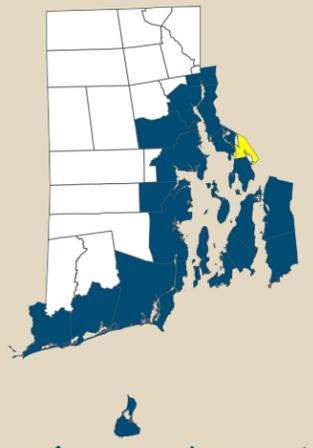


WARREN, RI

SOCIOECONOMICS OF SEA LEVEL RISE COASTAL FACTSHEET



PROJECT OVERVIEW

Rhode Island's municipalities are in the preliminary stages of integrating planning for sea level rise and climate change into their comprehensive planning process. To support these planning efforts of RI cities and towns, RISPP developed the Socioeconomics of Sea Level Rise project. The project aims to assist coastal municipalities in their long-term planning by attempting to identify population characteristics of **the people** located within sea level rise (SLR) inundation zones 1, 3, 5 and 7 FT. The data presented in this factsheet places a focus on Environmental Justice and Title VI populations.

METHODOLOGY

The RISPP utilized 2010 Decennial Census data and the latest American Community Survey (ACS) estimates to conduct an extensive data analysis. Staff also utilized CRMC's STORMTOOLS GIS shapefiles to identify the SLR inundation zones. In addition, RI Geographic Information Systems (RIGIS) e-911 data was utilized to identify single family, multi-family and mobile home residential points located within each SLR inundation zone. For more information on the methodology, please reference the [full report](#) on our website.

WARREN QUICK FACTS

10,611

2010 Census Population

44.5

2010 Census Median Age

\$53,706

2014 ACS Median Household Income

WARREN'S OCCUPIED RESIDENTIAL UNITS & POPULATION ESTIMATES

Warren is one of Rhode Island's 21 coastal communities, located east of Barrington and north of Bristol, Rhode Island.

The Town of Warren has an average household size of 2.27 (2010 Census). The average household size and the percentage of occupied housing units were used to calculate population estimates. Approximately 88% of the residential units located within SLR inundation zones 3, 5 and 7 FT. are occupied units.

Single family (SF) units and multi-family (MF) units were identified in GIS using the e-911 shapefile. The majority of the residential units located in the 3 and 7 FT. SLR inundation zones are single family units, while there are more multi-family units than single family units in the 5 FT. SLR scenario. There is a significant change between the estimated population located in the 3 and 5 FT. inundation zone, with an additional 348 people estimated in the 5 FT. zone. The 7 FT. inundation zone has the greatest population and number of residential units, with 792 people estimated within the zone and 349 occupied residential units.

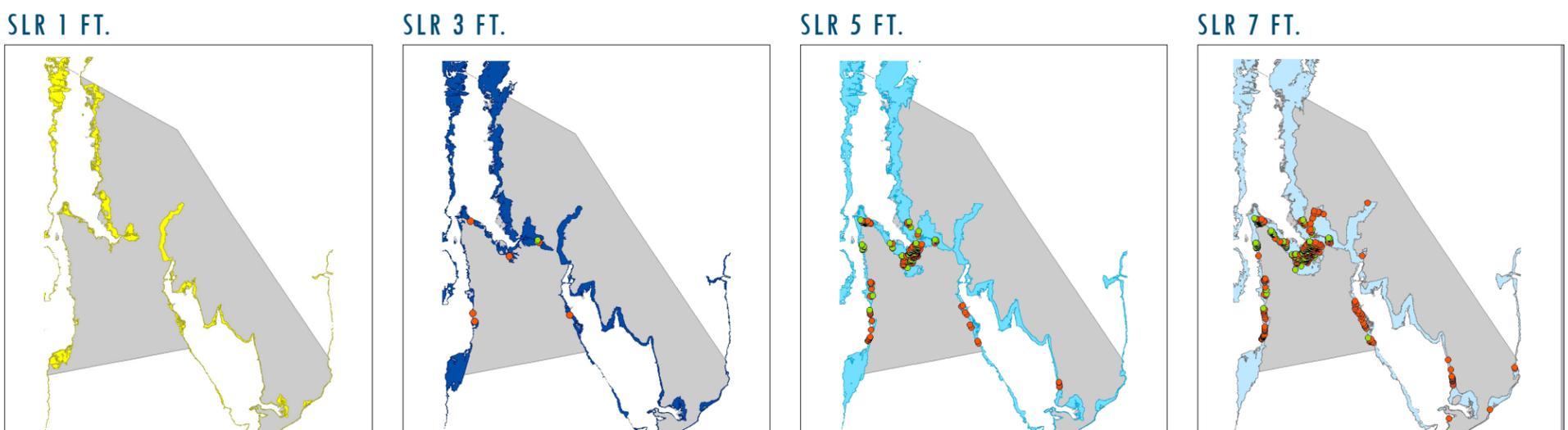
SLR Inundation zone	Residential Units	Occupied Unit calculation (Total Units (x) Occ. Housing Unit Rate in SLR zone)	Population calculation (Occupied Units (x) Warren Avg. HH Size)
1FT.	0	0	0
3FT.	6 SF, 2 MF	9 (88% occ. HU)	20
5FT.	88 SF, 93 MF	162 (88% occ. HU)	368
7FT.	209 SF, 159 MF	349 (88% occ. HU)	792



Warren Town Beach, Warren RI
Jun. 2016 King Tide, Photo Courtesy of Mycoast.org, submitted by Cindy Benevides

SLR INUNDATION ZONES

The maps above illustrate each of the SLR inundation zones. Single family units are represented by orange points in the SLR inundation zone maps, while multi-family units are represented by green points.



WARREN, RI

SOCIOECONOMICS OF SEA LEVEL RISE COASTAL FACTSHEET



SLR 1

EST. POPULATION: 0
EST. OCCUPIED HOUSEHOLDS: 0

There were zero residential units located within the e-911 shapefile in the 1 FT. SLR inundation scenario. Please note, a zero value does not imply that zero people or structures will be impacted in a 1 FT. SLR scenario.

SLR 3

EST. POPULATION: 20
EST. OCCUPIED HOUSEHOLDS: 9

95% or 19 - White
1% or 0.2 - Black
0% - American Indian/
Alaska Native
1% or 0.2 - Asian
2% or 0.4 - Hispanic
6% or 1 - Minority



SLR 5

EST. POPULATION: 368
EST. OCCUPIED HOUSEHOLDS: 162

96% or 352 - White
1% or 3 - Black
0.5% or 2 - American
Indian/Alaska Native
1% or 3 - Asian
2% or 6 - Hispanic
5% or 19 - Minority



SLR 7

EST. POPULATION: 792
EST. OCCUPIED HOUSEHOLDS: 349

96% or 757 - White
1% or 9 - Black
0.4% or 3 - American
Indian/Alaska Native
1% or 6 - Asian
2% or 13 - Hispanic
5% or 43 - Minority



RACE &
AGE

SOCIAL
CHARACTERISTICS

HOUSEHOLD
INCOME

HOUSEHOLD
CHARACTERISTICS



15% or 2 are Individuals with Disabilities

15% or 35 are Individuals with Disabilities

15% or 76 are Individuals with Disabilities

3% or 0.3 are Limited English Proficiency Households

3% or 5 are Limited English Proficiency Households

3% or 11 are Limited English Proficiency Households

11% or 2 are Unemployed

11% or 34 are Unemployed

11% or 73 are Unemployed

11% or 2 are Individuals Below Poverty Level

11% or 42 are Individuals Below Poverty Level

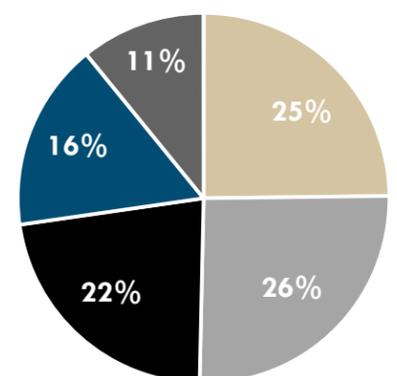
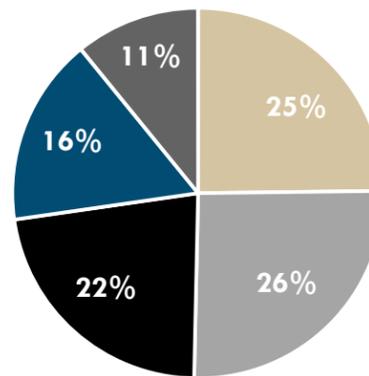
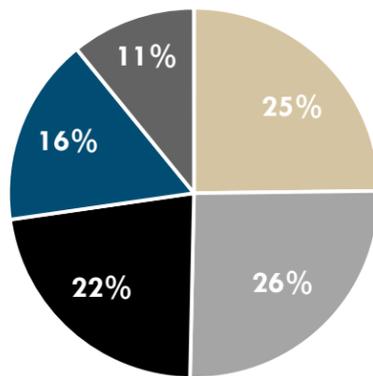
11% or 91 are Individuals Below Poverty Level

4% or 0.4 Households receive SSI

4% or 7 Households receive SSI

4% or 15 Households receive SSI

- In Estimated Occupied Housing Units



■ Less than 24,999K ■ 25,000 to 49,999 ■ 50,000 to 74,999 ■ 75,000 to 124,999 ■ 125,000 and up

- Percent of Population in Housing Type

40% Renter Occupied
14% Owned Outright

40% Renter Occupied
14% Owned Outright

40% Renter Occupied
14% Owned Outright



WARREN (3FT, 5FT, 7FT)*

*No Residential Units within 1FT SLR Scenario

Variable Name	Sea Level Rise (SLR)						Count
	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
e911 Housing Unit Total							
Single Family (R1) Units	6		88		202		
Multifamily (R2) Units with Calculation (*2)	2*2=4		93*2=186		159*2=318		
Mobile Home (R3) Units	0		0		0		
Total Units: Single Family (R1), Multifamily (R2), Mobile Home (R3)	10		185		396		
Note: Multifamily unit totals are multiplied by 2 based on the presumption that there are a minimum of two units within each multifamily e911 point							
Variable Name	Count & Percentage						
e911 Occupied Housing Unit Calculation	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Units: Single Family (R1), Multifamily (R2), Mobile Home (R3)	10	100%	185	100%	396	100%	
Estimated Occupied Units - Count and Percentage	9	88%	162	88%	349	88%	
Population Calculation	SLR 3		SLR 5		SLR 7		
Estimated Occupied Units	9	100%	162	100%	349	100%	
Population Estimate= Occupied Units (x) Municipal Avg. Household Size (2.27)	9*2.27=20		162*2.27=368		349*2.27=792		
Race/Hispanic Ethnicity	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Population (in Occupied Housing Units)	20	100%	368	100%	792	100%	
White	19	95%	352	96%	757	96%	
Black or African American	0.2	1%	3	1%	9	1%	
American Indian and Alaska Native	0	0%	2	0.5%	3	0.4%	
Asian	0.2	1%	3	1%	6	1%	
Some Other Race	0.1	0%	1	0.3%	2	0.3%	
Hispanic	0.4	2%	6	2%	13	2%	
Non-Hispanic, White Population	19	94%	349	95%	749	95%	
Minority Population (Total Population minus Non-Hispanic, White Population)	1	6%	19	5%	43	5%	
Age	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Population (in Occupied Housing Units)	20	100%	368	100%	792	100%	
Young Children (<5)	1	4%	16	4%	36	5%	
School-Age Children (5-17)	3	13%	48	13%	107	14%	
Age 18-24	2	8%	28	8%	63	8%	
Age 25-44	5	24%	85	23%	185	23%	
Age 45-64	6	31%	116	32%	249	31%	
Age 65-74	2	10%	36	10%	73	9%	
Age ≥75	2	11%	38	10%	79	10%	
Population 16-64 (For Individuals with a disability variable) ⁺	13	64%	237	64%	511	64%	
Population ≥25 (For educational attainment variable)	15	75%	275	75%	585	74%	
Population ≥16 (For employment variable) ⁺	16	82%	303	82%	652	82%	
Population ≥65 (For age ≥65 in group quarters variable) ⁺	4	20%	74	20%	151	19%	
Disability	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Population (in Occupied Housing Units, age 16-64)	13	100%	237	100%	511	100%	
Individuals with Disabilities	2	15%	35	15%	76	15%	
Limited English Proficiency (LEP)	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Estimated Occupied Housing Units	9	100%	162	100%	349	100%	
Limited English Proficiency Households	0	3%	5	3%	11	3%	
Educational Attainment	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Population (in Occupied Housing Units, age ≥25)	15	100%	275	100%	585	100%	
Less than a High School Diploma or Equivalent	2	13%	36	13%	77	13%	
High School Diploma or GED	5	35%	95	35%	202	35%	
Professional School	0	2%	5	2%	10	2%	
Associate's/Bachelor's	4	24%	66	24%	141	24%	
Master's/PhD	1	10%	28	10%	58	10%	
Other (Some College)	2	17%	46	17%	97	17%	
Employment	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Population (in Occupied Housing Units, age ≥16)	16	100%	303	100%	652	100%	
Employed	15	89%	269	89%	580	89%	
Unemployed	2	11%	34	11%	73	11%	
Job Industry ‡	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Population (age ≥16 and employed)	15	100%	269	100%	580	100%	
Agriculture, forestry, fishing & hunting, mining	0	1%	4	1%	9	1%	
Construction	1	9%	23	9%	50	9%	
Manufacturing	2	13%	35	13%	76	13%	
Wholesale trade	0	2%	6	2%	14	2%	
Retail trade	2	11%	29	11%	62	11%	
Transportation & warehousing, utilities	1	5%	15	5%	32	5%	
Information	0	1%	3	1%	6	1%	
Finance & insurance, real estate, rental & leasing	1	9%	23	9%	50	9%	
Professional, scientific, management, administrative, waste management services	1	6%	18	6%	38	6%	
Educational services, health care, social assistance	4	28%	75	28%	161	28%	
Arts, entertainment, recreation, accommodation & food services	1	9%	25	9%	53	9%	
Other services (except public administration)	0	3%	7	3%	15	3%	
Public administration	0	3%	7	3%	16	3%	
Income	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Estimated Occupied Housing Units	9	100%	162	100%	349	100%	
Less than \$24,999K	2	25%	40	25%	87	25%	
\$25,000 to 49,999	2	26%	41	26%	89	26%	
\$50,000 to 74,999	2	22%	36	22%	78	22%	
\$75,000 to 124,999	1	16%	27	16%	57	16%	
\$125,000 and greater	1	11%	18	11%	38	11%	
Total Population (in Occupied Housing Units)	20	100%	368	100%	792	100%	
Income Below Poverty Level	2	11%	42	11%	91	11%	
Income Above Poverty Level	18	89%	326	89%	701	89%	
Estimated Occupied Housing Units	9	100%	162	100%	349	100%	
With Social Security Income (SSI) Households	0.4	4%	7	4%	15	4%	
Without Social Security Income (SSI) Households	9	96%	155	96%	334	96%	
Housing Occupancy	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Housing Units	10	100%	185	100%	396	100%	
Occupied Housing Units	9	88%	162	88%	349	88%	
Vacant Housing Units	1	12%	23	12%	47	12%	
Estimated Occupied Housing Units	9	100%	162	100%	349	100%	
Owner-Occupied Housing Units	5	56%	96	59%	200	57%	
Renter-Occupied Housing Units	4	44%	66	41%	148	43%	
Total Population (in Occupied Housing Units)	20	100%	368	100%	792	100%	
Population in Group Quarters	1	3%	8	2%	16	2%	
Total Population (age ≥65)	4	100%	74	100%	151	100%	
Age ≥65 in Group Quarters ⁺	0.4	10%	7	10%	15	10%	
Housing Tenure*	SLR 3	SLR 3 %	SLR 5	SLR 5 %	SLR 7	SLR 7 %	
Total Population (in Occupied Housing Units)	20	100%	368	100%	792	100%	
Population in Property Owned with mortgage or loan	9	46%	171	46%	367	46%	
Population in Property Owned free and clear	3	14%	51	14%	110	14%	
Population in Renter-Occupied Units	8	40%	146	40%	315	40%	
Employment and Business Unit Data‡							Count
Average Employment - Municipality							3536
Number of Units (Business - Private and Government)							380
Average Number of Workers per Unit (Business - Private and Government)							9
Workers Per Commercial Unit	SLR 3		SLR 5		SLR 7		
e911 Commercial Unit Total	4		27		48		
Average Number of Workers/Jobs per Commercial Unit	37		251		447		

HOUSING UNITS & POPULATION

DEMOGRAPHIC
Block Level and Block Group Data

SOCIAL
Block Group Data

ECONOMIC
Block Group Data and Municipal Level Data†

HOUSING
Block Level and Block Group Data

JOBS
Municipal Data‡ & e911 Data