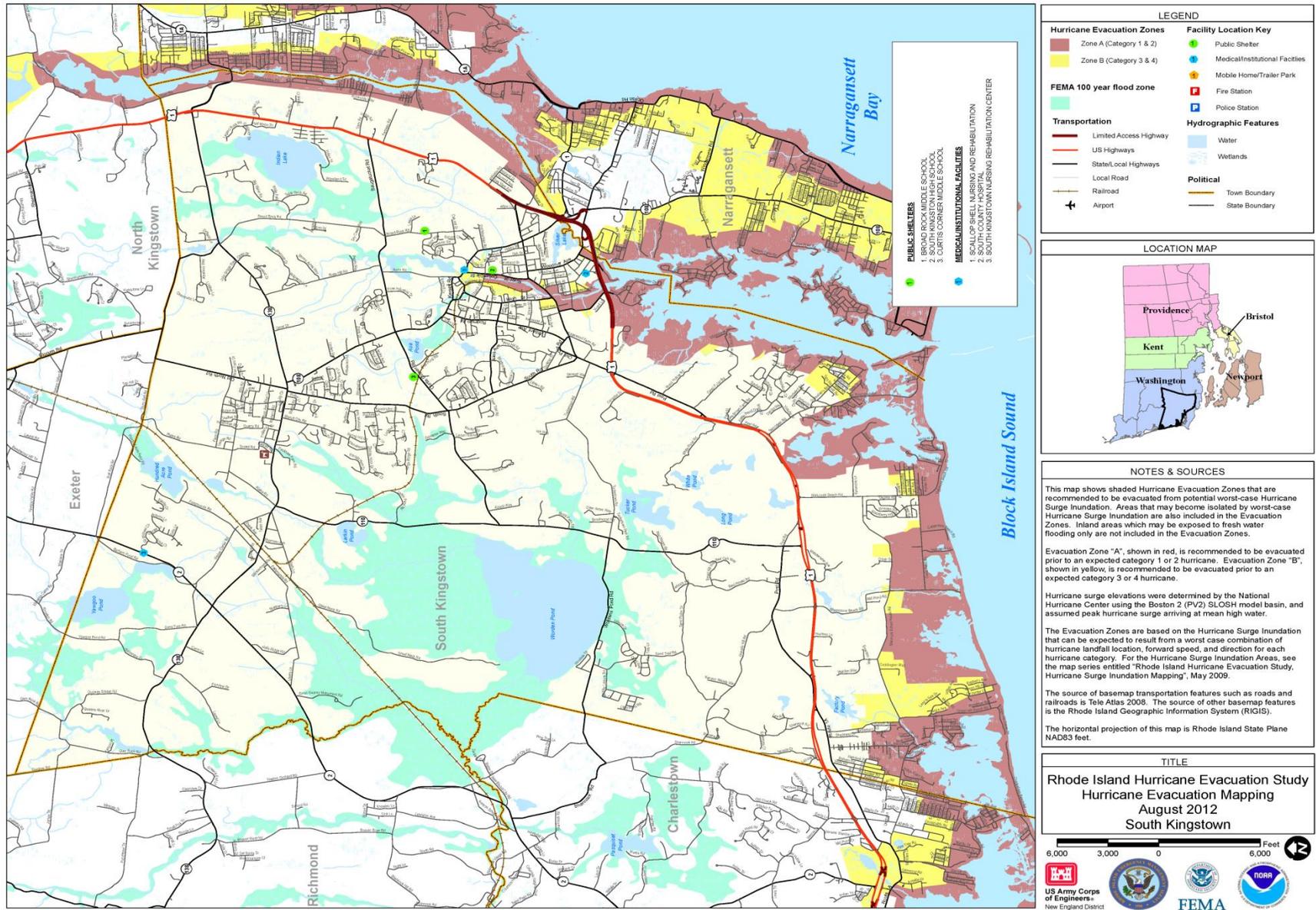


Figure 3-20: Hurricane Evacuation Zones – Washington County / South Kingstown

3.0 Vulnerability Analysis

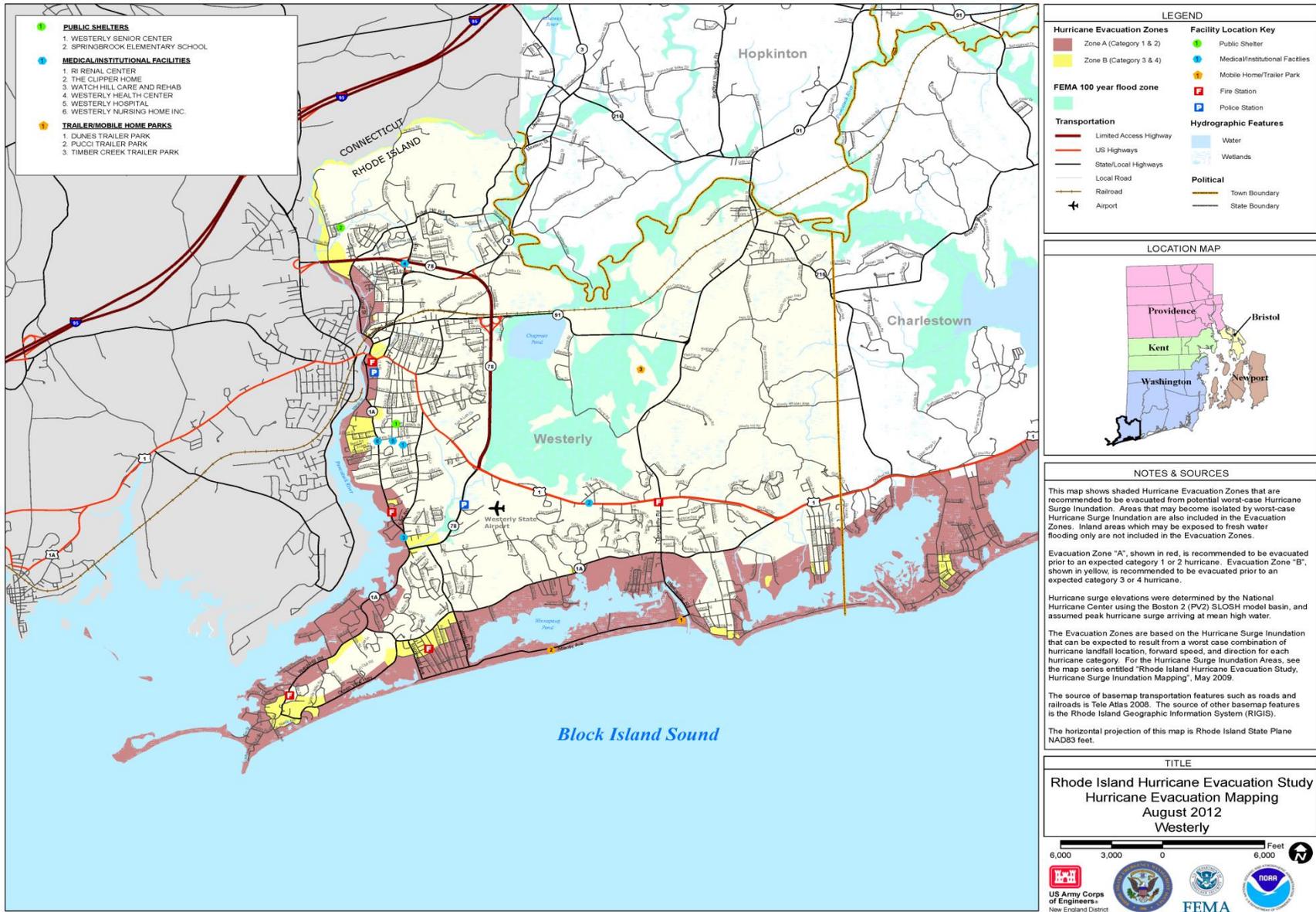


Figure 3-21: Hurricane Evacuation Zones – Washington County / Westerly



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3.4 Vulnerable Population

For the purpose of this study, the vulnerable population is comprised of people residing within the evacuation zones subject to storm surge and residents of all mobile homes, which may be threatened by hurricane-force winds. The tourist population varies with the tourist season. A low (30 percent) and high (90%) tourist occupancy rate has been used in each county for evacuation scenarios. Table 3-2 gives estimates of the current vulnerable population for the overall study area. Tables 3-3 through 3-7 provide a more detailed account of the evacuating population statistics and are illustrated in Figures 3-22 through 3-25.

- Table 3-2: Vulnerable Population Summary
- Table 3-3: Evacuating Population Statistics – Bristol County
- Table 3-4: Evacuating Population Statistics – Kent County
- Table 3-5: Evacuating Population Statistics – Newport County
- Table 3-6: Evacuating Population Statistics – Providence County
- Table 3-7: Evacuating Population Statistics – Washington County
- Figure 3-22: Estimated Evacuation Population for Category 3/4 High Tourist Occupancy – Bristol County
- Figure 3-23: Estimated Evacuation Population for Category 3/4 High Tourist Occupancy – Kent and Providence Counties
- Figure 3-24: Estimated Evacuation Population for Category 3/4 High Tourist Occupancy – Newport County
- Figure 3-25: Estimated Evacuation Population for Category 3/4 High Tourist Occupancy – Washington County

Table 3-2: Vulnerable Population Summary

County	Scenario A Low Occ	Scenario A High Occ	Scenario B Low Occ	Scenario B High Occ	Scenario C Low Occ	Scenario C High Occ
Bristol County	22,070	22,984	26,936	27,932		
Kent County	19,338	22,178	32,446	36,164		
Newport County	23,563	34,303	32,294	44,633		
Providence County	32,052	36,741	75,139	80,944	76,142	82,034
Washington County	33,067	53,750	46,951	69,293		
Totals	130,090	169,956	213,766	258,966	76,142	82,034

1. Scenario C only applies to Providence County.



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Table 3-3: Evacuating Population Statistics – Bristol County

Evacuation Zones ¹	Scenario A Low Occ	Scenario A High Occ	Scenario B Low Occ	Scenario B High Occ
Barrington	11,098	11,269	11,098	11,269
	509	533	1,835	1,862
	102	109	301	311
Total	11,709	11,911	13,234	13,442
Bristol	3,622	3,991	3,622	3,991
	166	173	602	609
	974	1,120	2,804	3,009
Total	4,762	5,284	7,028	7,609
Warren	5,115	5,233	5,115	5,233
	277	317	962	1,007
	207	239	597	641
Total	5,599	5,789	6,674	6,881
Overall Total	22,070	22,984	26,936	27,932

1. Key: Zone A Zone B Inland Area (Non-Surge)

Table 3-4: Evacuating Population Statistics – Kent County

Evacuation Zones ¹	Scenario A Low Occ	Scenario A High Occ	Scenario B Low Occ	Scenario B High Occ
East Greenwich	139	150	139	150
	79	80	277	278
	678	726	1,952	2,020
Total	896	956	2,368	2,448
Warwick	12,230	12,566	12,230	12,566
	2,268	2,681	7,789	8,248
	3,944	5,975	10,059	12,902
Total	18,442	21,222	30,078	33,716
Overall Total	19,338	22,178	32,446	36,164

1. Key: Zone A Zone B Inland Area (Non-Surge)



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Table 3-5: Evacuating Population Statistics – Newport County

Evacuation Zones ¹	Scenario A Low Occ	Scenario A High Occ	Scenario B Low Occ	Scenario B High Occ
Jamestown	1,515	2,175	1,515	2,175
	18	18	67	67
	314	531	769	1,072
Total	1,847	2,724	2,351	3,314
Little Compton	608	1,106	608	1,106
	74	195	116	251
	401	779	811	1,340
Total	1,083	2,080	1,535	2,697
Middletown	789	1,169	789	1,169
	49	92	122	171
	1,603	2,859	3,494	5,253
Total	2,441	4,120	4,405	6,593
Newport	8,178	11,699	8,178	11,699
	400	798	956	1,399
	1,614	3,096	3,590	5,666
Total	10,192	15,593	12,724	18,764
Portsmouth	4,023	4,949	4,023	4,949
	95	218	193	330
	1,116	1,434	2,677	3,122
Total	5,234	6,601	6,893	8,401
Tiverton	1,667	1,938	1,667	1,938
	0	0	0	0
	1,099	1,247	2,719	2,926
Total	2,766	3,185	4,386	4,864
Overall Total	23,563	34,303	32,294	44,633

1. Key: Zone A Zone B Inland Area (Non-Surge)



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Table 3-6: Evacuating Population Statistics – Providence County

Evacuation Zones ¹	Scenario A Low Occ	Scenario A High Occ	Scenario B Low Occ	Scenario B High Occ	Scenario C Low Occ	Scenario C High Occ
Cranston	2,087	2,098	2,087	2,098		
	472	483	1,716	1,729		
	3,959	4,182	11,575	11,888		
Total	6,518	6,763	15,378	15,715		
East Providence	3,945	3,970	3,945	3,970		
	1,028	1,048	3,745	3,767		
	1,990	2,162	5,704	5,945		
Total	6,963	7,180	13,394	13,682		
Pawtucket	260	260	260	260		
	55	58	196	200		
	4,019	4,210	11,311	11,578		
Total	4,334	4,528	11,767	12,038		
Providence	2,511	2,765	2,511	2,765		
	1,500	3,457	3,001	5,175		
	783	1,389	2,070	2,849	3,073	3,939
	9,443	10,659	27,018	28,720		
Total	14,237	18,270	34,600	39,509	3,073	3,939
Overall Total	32,052	36,741	75,139	80,944	3,073	3,939

1. Key:
- Zone A
 - Zone C (Fox Point Hurricane Barrier Failure)
 - Zone B
 - Inland Area (Non-Surge)



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Table 3-7: Evacuating Population Statistics – Washington County

Evacuation Zones ¹	Scenario A Low Occ	Scenario A High Occ	Scenario B Low Occ	Scenario B High Occ
Charlestown	1,782	3,600	1,782	3,600
	194	483	340	662
	1,047	2,248	2,007	3,689
Total	3,023	6,331	4,129	7,951
Narragansett	8,695	12,110	8,695	12,110
	1,393	2,428	3,737	4,887
	254	427	622	864
Total	10,342	14,965	13,054	17,861
New Shoreham	717	1,705	717	1,705
	66	183	87	204
	1,423	4,103	1,589	4,269
Total	2,206	5,991	2,393	6,178
North Kingstown	3,625	4,054	3,625	4,054
	834	908	2,791	2,873
	1,246	1,457	3,219	3,514
Total	5,705	6,419	9,635	10,441
South Kingstown	3,824	6,552	3,824	6,552
	326	699	716	1,132
	1,975	2,905	4,972	6,274
Total	6,125	10,156	9,512	13,958
Westerly	3,858	6,724	3,858	6,724
	300	602	713	1,048
	1,508	2,562	3,657	5,132
Total	5,666	9,888	8,228	12,904
Overall Total	33,067	53,750	46,951	69,293

1. Key: Zone A Zone B Inland Area (Non-Surge)



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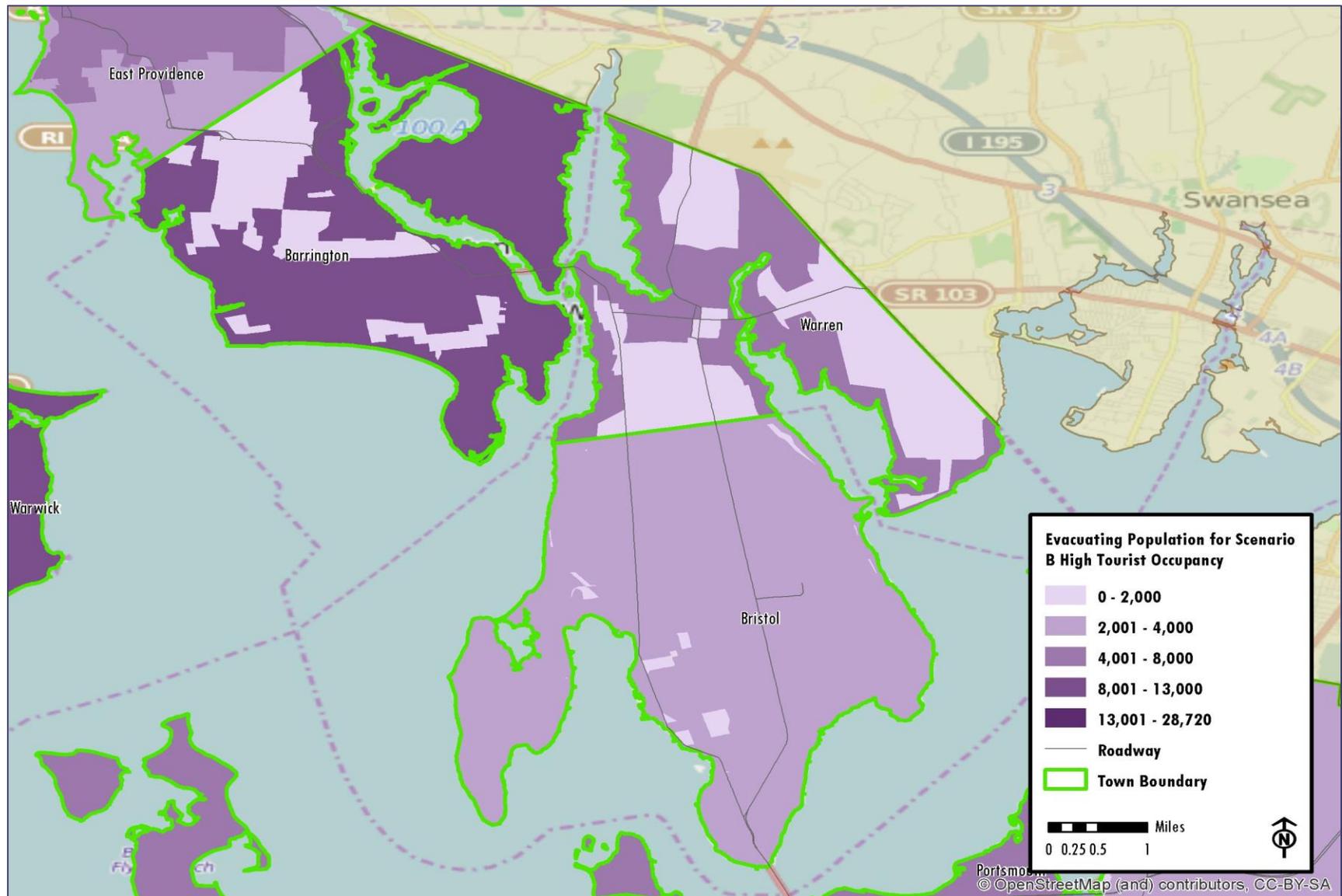


Figure 3-22: Estimated Evacuation Population for Category 3/4 High Tourist Occupancy – Bristol County



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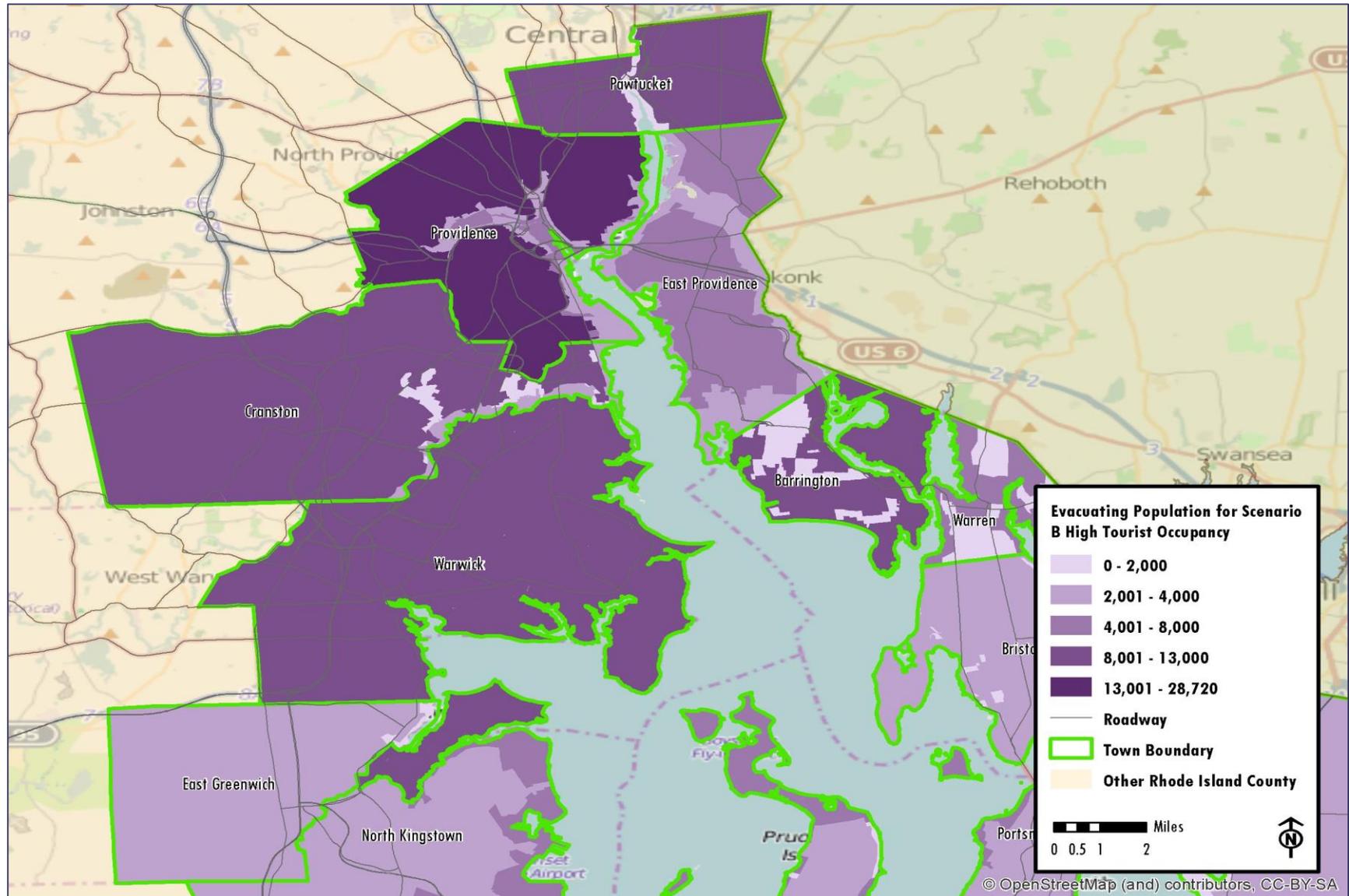


Figure 3-23: Estimated Evacuation Population for Category 3/4 High Tourist Occupancy – Kent and Providence Counties



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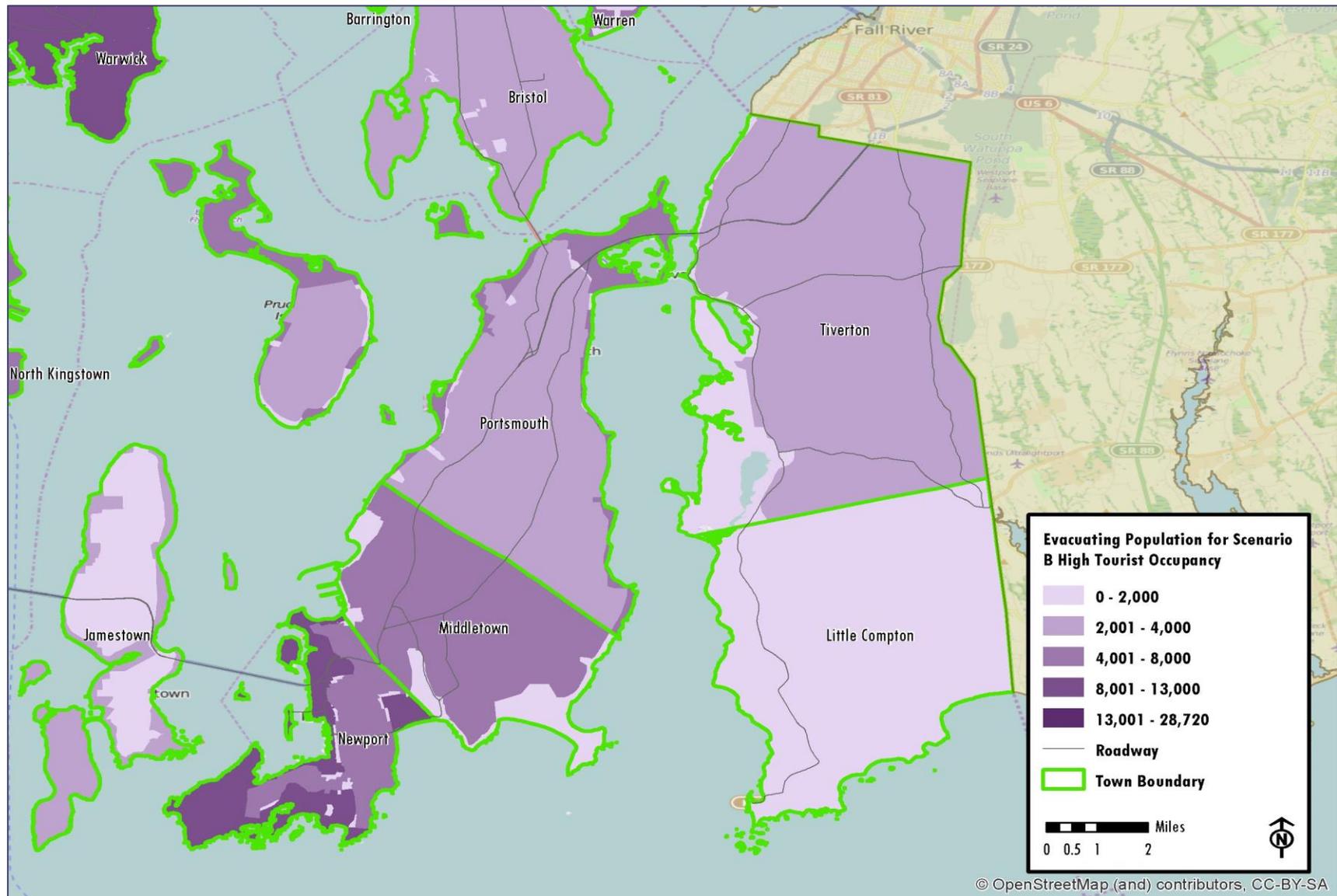


Figure 3-24: Estimated Evacuation Population for Category 3/4 High Tourist Occupancy – Newport County



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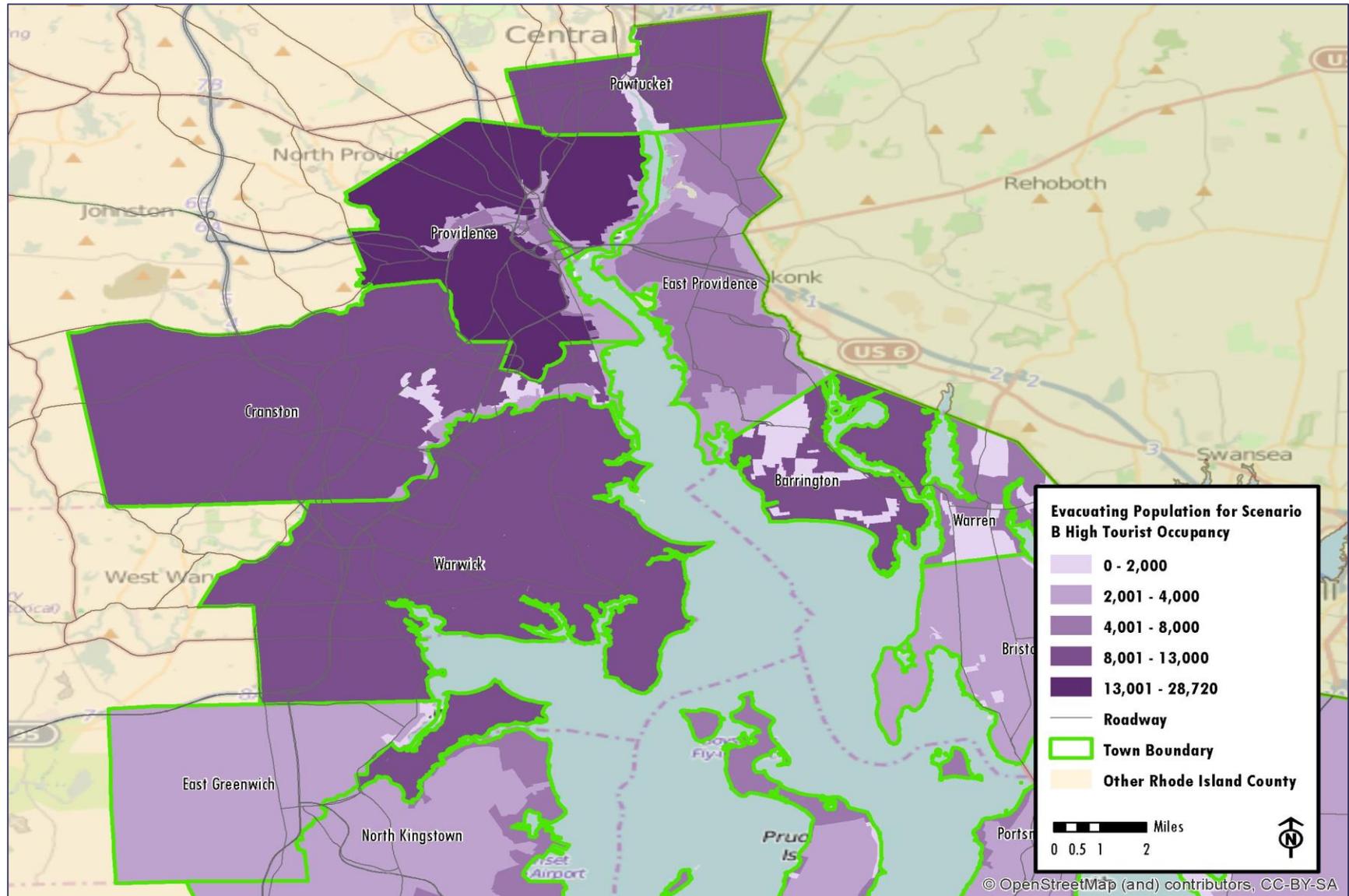


Figure 3-25: Estimated Evacuation Population for Category 3/4 High Tourist Occupancy – Washington County



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3.5 Critical Facilities

Critical facilities are those that need special consideration for hurricane preparedness. Hospitals, fire and law enforcement, educational, industrial, and water facilities are examples of critical facilities needing special consideration and planning.

The USACE provided an initial list of critical facilities for each county. The primary list included a wide range of facilities and various data fields. The fields from the list included the type of facility, the facility name, street address, city, and latitude and longitude.

To be able to offer a meaningful presentation of this information, the various data sources have been compiled and include the zone in which it is located (A, B, C, or Inland), facility type, name and street address. Facility codes were assumed to be correct and were not edited.

As noted, the critical facilities list included a facility type. The facility type was abbreviated and the following key may be used to interpret the codes, as follows:

- BF = Banking and Finance
- CF = Commercial Facilities
- CM = Communications
- D = Dams
- DB = Defense Industrial Base
- E = Energy
- ES = Emergency Services
- GF = Government Facilities
- HC = Healthcare and Public Health
- HZ = Chemical and Hazardous Materials Industry
- IT = Information Technology
- NU = Nuclear Reactors, Materials, and Waste
- PS = Postal and Shipping
- T = Transportation
- W = Water



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Tables 3-8 through 3-15 list the critical facilities provided by each county within the study area as listed below:

- Table 3-8: Critical Facilities – Bristol County
- Table 3-9: Critical Facilities – Kent County
- Table 3-10: Critical Facilities – Newport County
- Table 3-11: Critical Facilities – Providence County
- Table 3-12: Critical Facilities – Washington County
- Table 3-13: Critical Facilities – Non-Surge Vulnerable Communities of Kent County
- Table 3-14: Critical Facilities – Non-Surge Vulnerable Communities of Providence County
- Table 3-15: Critical Facilities – Non-Surge Vulnerable Communities of Washington County

Figures 3-26 through 3-32 illustrate the critical facilities provided by each county within the study area as listed below:

- Figure 3-26: Critical Facilities – Bristol County
- Figure 3-27: Critical Facilities – Kent County
- Figure 3-28: Critical Facilities – Newport County
- Figure 3-29: Critical Facilities – Providence County
- Figure 3-30: Critical Facilities – Providence County (zoom)
- Figure 3-31: Critical Facilities – Providence County (Providence zoom)
- Figure 3-32: Critical Facilities – Washington County

Interactive maps including each of these facility types for the counties within the study area are also located in the File Bank. Agencies responsible for hurricane preparedness of critical facilities should ensure that proper attention is given to the complex task of planning and coordinating emergency response for these locations.

In addition to the storm surge hazards, officials should be aware of the increased potential for wind damage to upper floors of multi-story buildings. Post-hurricane surveys in other areas show that extreme winds can inflict major damage to substantial structures, exposing occupants to life-threatening danger.



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Table 3-8: Critical Facilities – Bristol County

Community	Zone ¹	Type ²	Asset	Address	Zip
Barrington	A	ES	Barrington Fire Department	100 Federal Rd	02806
	A	ES	Barrington Police Department	100 Federal Rd	02806
	A	GF	Barrington Public Works	84 Upland Way	02806
	Inland	GF	Primrose Hill School	60 Middle Hwy	02806
Bristol	Inland	ES	Bristol Fire Department - Hydraulic Fire Station	4 Annawanscutt Dr	02809
	Inland	ES	Bristol Police Department	395 Metacom Ave	02809
	Inland	GF	Roger Williams University	One Old Ferry Rd	02809
Warren	A	GF	Kickemuit Middle School	525 Child St	02885
	B	ES	Warren Fire Department - Massasoit Hook & Ladder	45 Railroad Ave	02885
	B	ES	Warren Police Department	1 Joyce St	02885

1. Key: Zone A (Category 1 & 2) Zone B (Category 3 & 4) Inland Area (Non-Surge)
2. Critical Facility Types include: Emergency Services (ES) and Government Facilities (GF).



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Table 3-9: Critical Facilities – Kent County

Community	Zone ¹	Type ²	Asset	Address	Zip
East Greenwich	Inland	T	RIDOT MidState Facility / Kent Division	2400 New London Tpke	02818
	Inland	ES	East Greenwich Fire District Station 1	284 Main St	02818
	Inland	ES	East Greenwich Police Department	176 First Ave	02818
	Inland	GF	East Greenwich High School	300 Avenger Dr	02818
Warwick	A	HZ	Advanced Chemical Co.	Suite 105B, 105 Bellows St	02888
	A	HZ	Advanced Chemical Co.	Suite 131B, 131 Bellows St	02888
	A	HZ	Mann Chemical LLC	3134 Post Rd	02886
	A	ES	Warwick Police	99 Veterans Memorial Dr	02886
	A	GF	Community College of Rhode Island - Liston Campus	400 East Ave	02886
	A	W	Warwick Sewer Authority, WWTF	125 Arthur W. Devine Blvd	02886
	B	ES	Warwick Fire	111 Veterans Memorial Dr	02886
	Inland	HC	Kent Hospital	455 Toll Gate Rd	02886
	Inland	HZ	HAB Tool Inc.	50 Colorado Ave	02888
	Inland	T	MBTA TF Green Airport	700 Jefferson Blvd	02886
	Inland	GF	New England Institute of Technology	2500 Post Rd	02886
	Inland	T	TF Green State Airport	2200 Post Rd	02886
	Inland	CF	Warwick Mall	400 Bald Hill Rd	02840
	Inland	GF	3d Division District Court Noel Judicial Complex	222 Quaker Ln	02886
	Inland	ES	RIAP	2000 Post Rd	02886
	Inland	GF	Community College of Rhode Island - Knight Campus	400 East Ave	02886
Inland	GF	Pilgrim High School	111 Pilgrim Pkwy	02888	
Inland	GF	Warwick Veterans Memorial High School	2401 West Shore Rd	02889	

1. Key: Zone A (Category 1 & 2) Zone B (Category 3 & 4) Inland Area (Non-Surge)

2. Critical Facility Types include: Commercial Facilities (CF), Emergency Services (ES), Government Facilities (GF), Healthcare and Public Health (HC), Chemical and Hazardous Materials Industry (HZ), Transportation (T), and Water (W).



3.0 Vulnerability Analysis

Table 3-10: Critical Facilities – Newport County

Community	Zone ¹	Type ²	Asset	Address	Zip
Jamestown	A	T	Claiborne Pell Bridge	1 East Shore Rd	02835
	Inland	ES	Jamestown Fire Department	50 Narragansett Ave	02835
	Inland	ES	Jamestown Police Department	250 Conanicus Ave	02835
	Inland	GF	Melrose Avenue School	76 Melrose Ave	02835
Little Compton	Inland	ES	Little Compton Fire Department	60 Simmons Rd	02837
	Inland	ES	Little Compton Police Department	60 Simmons Rd	02837
Middletown	Inland	ES	Middletown Fire Department	239 Wyatt Rd	02842
	Inland	ES	Middletown Police Department	123 Valley Rd	02842
	Inland	GF	Joseph H. Gaudet Middle School and Learning Academy	1113 Aquidneck Ave	02842
	Inland	GF	Middletown High School	130 Valley Rd	02842
Newport	A	DB	Narragansett Bay Shallow Water Test Facility	1176 Howell St, Naval Undersea Warfare Center (NUWC)	02841
	A	ES	Newport Fire Department Station 1	21 W Marlborough St	02840
	A	GF	Community College of RI - Newport County Campus	One John H. Chafee Blvd	02840
	A	GF	Naval War College	686 Cushing Rd	02840
	A	W	City of Newport WWTF	250 J.T. Connel Hwy	02840
	B	T	Port of Newport Harbor	320 Thames St	02840
	Inland	HC	Newport Hospital	11 Friendship St	02840
	Inland	CF	Touro Synagogue	85 Touro St	02840
	Inland	GF	2nd Division District Court Murray Judicial Complex	45 Washington Sq	02840
	Inland	GF	Naval Station Newport	690 Perry St	02841
	Inland	ES	Naval Station Newport Fire Department - DOD	1931 Peary St	02841
	Inland	ES	Newport Police Department	120 Broadway	02840
	Inland	GF	Salve Regina University	100 Ochre Point Ave	02840
Portsmouth	A	T	Mount Hope Bridge	Rt 114	02872
	A	T	RIDOT Portsmouth Facility / Newport Division	170 Anthony Rd	02871
	Inland	ES	Portsmouth Fire Department	2300 East Main Rd	02871
	Inland	ES	Portsmouth Police Department	2270 East Main Rd	02871
	Inland	ES	Prudence Island Volunteer Fire Department	292 Narragansett Ave	02871
	Inland	GF	Portsmouth Middle School	125 Jepson Ln	02871



3.0 Vulnerability Analysis

Table 3-10: Critical Facilities – Newport County (continued)

Community	Zone ¹	Type ²	Asset	Address	Zip
Tiverton	A	E	Inland Fuel	25 State Ave	02878
	Inland	ES	Tiverton Fire Department Station 2	85 Main Rd	02878
	Inland	ES	Tiverton Police Department	20 Industrial Way	02878
	Inland	GF	Tiverton Middle School	10 Quintal Dr	02878

1. Key: Zone A (Category 1 & 2) Zone B (Category 3 & 4) Inland Area (Non-Surge)
2. Critical Facility Types include: Commercial Facilities (CF), Defense Industrial Base (DB), Energy (E), Emergency Services (ES), Government Facilities (GF), Healthcare and Public Health (HC), Transportation (T), and Water (W).



3.0 Vulnerability Analysis

Table 3-11: Critical Facilities – Providence County

Community	Zone ¹	Type ²	Asset	Address	Zip
Cranston	A	W	City of Cranston, Water Pollution Control Facility	140 Pettaconsett Ave	02920
	Inland	HC	Eleanor Slater Unified Hospital System	111 Howard Ave	02920
	Inland	HZ	Technic, Inc.	1 Spectacle St	02910
	Inland	ES	Cranston Fire Department Station 2	301 Pontiac Ave	02910
	Inland	ES	Cranston Police Department	5 Garfield Ave	02920
	Inland	GF	RI Department of Corrections, Adult Correctional Institute	40 Howard Ave	02920
	Inland	IT	Rhode Island Command Readiness Center	645 New London Ave	02920
	Inland	ES	RIEMA	645 New London Ave	02920
	Inland	GF	Park View Middle School	25 Park View Blvd	02910
	Inland	GF	Western Hills Middle School	400 Phenix Ave	02920
East Providence	A	E	Capital Terminal Co.	100 Dexter Rd	02914
	A	E	Exxon Mobil Terminal	1001 Wampanoag Trail	02915
	A	W	City of East Providence WWTF	1 Crest Ave	02915
	A	W	Narragansett Bay Commission Bucklin Point WWTF	102 Campbell Ave	02916
	Inland	HC	Emma Pendleton Bradley Hospital	1011 Veterans Memorial Pkwy	02915
	Inland	T	RIDOT East Providence Facility / Bristol Division	691 Warren Ave	02914
	Inland	ES	East Providence Fire Department Station 1 - HQ	913 Broadway	02914
	Inland	ES	East Providence Police Department	750 Waterman Ave	02914
	Inland	BF	RBS Citizens East Providence Operations Center	1 Citizens Dr	02915
	Inland	GF	East Providence High School	2000 Pawtucket Ave	02914
Pawtucket	B	ES	Pawtucket Fire Department Station 2	145 Roosevelt Ave	02860
	B	ES	Pawtucket Police Department	121 Roosevelt Ave	02860
	B	ES	Pawtucket Police Department	137 Roosevelt Ave	02860
	Inland	HC	Memorial Hospital of Rhode Island	111 Brewster St	02860
	Inland	CF	McCoy Stadium	1 Columbus Ave	02860
	Inland	HZ	Roberts Chemical Co. Inc.	258 Pine St	02860
	Inland	HZ	Truex, Inc.	300 Armistice Blvd	02861
	Inland	GF	Joseph Jenks Junior High School	350 Division St	02860



3.0 Vulnerability Analysis

Table 3-11: Critical Facilities – Providence County (continued)

Community	Zone ¹	Type ²	Asset	Address	Zip
Providence	A	E	Motiva Enterprises LLC Providence terminal	520 Allens Ave	02905
	A	E	National Grid Liquified Natural Gas (LNG) Storage	121 Terminal Rd	02905
	A	T	Port of Providence	35 Terminal Rd	02905
	A	E	Sprague Energy	144 Allens Ave	02903
	A	E	Teppco L.P Marine Propane Terminal	1 Terminal Rd	02905
	A	HZ	Univar	175 Terminal Rd	02905
	A	CF	Westin Hotel	One W Exchange St	02903
	A	GF	6th Division District Court Garrahy Judicial Complex	1 Dorrance Plaza	02903
	A	GF	Federal Building, U.S. District Court	1 Exchange Terrance, Kennedy Plaza	02903
	A	GF	RI Fusion Center	10 Weybosset St, #400	02903
	A	GF	Johnson & Wales University - Harborside Campus	321 Harborside Blvd	02905
	A	W	Narragansett Bay Commission - Fields Point WWTF	1 Service Rd	02905
	B	HC	Hasbro Hospital	593 Eddy St	02903
	B	HC	Rhode Island Hospital	593 Eddy St	02903
B	E	Dominion Energy	40 Point St	02903	
B	CF	Providence Place Mall	1 Providence Place	02903	
B	D	Providence River - Fox Point Hurricane Barrier	On the Providence River near the Manchester St Station	02903	
B	CF	Rhode Island Convention Center	1 Sabin St	02903	
C	CF	Dunkin Donuts Center	1 LaSalle Square	02903	
C	CM	Verizon Fiber Solutions Center	234 Washington St	02903	
C	CM	City of Providence Communications Department	1 Communications Place	02903	
C	GF	Federal Building	380 Westminster St	02902	
C	GF	Rhode Island Supreme Court Licht Judicial Complex	250 Benefit St	02903	
C	GF	Johnson and Wales University	8 Abbott Park Place	02903	
C	GF	Rhode Island School of Design	2 College St	02903	
Inland	PS	Main Post Office - Providence	24 Corliss St	02903	
Inland	HC	Butler Hospital	345 Blackstone Blvd	02906	
Inland	HC	Providence VA Medical Center	830 Chalkstone Ave	02908	



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Table 3-11: Critical Facilities – Providence County (continued)

Community	Zone ¹	Type ²	Asset	Address	Zip
Providence (continued)	Inland	HC	Roger Williams Medical Center	825 Chalkstone Ave	02908
	Inland	HC	St. Joseph Health Services of Rhode Island	21 Peace St	02907
	Inland	HC	The Miriam Hospital	164 Summit Ave	02906
	Inland	HC	Woman & Infant's Hospital	101 Dudley St	02905
	Inland	T	RIDOT Traffic Management System	2 Capitol Hill	02903
	Inland	T	AmTrak / MBTA Providence Station	100 Gaspee St	02903
	Inland	GF	Neutaconkanut Recreation Club	675 Plainfield St	02909
	Inland	IT	Rhode Island Division of Information Technology	1 Capitol Hill	02908
	Inland	T	Rhode Island Public Transit Authority	265 Melrose St	02907
	Inland	IT	VeriSign Security Operations Center	90 Royal Little Dr	02904
	Inland	ES	DOH Emergency Services	3 Capitol Hill	02908
	Inland	ES	Providence Emergency Management Agency	591 Charles St	02904
	Inland	ES	Providence Police/Fire	325 Washington St	02901
	Inland	GF	Rhode Island State House	82 Smith St	02903
	Inland	GF	Brown University	1 Prospect St	02912
	Inland	GF	Providence College	1 Prospect St	02912
	Inland	GF	DelSesto-Springfield Middle School	152 Springfield St	02909
	Inland	GF	Providence Career & Technical Academy	41 Fricker St	02903
Inland	GF	Rhode Island College	600 Mount Pleasant Ave	02908	
Inland	W	Prov Water Supply Board	552 Academy Ave	02908	

1. Key: Zone A (Category 1 & 2) Zone B (Category 3 & 4)
 Zone C (Category 3 & 4/Fox Point Hurricane Barrier Failure) Inland Area (Non-Surge)
2. Critical Facility Types include: Banking and Finance (BF), Commercial Facilities (CF), Communications (CM), Dams (D), Energy (E), Emergency Services (ES), Government Facilities (GF), Healthcare and Public Health (HC), Chemical and Hazardous Materials Industry (HZ), Information Technology (IT), Postal and Shipping (PS), Transportation (T), and Water (W).



3.0 Vulnerability Analysis

Table 3-12: Critical Facilities – Washington County

Community	Zone ¹	Type ²	Asset	Address	Zip
Charlestown	Inland	ES	Charlestown Police Department	4901 Old Post Rd	02813
	Inland	ES	Charlestown-Richmond Fire Department Station 1	4377 South County Trail	02813
	Inland	ES	Dunns Corner Fire Department Station 2	5660 Post Rd	02813
	Inland	ES	Narragansett Tribal Police Department	4375B South County Trial	02813
Narragansett	A	ES	Narragansett Fire Department Station 1	40 Caswell St	02882
	A	ES	Narragansett Police Department	40 Caswell St	02882
	A	NU	URI - NSC	16 Reactor Rd	02882
	Inland	GF	Narragansett High School	245 South Pier Rd	02882
	Inland	GF	Narragansett Pier Middle School	235 South Pier Rd	02882
New Shoreham	A	ES	New Shoreham Fire & Rescue - Block Island Station	10 Beach Ave	02807
	A	ES	New Shoreham Police Department	10 Beach Ave	02807
North Kingstown	A	T	Quonset State Airport	210 Airport St	02852
	A	DB	General Dynamics Electric Boat, Quonset Point Division	165 Dillabur Ave	02852
	A	T	Port of Davisville	2574 Davisville Rd	02852
	A	ES	Quonset Fire Department	11 Airport Dr	02852
	B	HZ	Fuji Film Electronics Materials USA Inc.	40 Circuit Dr	02852
	Inland	T	MBTA Wickford Junction	1011 Ten Rod Rd	02852
	Inland	T	RIDOT Belleville Facility / Washington North	439 Tower Hill Rd	02852
	Inland	ES	North Kingstown Fire Department Station 1	8150 Post Rd	02852
	Inland	ES	North Kingstown Police Department	8166 Post Rd	02852
	Inland	GF	North Kingston Senior High School	50 East Court	02852
South Kingstown	Inland	CM	AT&T TransAtlantic Cable Station - Greenhill	295 Shannock Rd	02879
	Inland	GF	South Kingstown High School	215 Columbia St	02879



3.0 Vulnerability Analysis

Table 3-12: Critical Facilities – Washington County (continued)

Communit	Zone ¹	Type ²	Asset	Address	Zip
Westerly	A	ES	Westerly Fire Department Station 1 - HQ	7 Union St	02891
	B	ES	Misquamicut Fire Department	65 Crandall Ave	02891
	Inland	ES	Watch Hill Fire Department	222 Watch Hill Rd	02891
	Inland	HC	Westerly Hospital	25 Wells St	02891
	Inland	T	AmTrak Station - Westerly	14 Railroad Ave	02891
	Inland	GF	Westerly Senior Center	39 State St	02891
	Inland	ES	Bradford Volunteer Fire Department	35 North Main St	02808
	Inland	ES	Dunns Corner Fire Department Station 1	1 Langworthy Rd	02891
	Inland	ES	Westerly Police Department	60 Airport Rd	02891

1. Key: Zone A (Category 1 & 2) Zone B (Category 3 & 4) Inland Area (Non-Surge)

2. Critical Facility Types include: Communications (CM), Defense Industrial Base (DB), Emergency Services (ES), Government Facilities (GF), Healthcare and Public Health (HC), Chemical and Hazardous Materials Industry (HZ), Nuclear Reactors, Materials, and Waste (NU), and Transportation (T).



3.0 Vulnerability Analysis

Table 3-13: Critical Facilities – Non-Surge Vulnerable Communities of Kent County

Community	Zone ¹	Type ²	Asset	Address	Zip
Coventry	Inland	HZ	Clariant Corp	500 Washington St	02816
	Inland	PS	DHL Providence ground hub	70 Centre of New England Blvd	02816
	Inland	HZ	Rhodes Technologies	498 Washington St	02816
	Inland	ES	Central Coventry Fire District Station 3	2 Station St	02816
	Inland	ES	Central Coventry Fire District Station 5	701 Main St	02816
	Inland	ES	Central Coventry Fire District Station 7	2847 Flat River Rd	02816
	Inland	ES	Coventry Fire District - Anthony Fire Station	571 Washington St	02816
	Inland	ES	Coventry Police Department	1075 Main St	02816
	Inland	ES	Hopkins Hill Fire District	1 Bestwick Trail	02816
	Inland	ES	Western Coventry Fire District Station 2	4661 Flat River Rd	02827
	Inland	GF	Coventry High School	40 Reservoir Rd	02816
West Greenwich	Inland	ES	Hianloland Fire Company Station 2 Rescue 3	244 Plain Rd	02817
	Inland	ES	Lake Mishnock Volunteer Fire Department	166 Michnock Rd	02817
	Inland	ES	West Greenwich Fire Department	830 Nooseneck Hill Rd	02817
	Inland	ES	West Greenwich Police Department	280 Victory Highway	02817
West Warwick	Inland	D	Arctic Dam		02893
	Inland	CM	Cox Communications Master Communications Center (MTC)	11 James P Murphy Hwy	02893
	Inland	CM	Cox Communications New England Headquarters	9 James P Murphy Hwy	02893
	Inland	HZ	Metachem Resins Corp.	1505 Main St	02893
	Inland	ES	West Warwick Fire Department Station 1 - HQ	1176 Main St	02893
	Inland	ES	West Warwick Police Department	1162 Main St	02893
	Inland	W	West Warwick Regional WWTF	1 Pontiac Ave	02893

1. Key: Zone A (Category 1 & 2) Zone B (Category 3 & 4) Inland Area (Non-Surge)

2. Critical Facility Types include: Communications (CM), Dams (D), Emergency Services (ES), Government Facilities (GF), Chemical and Hazardous Materials Industry (HZ), Postal and Shipping (PS), and Water (W).



3.0 Vulnerability Analysis

Table 3-14: Critical Facilities – Non-Surge Vulnerable Communities of Providence County

Community	Zone ¹	Type ²	Asset	Address	Zip
Burrillville	Inland	ES	Burrillville Police Department	1477 Victory Highway	02830
Central Falls	Inland	HZ	OSAM Sylvania	1193 Broad St	02863
	Inland	ES	Central Falls Fire Department	150 Illinois St	02863
	Inland	ES	Central Falls Police Department	160 Illinois St	02863
	Inland	GF	Dr. Earl F. Calcutt Middle School	112 Washington St	02863
Chepachet	Inland	ES	Chepachet Fire Department	1170 Putnam Pike	02814
Cumberland	Inland	ES	Cumberland Fire District	1530 Mendon Rd	02864
	Inland	ES	Cumberland Hill Fire Department	3502 Mendon Rd	02864
	Inland	ES	Cumberland Police Department	1380 Diamond Hill Rd	02864
	Inland	ES	North Cumberland Fire Department	50 Arnold Mills Rd	02864
	Inland	ES	Valley Falls Fire Department	555 High St	02864
	Inland	GF	Cumberland High School	2600 Mendon Rd	02864
	Inland	W	Pawtucket Water Supply Board - Happy Hollow Treatment Plant	120 Mill St	02864
Foster	Inland	ES	Foster Police Department	182 Howard Hill Rd	02825
	Inland	ES	Foster Center Fire Department	86 Foster Center Rd	02825
	Inland	ES	Mossup Valley Fire Department	55 Moosup Valley Rd	02825
	Inland	ES	South Foster Fire Department	5 Mount Hygeia Rd	02825
	Inland	GF	Captain Isaac Paine School	160 Foster Center Rd	02825
Glocester	Inland	T	RIDOT Glocester Facility/ Northwest Division	648 Putnam Pike	02814
	Inland	ES	Glocester Police Department	162 Chopmist Hill Rd	02814
	Inland	ES	Harmony Fire Department	194 Putnam Pike	02829
	Inland	ES	West Glocester Fire Department Station 1	2410 Putnam Pike	02814
Harrisville	Inland	ES	Harrisville Fire Department	201 Callahan School St	02830
	Inland	ES	Nasonville Fire Department	2577 Victory Highway	02830
	Inland	GF	Burrillville High School	425 East Ave	02830
Hope	Inland	CF	Saints Mary & Mena Coptic Orthodox Church - Mother of Light	2433 Scituate Ave	02831
	Inland	ES	Scituate Police Department	116 Main St	02831
Johnston	Inland	ES	Johnston Fire Department Station 3 - HQ	1520 Atwood Ave	02919
	Inland	ES	Johnston Police Department	1651 Atwood Ave	02919
	Inland	GF	Nicholas A. Ferri Middle School	10 Memorial Ave	02919



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Table 3-14: Critical Facilities – Non-Surge Vulnerable Communities of Providence County
(continued)

Community	Zone ¹	Type ²	Asset	Address	Zip
Lincoln	Inland	HZ	Chemart Co.	11 New England Way	02865
	Inland	HZ	Lincoln Fine Ingredients OilChem Inc.	50 Industrial Circle	02865
	Inland	ES	Albion Fire Department	38 School St	02802
	Inland	ES	Lime Rock Fire Department - HQ	1085 Great Rd	02865
	Inland	ES	Lincoln Police Department	100 Old River Rd	02865
	Inland	ES	Lonsdale Fire Department	224 Front St	02865
	Inland	ES	Manville Fire Department	112 Old Main St	02838
	Inland	ES	Quinnville Fire Department	861 Lower River Rd	02865
	Inland	ES	Saylesville Fire Department	1 Chapel St	02865
	Inland	GF	Community College of Rhode Island - Flanagan Campus	1762 Louisquisset Pike	02865
	Inland	GF	Lincoln High School	135 Old River Rd	02865
North Providence	Inland	HC	Our Lady of Fatima Hospital	200 High Service Ave	02904
	Inland	HZ	Evans Plating Corp.	50 Waterman Ave	02911-1004
	Inland	ES	North Providence Fire Department Station 1	1967 Mineral Spring Ave	02904
	Inland	ES	North Providence Police Department	1967 Mineral Spring Ave	02904
	Inland	GF	Dr. Edward A. Ricci Middle School	55 Intervale Ave	02911
	Inland	GF	North Providence High School	1828 Mineral Spring Ave	02904
North Scituate	Inland	ES	North Scituate Fire Department	201 Danielson Pike	02857
	Inland	IT	Rhode Island Public Safety Complex	311 Danielson Pike	02857
	Inland	ES	RISP	311 Danielson Pike	02857
	Inland	CM	State of Rhode Island E911 Operations Center	311 Danielson Pike	02857
	Inland	ES	State of Rhode Island Urban Search and Rescue (USAR) cache site	311 Danielson Pike	02857
North Smithfield	Inland	ES	North Smithfield Fire & Rescue Station 2 - HQ	1470 Providence Pike	02896
	Inland	ES	North Smithfield Police Department	575 Smithfield Rd	02896
	Inland	GF	North Smithfield High School	412 Greenville Rd	02824
	Inland	GF	North Smithfield Middle School	1850 Providence Pike	02824



3.0 Vulnerability Analysis

Table 3-14: Critical Facilities – Non-Surge Vulnerable Communities of Providence County
(continued)

Community	Zone ¹	Type ²	Asset	Address	Zip
Oakland	Inland	ES	Oakland-Mapleville Fire Department Station 1	46 Oakland School St	02858
Pascoag	Inland	E	Pascoag Utility District	253 Pascoag Main St	02859
	Inland	ES	Pascoag Fire Department	105 Pascoag Main St	02859
	Inland	ES	Wallum Lake Fire Department	2198 Wallum Lake Rd	02859
Scituate	Inland	D	Gainer Dam		02815
	Inland	ES	Chopmist Hill Fire Department	1362 Chopmist Hill Rd	02857
	Inland	ES	Hope Jackson Fire Department	117 Main St	02831
	Inland	ES	Potterville Fire Department	953 Tunk Hill Rd	02825
	Inland	W	Providence Water Supply Board, Water Purification Plant	61 North Rd	02831
Smithfield	Inland	T	North Central State Airport	300 Jenckes Hill Rd	02917
	Inland	T	RIDOT Smithfield Facility / Providence Division	395 George Washington Hwy	02907
	Inland	ES	Smithfield Fire Department Station 1 - HQ	607 Putnam Pike	02828
	Inland	ES	Smithfield Police Department	215 Pleasant View Ave	02917
	Inland	GF	Bryant University	1150 Douglas Pike	02917
Woonsocket	Inland	HC	Landmark Medical Center	115 Cass Ave	02895
	Inland	HZ	Technic, Inc.	300 Park East Dr	02895
	Inland	D	Woonsocket Falls Dam		02895
	Inland	ES	Woonsocket Fire Department - Station 2	5 Cumberland Hill Rd	02895
	Inland	ES	Woonsocket Police Department	242 Clinton St	02895
	Inland	W	City of Woonsocket WWTF	11 Cumberland Hill Rd	02895

1. Key: Zone A (Category 1 & 2) Zone B (Category 3 & 4)
 Zone C (Category 3 & 4/Fox Point Hurricane Barrier Failure) Inland Area (Non-Surge)
2. Critical Facility Types include: Commercial Facilities (CF), Communications (CM), Dams (D), Energy (E), Emergency Services (ES), Government Facilities (GF), Healthcare and Public Health (HC), Chemical and Hazardous Materials Industry (HZ), Information Technology (IT), Transportation (T), and Water (W).



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Table 3-15: Critical Facilities – Non-Surge Vulnerable Communities of Washington County

Community	Zone ¹	Type ²	Asset	Address	Zip
Ashaway	Inland	ES	Ashaway Volunteer Fire Association	213 Main St	02804
Carolina	Inland	ES	Richmond-Carolina Fire District Station 1	208 Richmond Townhouse Rd	02812
Exeter	Inland	ES	Exeter Fire Department Station 1	305 Ten Rod Rd	02822
	Inland	ES	Exeter Fire Department Station 2	366 Nooseneck Hill Rd	02822
Hope Valley	Inland	T	RIDOT Hope Valley Facility / Washington South	51 Bank St	02832
	Inland	ES	Hope Valley-Wyoming Fire District Station 1	996 Main St	02832
Hopkinton	Inland	ES	Hopkinton Police Department	406 Woodville Rd	02833
Kingston	Inland	CF	Ryan Center	1 Lincoln Almond Plaza	02881
	Inland	ES	Kingston Fire District	35 Bills Rd	02881
	Inland	GF	Rhode Island State Crime Lab	220 Fogarty Hall, 41 Lower College Rd	02881
	Inland	ES	URI Police Department	85 Briar Lane	02881
	Inland	GF	URI	45 Upper College Rd	02881
New Shoreham	A	ES	New Shoreham Fire & Rescue - Block Island Station	10 Beach Ave	02807
	A	ES	New Shoreham Police Department	10 Beach Ave	02807
Richmond	Inland	ES	Richmond Police Department	1168 Main St	02898
	Inland	GF	Chariho High & Middle School	453 Switch Rd	02894
Wakefield	Inland	HC	South County Hospital	100 Kenyon Ave	02879
	Inland	GF	4th Division District Court McGrath Judicial Complex	4800 Tower Hill Rd	02879
	Inland	ES	South Kingstown Police Department	1790 Kingstown Rd	02879
	Inland	W	South Kingstown Regional WWTF	180 High St	02879
West Kingston	Inland	T	AmTrak Station - West Kingston	1 Railroad Ave	02892

1. Key: Zone A (Category 1 & 2) Zone B (Category 3 & 4) Inland Area (Non-Surge)
2. Critical Facility Types include: Commercial Facilities (CF), Emergency Services (ES), Government Facilities (GF), Healthcare and Public Health (HC), Transportation (T), and Water (W).



3.0 Vulnerability Analysis

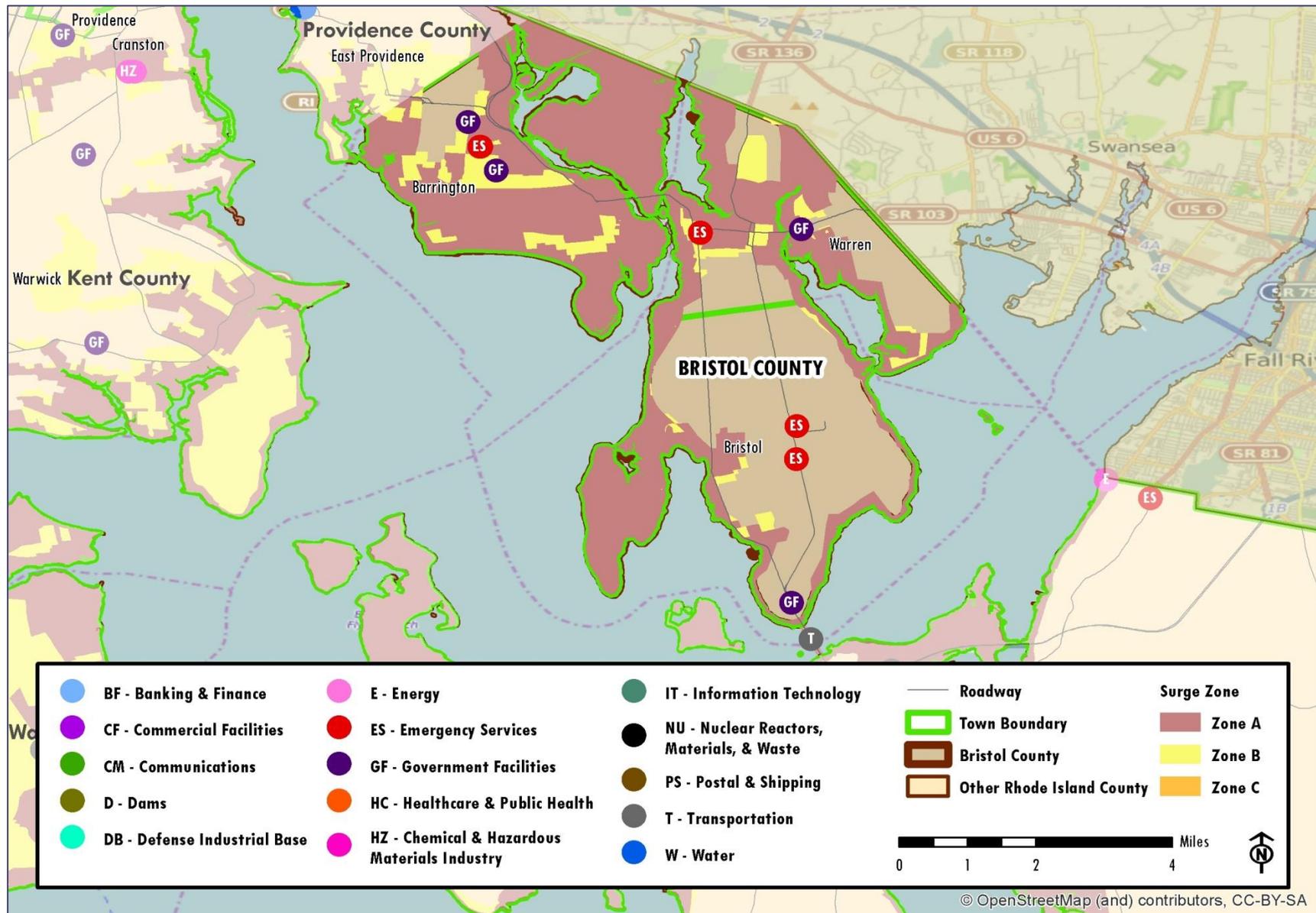


Figure 3-26: Critical Facilities – Bristol County



3.0 Vulnerability Analysis

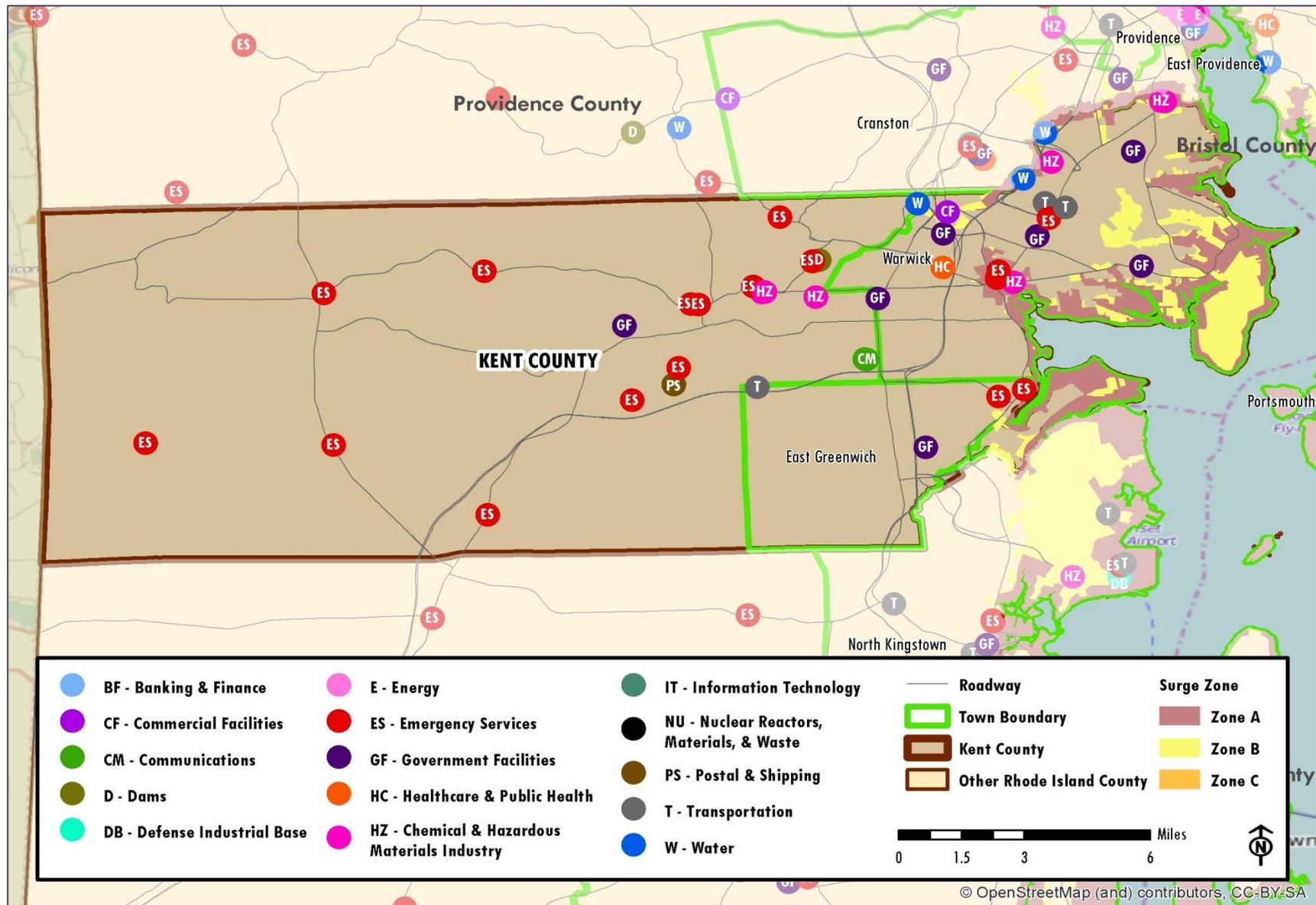


Figure 3-27: Critical Facilities – Kent County



3.0 Vulnerability Analysis

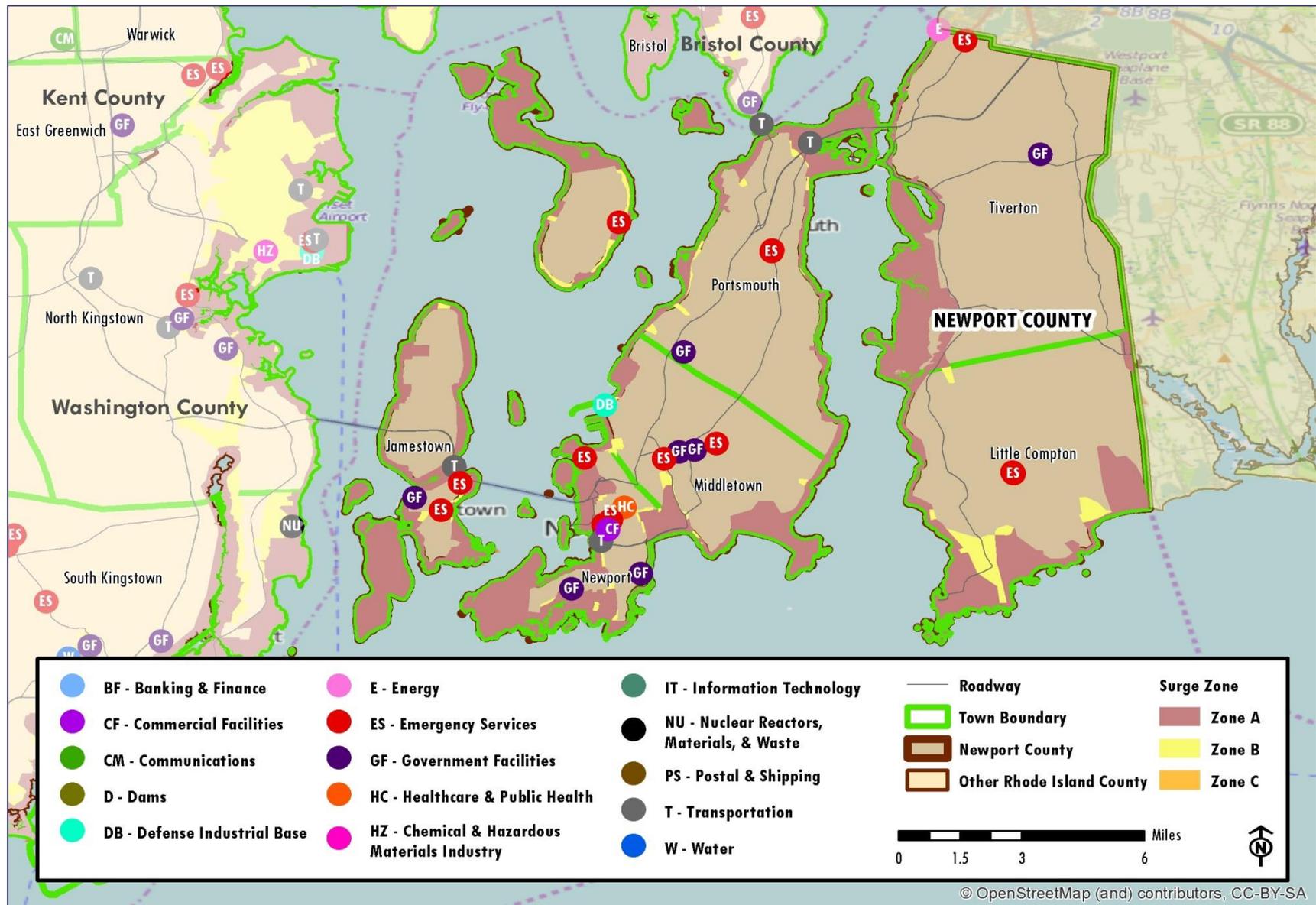


Figure 3-28: Critical Facilities – Newport County



3.0 Vulnerability Analysis

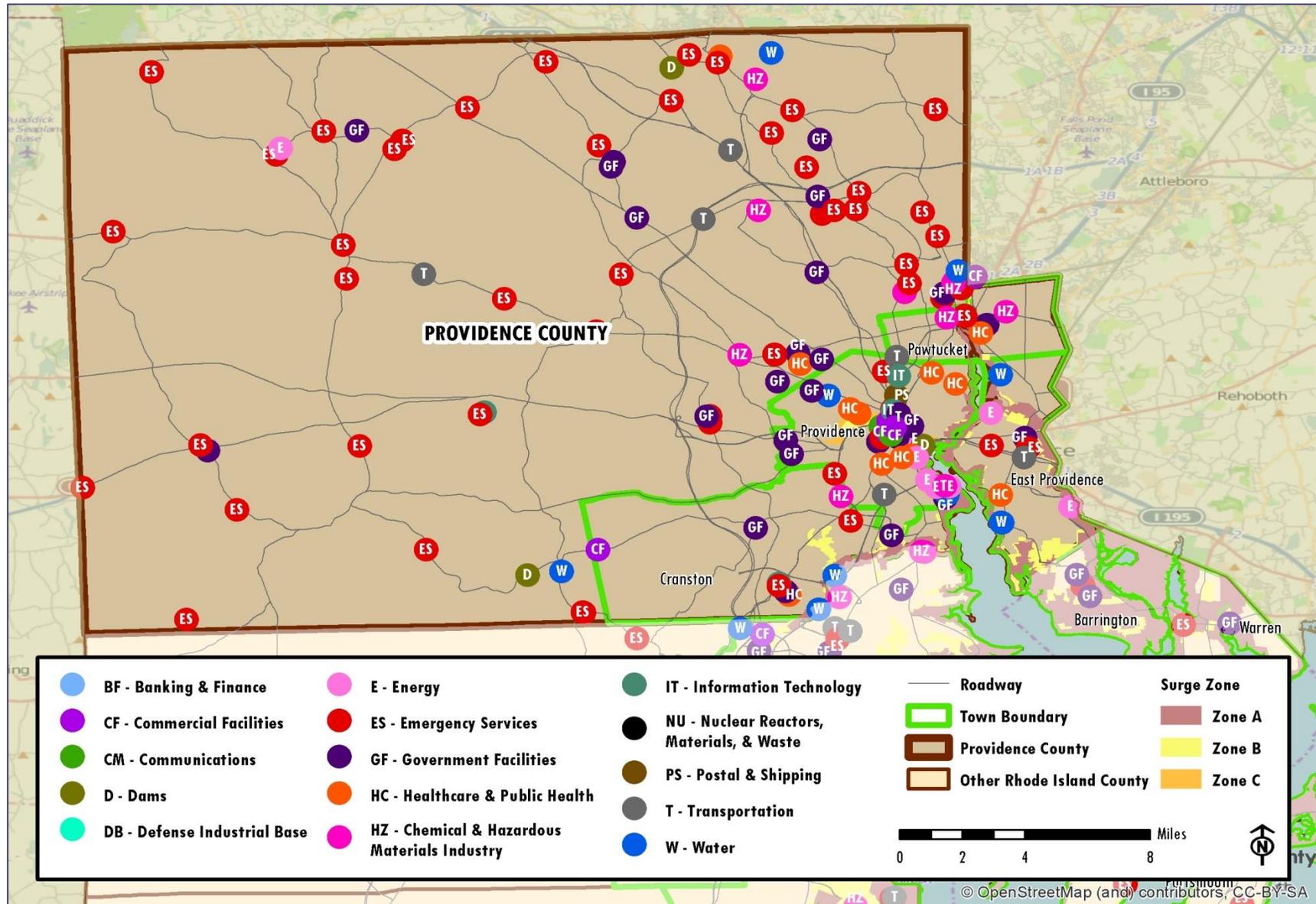


Figure 3-29: Critical Facilities – Providence County



3.0 Vulnerability Analysis

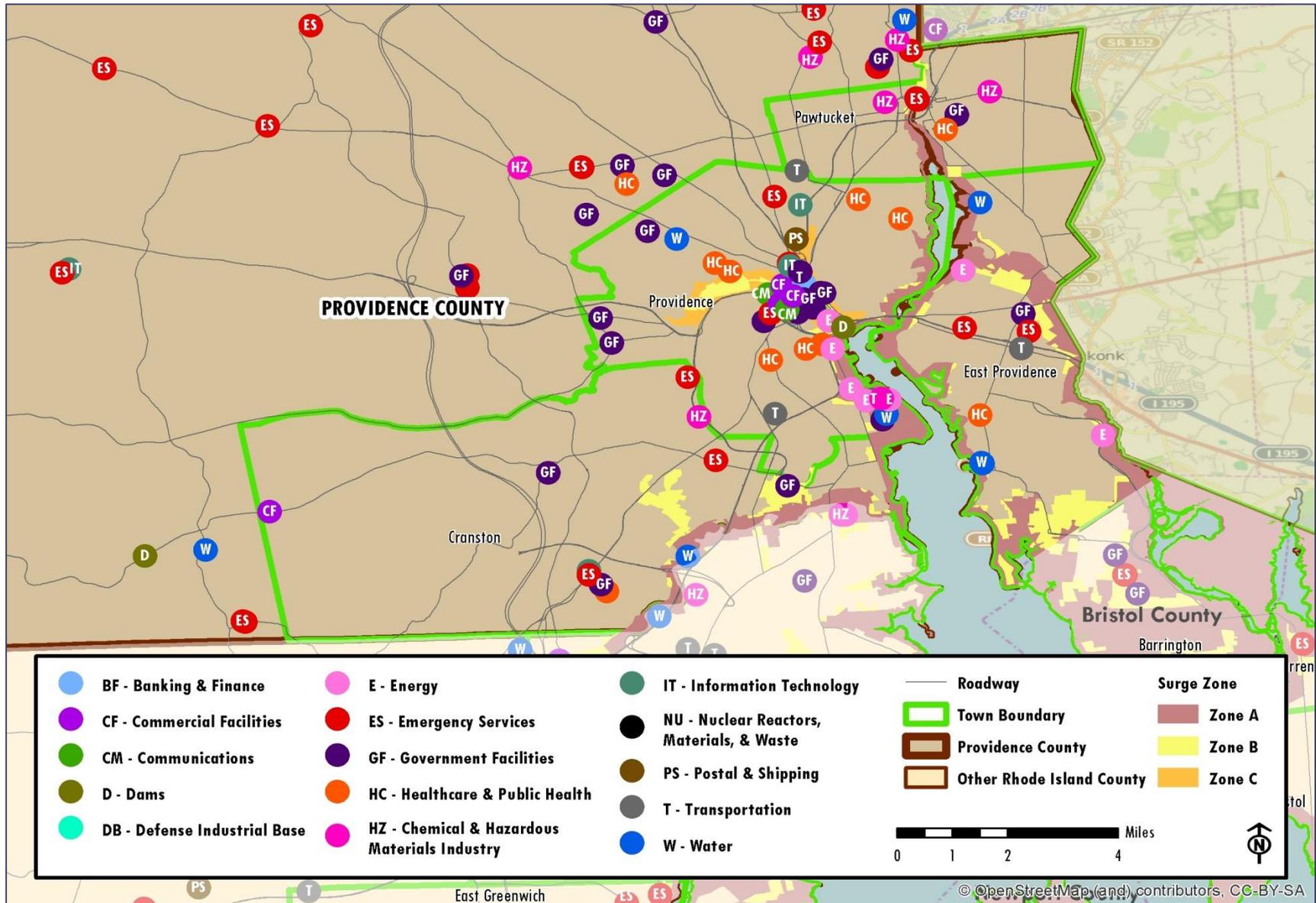


Figure 3-30: Critical Facilities – Providence County (zoom)



3.0 Vulnerability Analysis

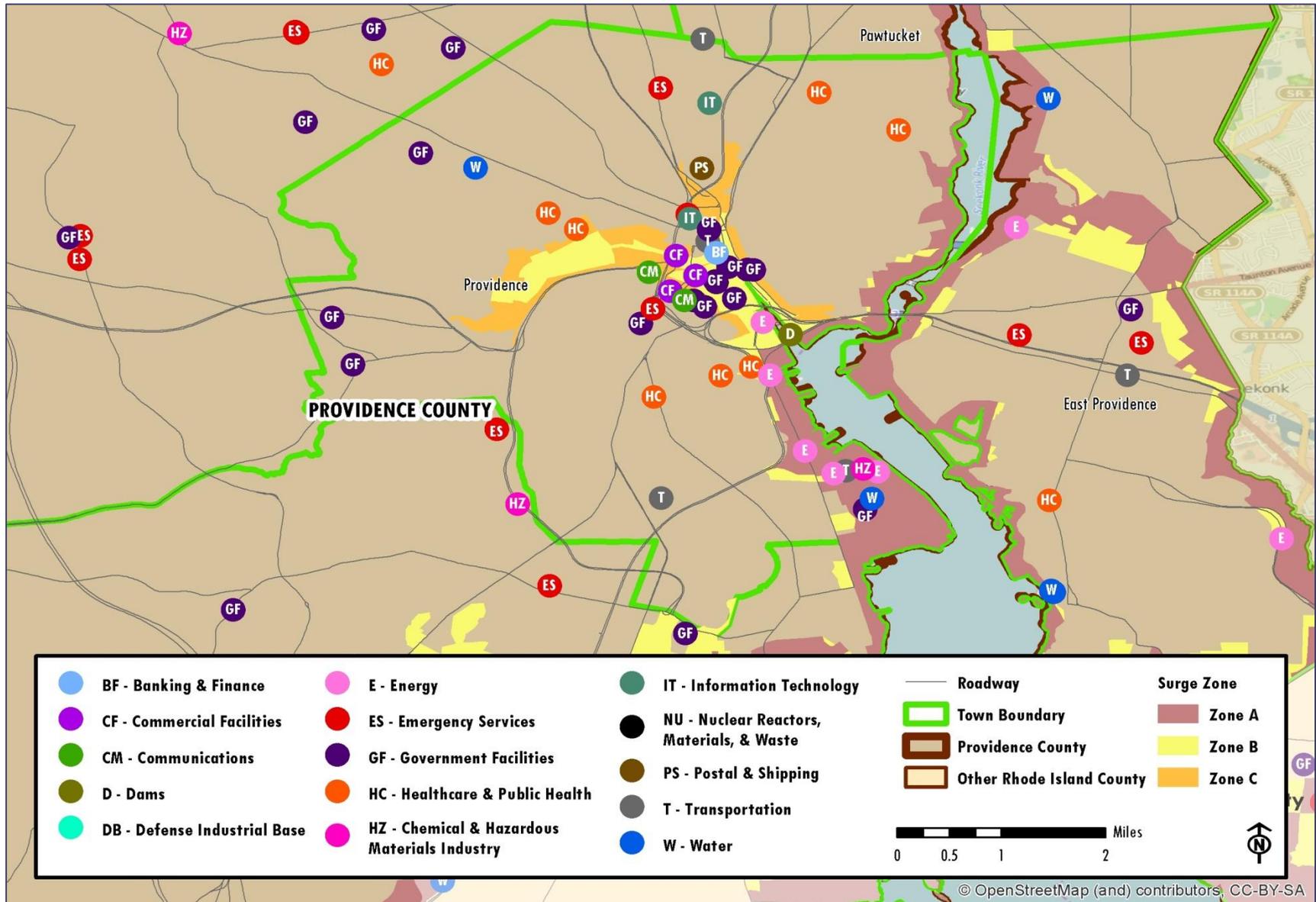


Figure 3-31: Critical Facilities – Providence County (Providence zoom)



3.0 Vulnerability Analysis

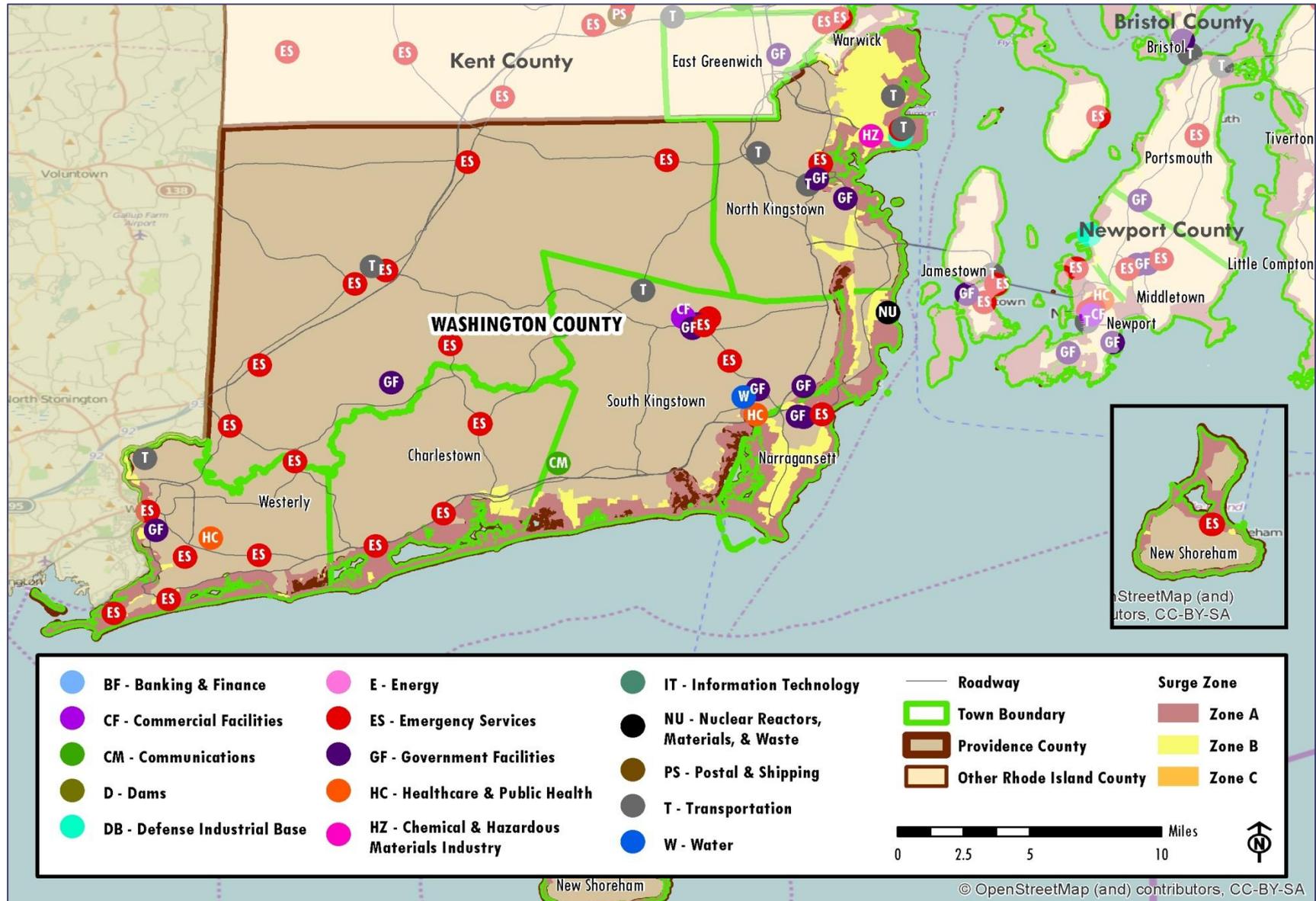


Figure 3-32: Critical Facilities – Washington County



3.0 Vulnerability Analysis

3.6 Evacuation Route Flooding

Evacuation route flooding can be caused by rainfall runoff and/or storm tide. Hurricane evacuations are normally timed so that evacuees can reach safe shelter ahead of the arrival of sustained tropical storm winds. Experience has shown that roadway flooding due to storm surge rarely occurs prior to the hazardous winds. However, emergency management officials should monitor roadway conditions and increase clearance times if the capacity of any evacuation route would be compromised as a result of flooding prior to ordering the evacuation.

3.7 Emergency Transportation Needs

Evacuation preparedness plans should consider all persons who do not have access to a private vehicle and therefore would have to rely on public transportation for evacuation. Local government should attempt to arrange for resources to meet the demand for public transportation.

Planning for adequate, special needs emergency transportation for residents in private homes is the responsibility of local emergency management officials, while transportation for those in health related facilities is the responsibility of the individual facilities. Each community should continue the practice of maintaining an up-to-date roster of persons likely to need special assistance. Non-ambulatory patients will require transportation that can easily accommodate wheelchairs, stretchers, and, possibly, life-sustaining equipment.

3.8 Mobile Homes

The location of existing mobile homes is also critical because it is recommended that all of them be evacuated for any storm threat that would result in hurricane force winds. Tables 3-16 through 3-20 provide a summary of the mobile homes within each evacuation zone and the estimated vulnerable population for each town located in the Rhode Island HES study area. Mobile home parks are also illustrated in Figures 3-1 through 3-20, where applicable.

- Table 3-16: Mobile Home Units and Vulnerable Population – Bristol County
- Table 3-17: Mobile Home Units and Vulnerable Population – Kent County
- Table 3-18: Mobile Home Units and Vulnerable Population – Newport County
- Table 3-19: Mobile Home Units and Vulnerable Population – Providence County
- Table 3-20: Mobile Home Units and Vulnerable Population – Washington County



3.0 Vulnerability Analysis

Table 3-16: Mobile Home Units and Vulnerable Population – Bristol County

Town	Evacuation Zone ¹	Mobile Home Units	People Per Permanent or Mobile Home Unit	Mobile Home Total Population
Barrington	Zone A	0	2.70	0
	Zone B	0	2.76	0
	Inland	0	2.79	0
Bristol	Zone A	0	2.68	0
	Zone B	0	2.24	0
	Inland	0	2.74	0
Warren	Zone A	0	2.19	0
	Zone B	0	2.19	0
	Inland	0	2.46	0
Totals		0		0

1. Key: Zone A Zone B Inland Area (Non-Surge)

Table 3-17: Mobile Home Units and Vulnerable Population – Kent County

Town	Evacuation Zone ¹	Mobile Home Units	People Per Permanent or Mobile Home Unit	Mobile Home Total Population
East Greenwich	Zone A	0	1.70	0
	Zone B	4	1.51	6
	Inland	21	2.71	57
Warwick	Zone A	12	2.33	28
	Zone B	0	2.42	0
	Inland	85	2.33	198
Totals		122		289

1. Key: Zone A Zone B Inland Area (Non-Surge)



3.0 Vulnerability Analysis

Table 3-18: Mobile Home Units and Vulnerable Population – Newport County

Town	Evacuation Zone ¹	Mobile Home Units	People Per Permanent or Mobile Home Unit	Mobile Home Total Population
Jamestown	Zone A	0	2.26	0
	Zone B	0	2.30	0
	Inland	0	2.30	0
Little Compton	Zone A	0	2.16	0
	Zone B	0	2.05	0
	Inland	51	2.36	120
Middletown	Zone A	0	2.32	0
	Zone B	0	2.20	0
	Inland	172	2.39	411
Newport	Zone A	0	2.65	0
	Zone B	0	2.05	0
	Inland	38	2.24	85
Portsmouth	Zone A	11	2.45	27
	Zone B	0	2.28	0
	Inland	222	2.50	555
Tiverton	Zone A	45	2.26	102
	Zone B	0	0.00	0
	Inland	258	2.37	611
Totals		797		1,911

1. Key: Zone A Zone B Inland Area (Non-Surge)



3.0 Vulnerability Analysis

Table 3-19: Mobile Home Units and Vulnerable Population – Providence County

Town	Evacuation Zone ¹	Mobile Home Units	People Per Permanent or Mobile Home Unit	Mobile Home Total Population
Cranston	Zone A	9	2.85	26
	Zone B	0	2.35	0
	Inland	63	2.60	164
East Providence	Zone A	0	2.09	0
	Zone B	0	2.36	0
	Inland	72	2.35	169
Pawtucket	Zone A	0	3.29	0
	Zone B	0	1.73	0
	Inland	323	2.45	791
Providence	Zone A	0	4.34	0
	Zone B	0	3.38	0
	Zone C	0	1.98	0
	Inland	160	2.82	451
Totals		627		1,601

1. Key:
- Zone A
 - Zone B
 - Zone C (Fox Point Hurricane Barrier Failure)
 - Inland Area (Non-Surge)



3.0 Vulnerability Analysis

Table 3-20: Mobile Home Units and Vulnerable Population – Washington County

Town	Evacuation Zone ¹	Mobile Home Units	People Per Permanent or Mobile Home Unit	Mobile Home Total Population
Charlestown	Zone A	0	1.92	0
	Zone B	0	2.17	0
	Inland	92	2.51	231
Narragansett	Zone A	92	2.30	210
	Zone B	13	2.43	31
	Inland	0	2.41	0
New Shoreham	Zone A	0	1.97	0
	Zone B	0	1.93	0
	Inland	0	2.07	0
North Kingstown	Zone A	0	2.19	0
	Zone B	43	2.56	110
	Inland	179	2.61	467
South Kingstown	Zone A	90	2.25	202
	Zone B	0	2.14	0
	Inland	90	3.09	278
Westerly	Zone A	0	2.13	0
	Zone B	0	1.93	0
	Inland	13	2.42	31
Totals		611		1,561

1. Key: Zone A Zone B Inland Area (Non-Surge)