

**RHODE ISLAND STATEWIDE PLANNING PROGRAM
TECHNICAL COMMITTEE MEETING**

Friday, June 3, 2016
RIDOA, Conference Room A
One Capitol Hill, Providence, RI

APPROVED MINUTES

I. Attendance

1. Members Present

| | |
|--------------------------------|---|
| Mr. Robert Azar, Chair | City of Providence |
| Mr. Michael DeLuca, Vice Chair | Town of Narragansett |
| Mr. Jared Rhodes, Secretary | RI Statewide Planning Program |
| Mr. John Chambers | Fuss & O'Neill, Incorporated |
| Mr. Nate Kelly | American Planning Association, RI Chapter |
| Mr. Thomas Kogut | RI Public Utilities Commission |
| Ms. Ashley Sweet | Town of Exeter |
| Mr. Jeffrey Willis | RI Coastal Resources Management Council |
| Mr. Ronald Wolanski | Town of Middletown |

2. Members Absent

| | |
|------------------------|---|
| Mr. Steve Devine | RI Department of Transportation |
| Ms. Nicole LaFontaine | Town of North Kingstown |
| Ms. Eliza Lawson | RI Department of Health |
| Ms. Lisa Primiano | RI Department of Environmental Management |
| Mr. Arnold Robinson | Roger Williams University |
| Ms. Jennifer Siciliano | City of Woonsocket |
| Mr. Michael Walker | RI Commerce Corporation |

3. Staff Present

| | |
|----------------------|-------------------------------|
| Mr. Parag Agrawal | RI Division of Planning |
| Ms. Kirsten Bryan | RI Statewide Planning Program |
| Ms. Kimberly Crabill | RI Statewide Planning Program |
| Mr. Vin Flood | RI Statewide Planning Program |
| Mr. Kevin Nelson | RI Statewide Planning Program |

4. Guests Present

None

II. Agenda Items

1. Call to Order

Chairman Azar called the meeting to order at 9:03 a.m.

2. Approval of May 6, 2016 Meeting Minutes – for action

Chairman Azar asked for a motion to approve the meeting minutes of May 6, 2016. Mr. Wolanski moved to approve and the motion was seconded by Mr. Kogut. There was no discussion. The following members voted aye: Azar, Chambers, DeLuca, Kelly, Kogut, Sweet, Willis, and Wolanski. Mr. Rhodes abstained. There were no nay votes.

3. Public Comment on Agenda Items – for discussion

There was none.

4. Draft FY 17 Unified Transportation Planning Work Program – for action

Chairman Azar introduced Parag Agrawal who overviewed the projects that have been added to the work program since the committee last met. These included the Housing Plan, the Transit Hub Project, the Transportation Improvement District effort, the Cranston Street Armory work, and finally, the Strategic Transit Plan. Discussion was as follows:

Mr. Kelly asked if the housing plan will become a State Guide Plan Element. Mr. Agrawal indicated that it would.

Mr. Azar then asked if Statewide Planning would be taking the lead on the development of the Transit Hub. In response, Mr. Agrawal indicated that planning will be involved in it but not leading it.

Chairman Azar asked for a motion to recommend that the State Planning Council adopt the Unified Transportation Planning Work Program. Mr. Chambers made the first motion and the motion was seconded by Ms. Sweet. There was no discussion. The following members voted aye: Azar, Chambers, DeLuca, Kelly, Kogut, Sweet, Willis, and Wolanski. Mr. Rhodes abstained. There were no nay votes.

5. Project Update, Socio-Economics of Sea Level Rise - informational presentation

Chairman Azar and Mr. Rhodes introduced Mr. Vin Flood and Ms. Kirsten Bryan who then presented the attached power point. Discussion was as follows:

Mr. Agrawal asked when the fact sheets would be made available. Ms. Bryan stated that they would be available by the end of the fiscal year.

Mr. Willis asked if the project would include storm surge data at a later time noting that it has a lot more impact on the environment. Mr. Rhodes responded that it very well could and that the decision not to include it upfront was based on a desire to first finalize the overall analysis methodology.

Mr. Kelly noted that he was struck by some of the statistics and wondered what kind of change was seen when moving more inland. Ms. Bryan responded that the largest changes occurred between three and five feet in terms of percentage. Mr. Flood then responded that as summary reports are

created for each municipality they would include that data to indicate the changes from three, five, and seven feet.

Mr. Chambers asked where this project would go next once the fact sheets were distributed to the municipalities. Mr. Rhodes responded that the program would be working in partnership with the cities and towns to integrate the information into their comprehensive plans and more importantly to try and find ways to initiate adaptation actions at both the local and state levels of government.

Mr. Willis noted that the socio-economic data is so important to have because we can say what structures will be lost but when we see the number of people that are affected it changes things.

Mr. DeLuca asked whether the topography of the area was considered in the methodology used for the census blocks. Mr. Rhodes indicated that it was.

Mr. Azar commented that Warwick Neck becomes an island at some point under a sea level rise scenario which would affect everyone there.

Mr. Kelly noted that it may be interesting to choose a community to pilot to go down to the local accessors data and compare age of structures and value of structures with the results you came up with to see how things match up. Mr. Rhodes responded that North Kingstown has done some of this kind of work for the CRC project. Mr. Willis also noted that Warwick and Charlestown both have projects going on to get to that parcel level data.

Mr. Rhodes concluded by thanking and acknowledging the hard work that Mr. Flood and Ms. Bryant put into the project.

6. Announcements – *for discussion*

None.

7. Adjourn

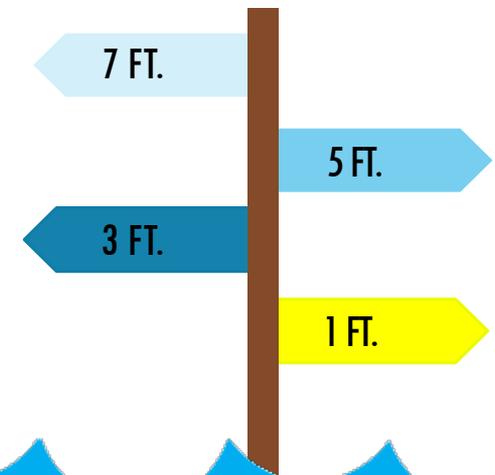
Chairman Azar called for a motion to adjourn. Committee member Willis made the first motion. The motion was seconded by Committee member DeLuca. There was no discussion. The following members voted aye: Azar, Chambers, DeLuca, Kelly, Kogut, Sweet, Willis, and Wolanski. Mr. Rhodes abstained. There were no nay votes.

Respectfully Submitted,

Jared L. Rhodes, II
Secretary

SOCIOECONOMICS OF SEA LEVEL RISE

RI STATEWIDE PLANNING PROGRAM
KIRSTEN BRYAN, VIN FLOOD
JUNE 9, 2016



INTRODUCTION

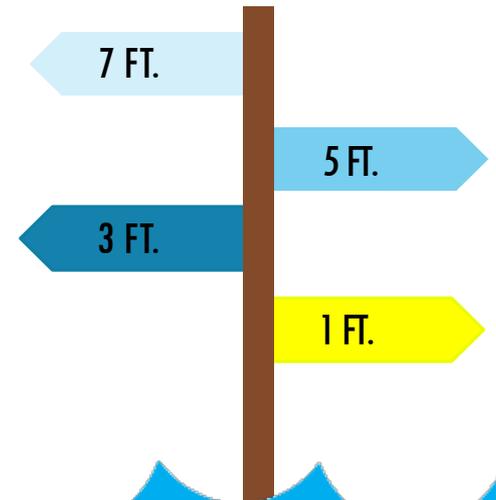
- Phase I: Vulnerability of Transportation Assets to SLR
 - Key Themes: Infrastructure, SLR Projections
- Phase II: Socioeconomics of SLR
 - Objective
 - Learn WHO located in these areas
 - Provide Info to guide
 - Unique focus on who, and how many people and businesses are within SLR Inundation zones 1, 3, 5, 7

MAP: RI'S 21 COASTAL COMMUNITIES (BLUE)



DATA

- **Selection of Socioeconomic Variables**
 - Solicit input from internal and external groups, CARIS, etc.
- **Sea Level Rise Inundation Zones**
 - 1, 3, 5, 7
- **Census Geography**
 - Blocks and Block Groups
- **E911 Points**
 - Residential Single and Multi-family points used for most accurate year-round housing estimate
 - Commercial points



METHODOLOGY

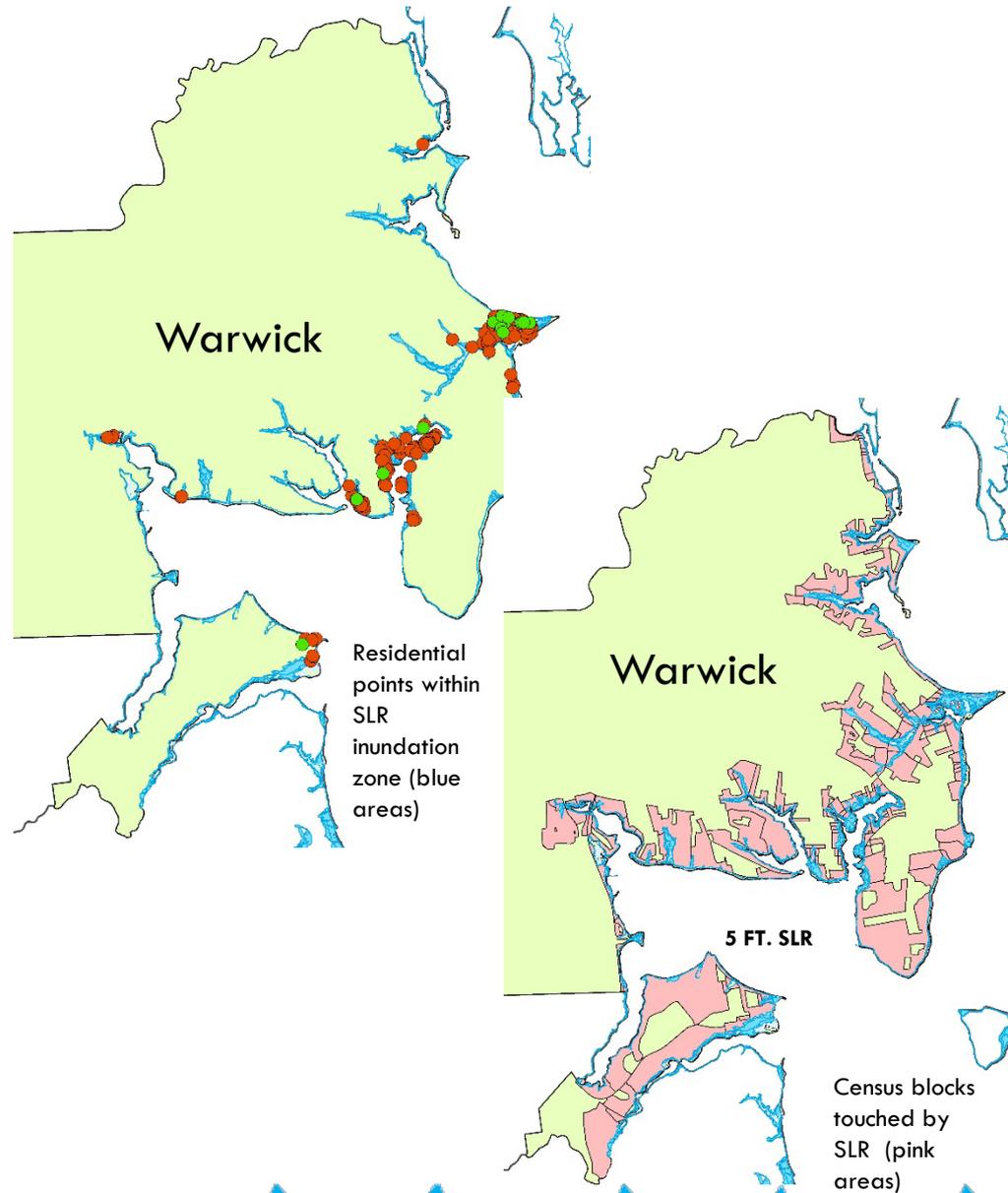
METHODOLOGY TO DETERMINE NUMBER OF RESIDENTIAL UNITS & POPULATION ESTIMATE

RESIDENTIAL UNITS

- GIS analysis: Selection of e911 residential points (SF/MF) touched by SLR inundation (blue)
- Census geography data (pink) to determine:
 - Occupancy rate
 - Avg. Household Size in city/town

POPULATION ESTIMATE

- # of Occupied HH Units (x) Avg. HH Unit Size

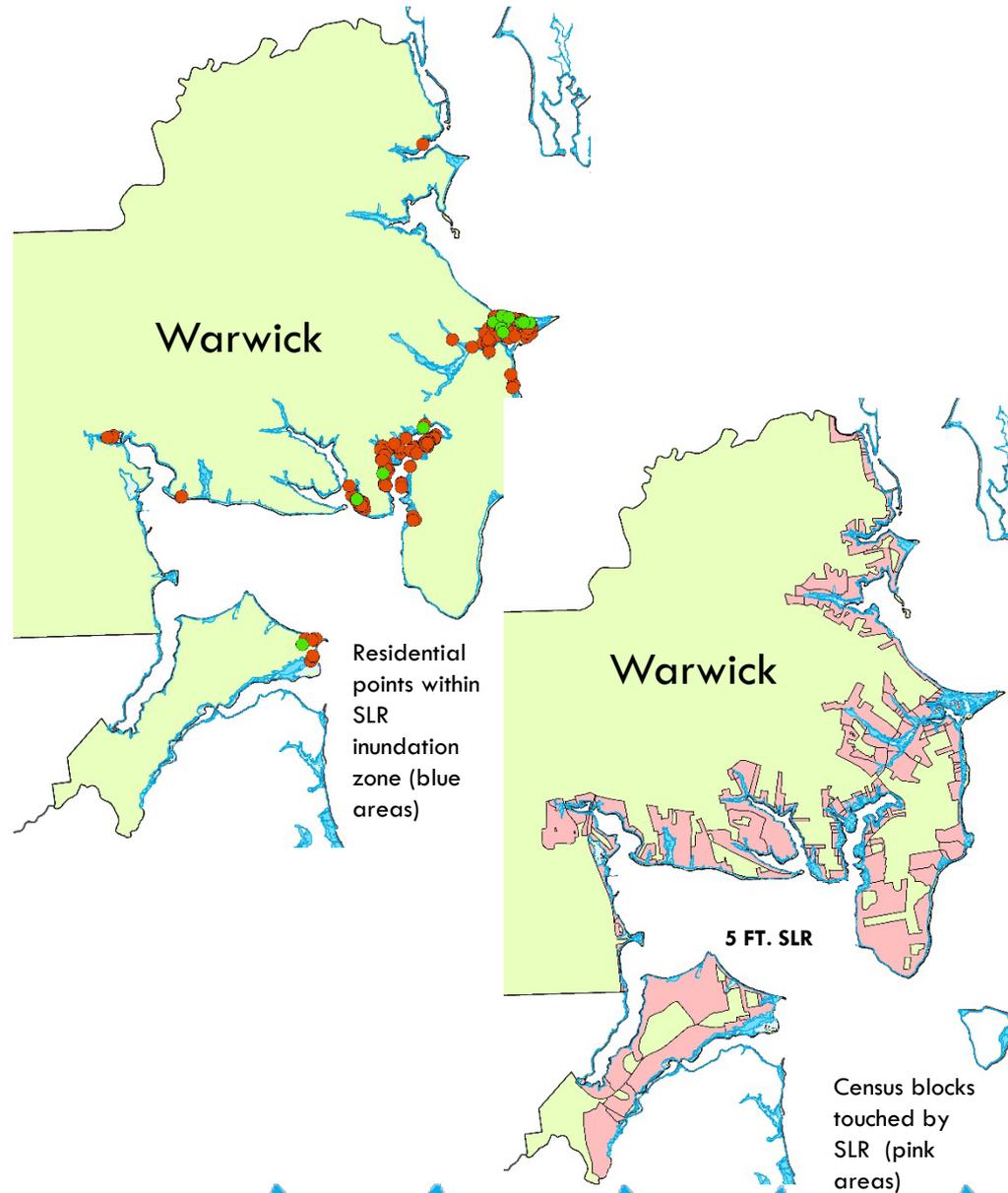


METHODOLOGY

APPLYING CENSUS DATA TO POPULATION ESTIMATES

SOCIOECONOMIC VARIABLES

- GIS: Selected blocks/block groups touched by SLR inundation zones (pink)
- Applied percentage of variables to population estimates located within inundation zones (blue)
- Percentages were calculated per inundation zone (census data), and applied to each of the e911 population estimates per inundation zones.

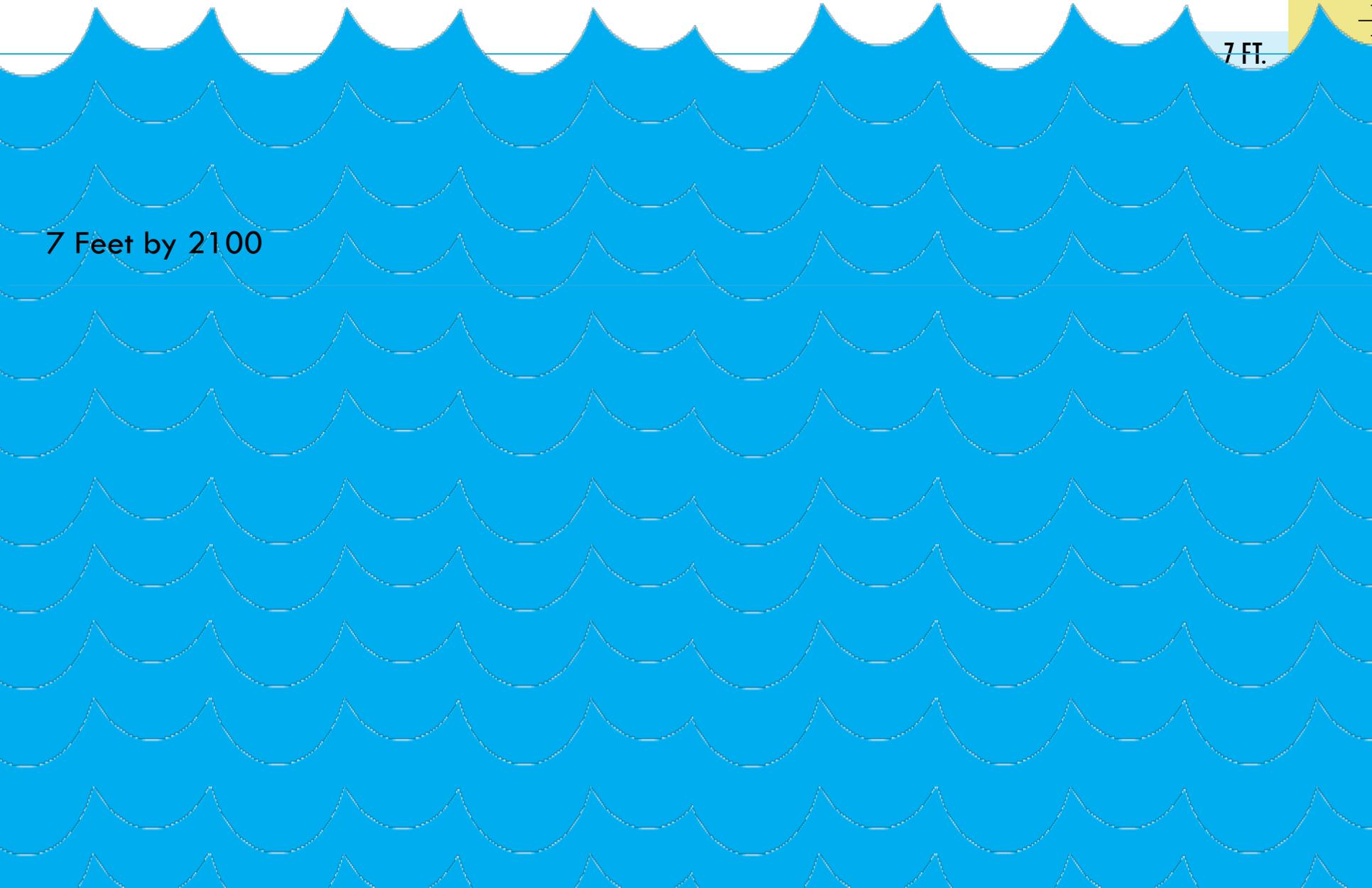


SOCIOECONOMICS OF SEA LEVEL RISE

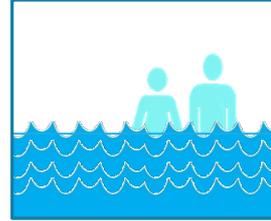
7 FT.

7 Feet by 2100

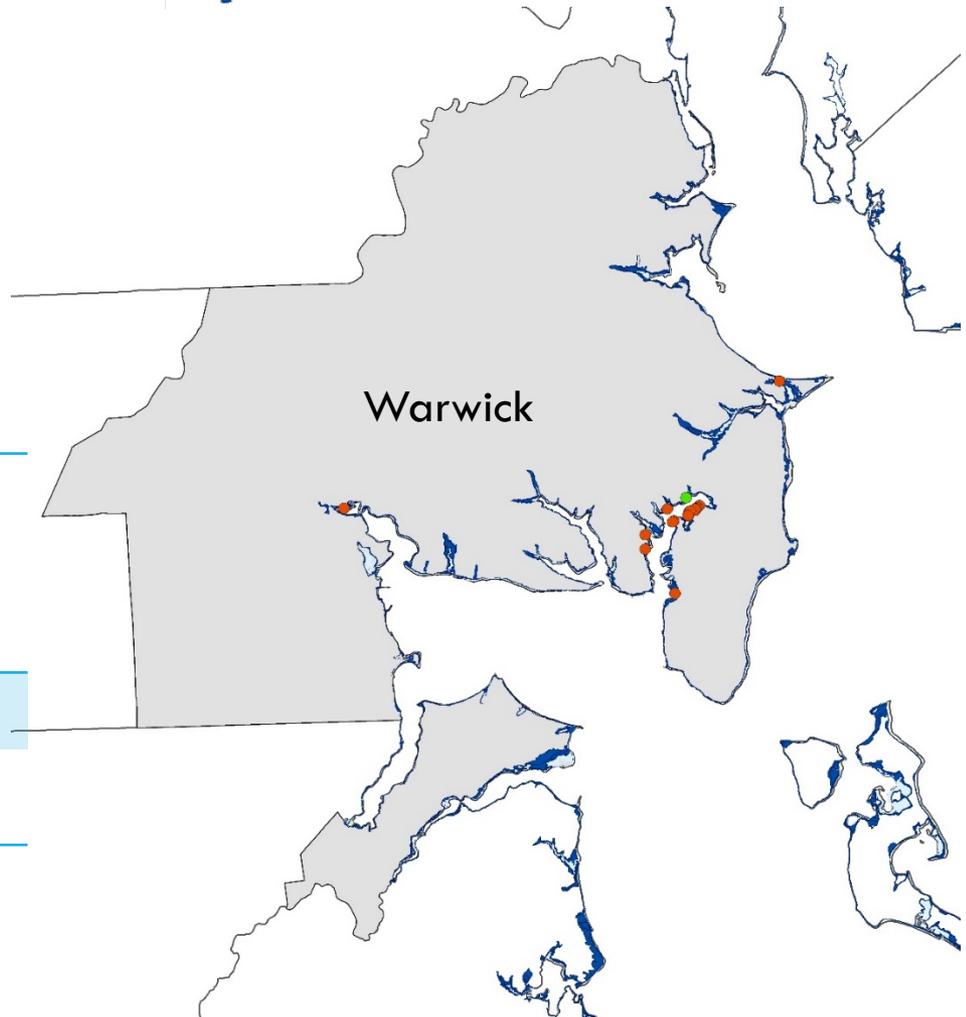
8



CASE STUDY: WARWICK, RI



- Pilot Community
- 21 coastal communities to follow + RI coastal summary
- **3FT. SLR Inundation zone**
 - E-911 Residential Units
 - 17 Single Family (Orange)
 - 1 Multi-Family* (Green) (assume min. 2 units)
 - Population = 37 (Based on number of occupied units (x) average household size in Warwick, RI (2.33)).¹

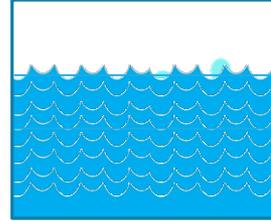


| SLR Inundation zone | Residential Units | Occupied Unit calculation (Total Units (x) Occ. Housing Unit Rate in SLR zone) | Population calculation (Occupied Units (x) Warwick Avg. HH Size) |
|---------------------|------------------------------|---|--|
| 1FT. | N/A | N/A | N/A |
| 3FT. | 17 SF, 1 MF *17 + 1(2)=19 | 17 (89% occ. HU) | 39 |

¹ Average Household Size in Warwick, RI according to the 2010 U.S. Census.
 *Formula for calculating population in MF households (how many units to assign)
 **SLR Estimates are a floating ranged adopted by CRMC projected by NOAA.



CASE STUDY: WARWICK, RI



• 5FT. SLR Inundation zone

- E-911 Residential Units =
 - 185 Single Family (Orange)
 - 17 Multi-Family* (Green) (assume min. 2 units)
- Population = 424 (based on number of residential units (x) average household size in Warwick, RI (2.33).¹)

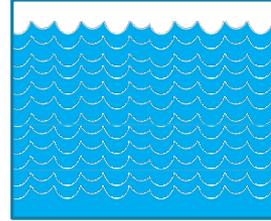


| SLR Inundation zone | Residential Units | Occupied Unit calculation (Total Units (x) Occ. Housing Unit Rate in SLR zone) | Population calculation (Occupied Units (x) Warwick Avg. HH Size) |
|---------------------|------------------------------|---|---|
| 1 FT. | 0 | 0 | 0 |
| 3 FT. | 17 SF, 1 MF *17 + 1(2)=19 | 17 (89% occ. HU) | 39 |
| 5 FT. | 185 SF, 17 MF | 197 (90% occ. HU) | 459 |

¹ Average Household Size in Warwick, RI according to the 2010 U.S. Census.
 *Formula for calculating population in MF households (how many units to assign)
 **SLR Estimates are a floating ranged adopted by CRMC projected by NOAA.

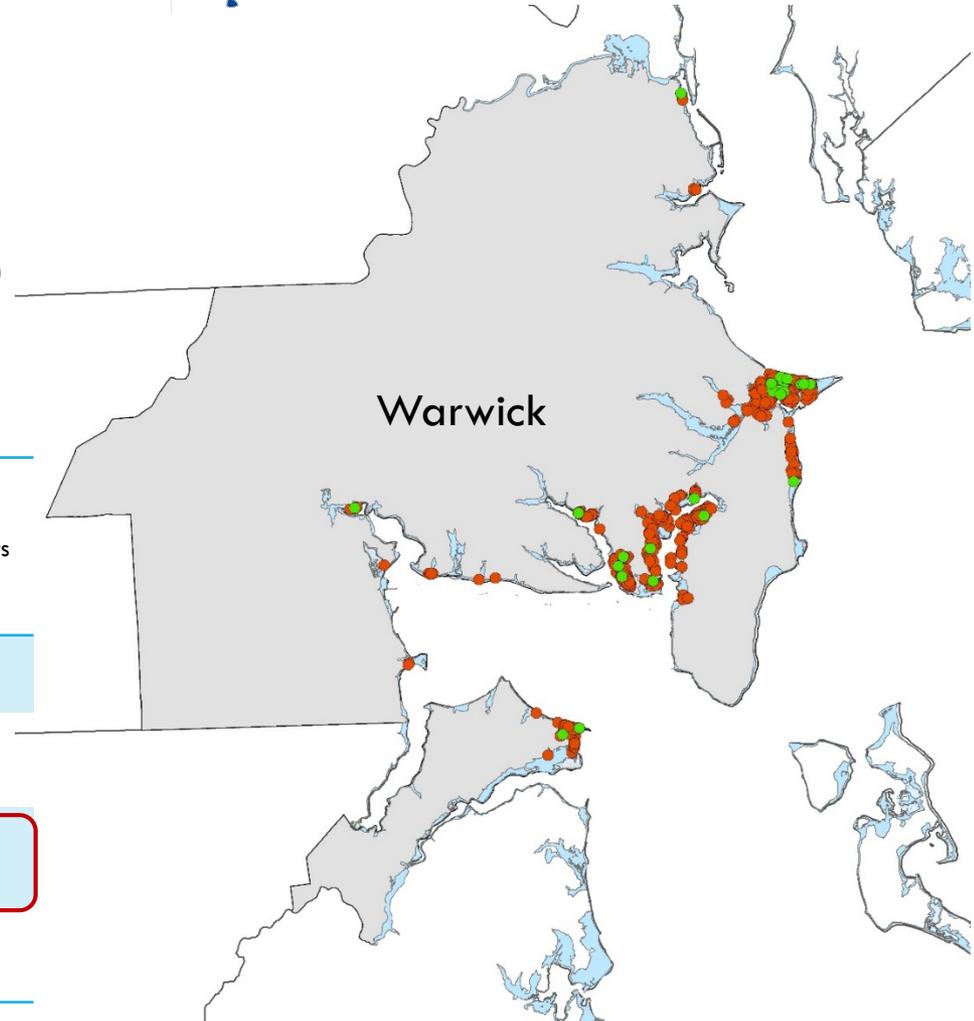


CASE STUDY: WARWICK, RI



• 7FT. SLR Inundation zone

- E-911 Residential Units =
 - 449 Single Family (Orange)
 - 36 Multi-Family* (Green) (assume min. 2 units)
- Population = 1017 (based on number of residential units (x) average household size in Warwick, RI (2.33).¹)
- All zones included in full analyses



| SLR Inundation zone | Residential Units | Occupied Unit calculation (Total Units (x) Occ. Housing Unit Rate in SLR zone) | Population calculation (Occupied Units (x) Warwick Avg. HH Size) |
|---------------------|------------------------------|---|---|
| 1FT. | 0 | 0 | 0 |
| 3FT. | 17 SF, 1 MF *17 + 1(2)=19 | 17 (89% occ. HU) | 39 |
| 5FT. | 185 SF, 17 MF | 197 (90% occ. HU) | 459 |
| 7FT. | 449 SF, 36 MF | 469 (90% occ. HU) | 1093 |

¹ Average Household Size in Warwick, RI according to the 2010 U.S. Census.
 *Formula for calculating population in MF households (how many units to assign)
 **SLR Estimates are a floating ranged adopted by CRMC projected by NOAA.



CASE STUDY: WARWICK, RI

SLR 5 FT Findings

RACE

| | |
|--|------------|
| Total Population | 459 |
| White | 431 |
| Asian | 8 |
| Black or African American | 7 |
| Some Other Race | 3 |
| American Indian and Alaska Native | 2 |
| Native Hawaiian and Other Pacific Islander | 0 |



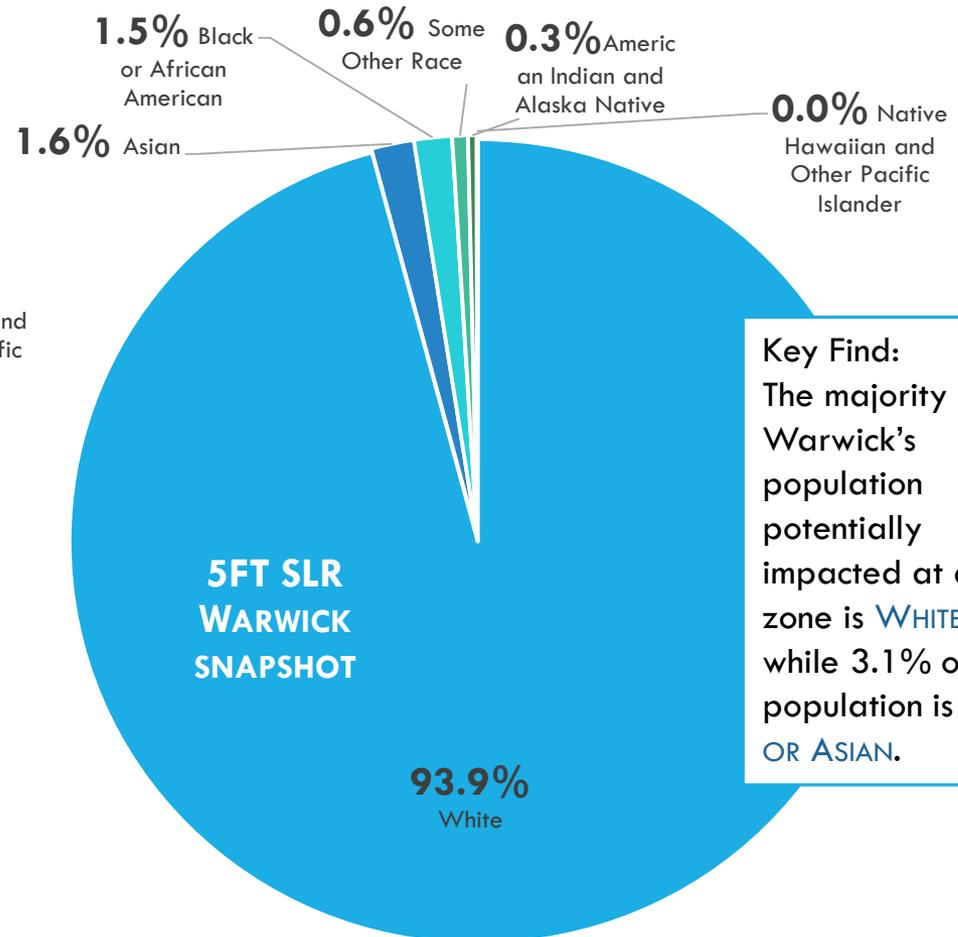
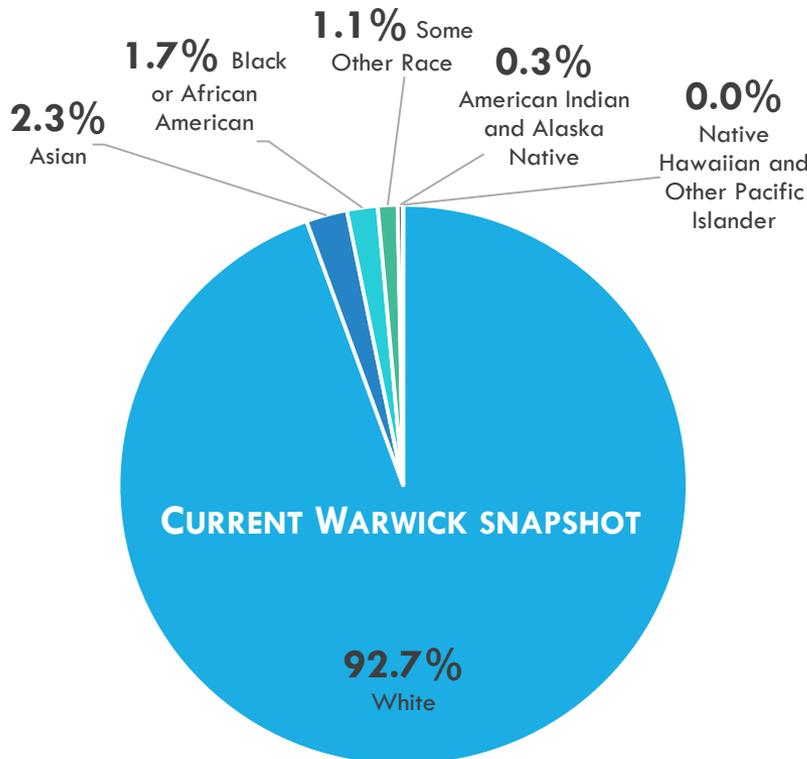
HISPANIC POPULATION IN WARWICK (5FT)

98% Not Hispanic or Latino



2% Hispanic or Latino

| | |
|------------------------|-----|
| Hispanic Population | 9 |
| Not Hispanic or Latino | 450 |



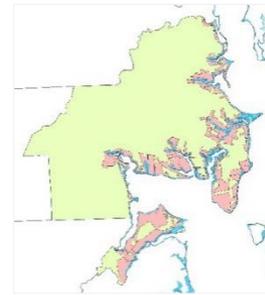
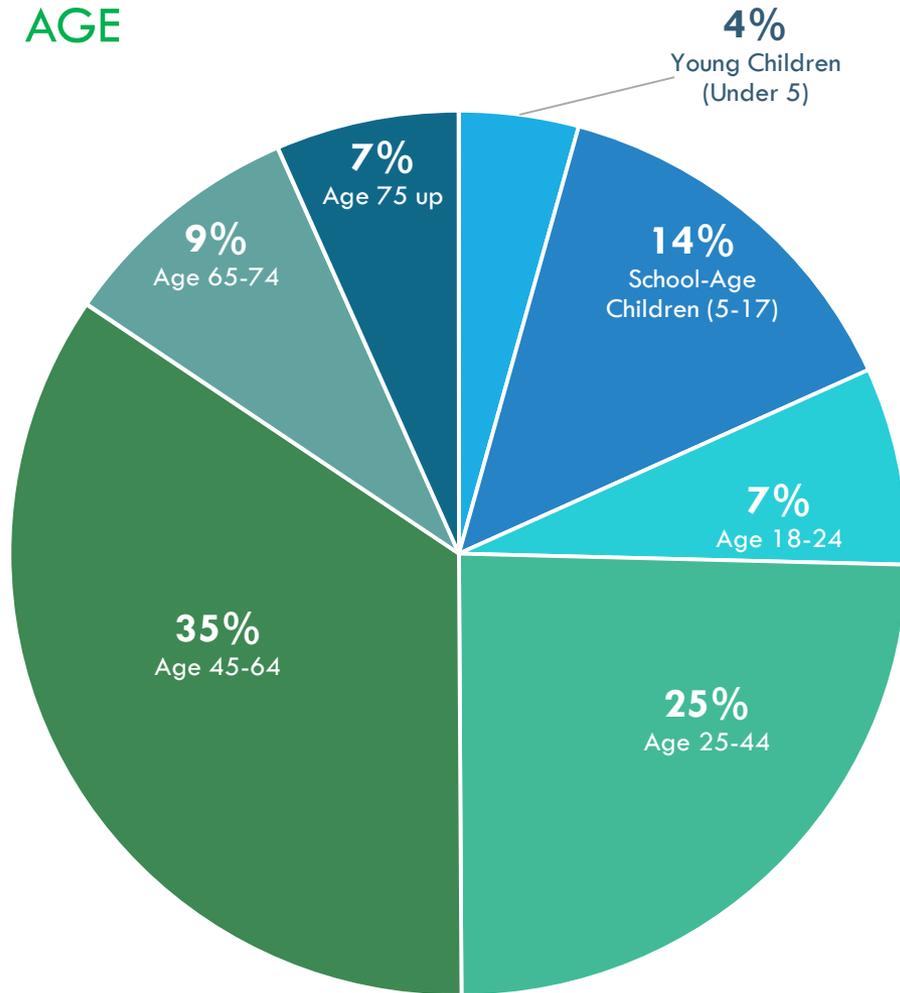
Key Find:
The majority of Warwick's population potentially impacted at a 5FT zone is **WHITE**, while 3.1% of the population is **BLACK OR ASIAN**.

**Between 1 and 2 FT. of SLR by 2040 based on NOAA projections

CASE STUDY: WARWICK, RI

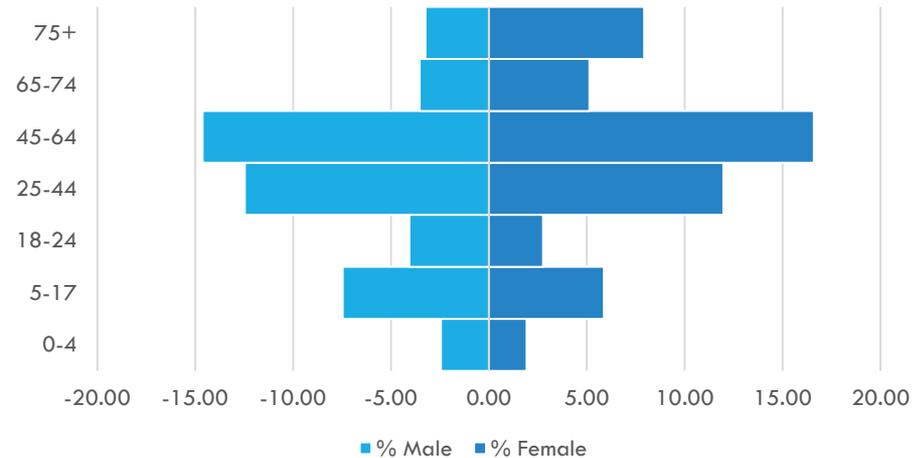
SLR 5 FT Findings

AGE



| Total Population | 459 |
|----------------------------|-----|
| Young Children (Under 5) | 20 |
| School-Age Children (5-17) | 64 |
| 18-24 | 33 |
| 25-44 | 112 |
| 45-64 | 159 |
| 65-74 | 41 |
| 75 up | 30 |

Population Pyramid for Warwick, RI (2010)



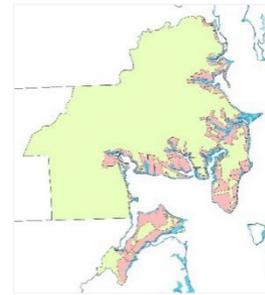
Key Find:

The majority of Warwick's population potentially impacted at a 5FT zone is **AGE 45-64 (35%)**, and the 2nd largest population is **AGE 25-44 (25%)**

CASE STUDY: WARWICK, RI

SLR 5 FT Findings

EDUCATIONAL ATTAINMENT (POPULATION OVER 25)

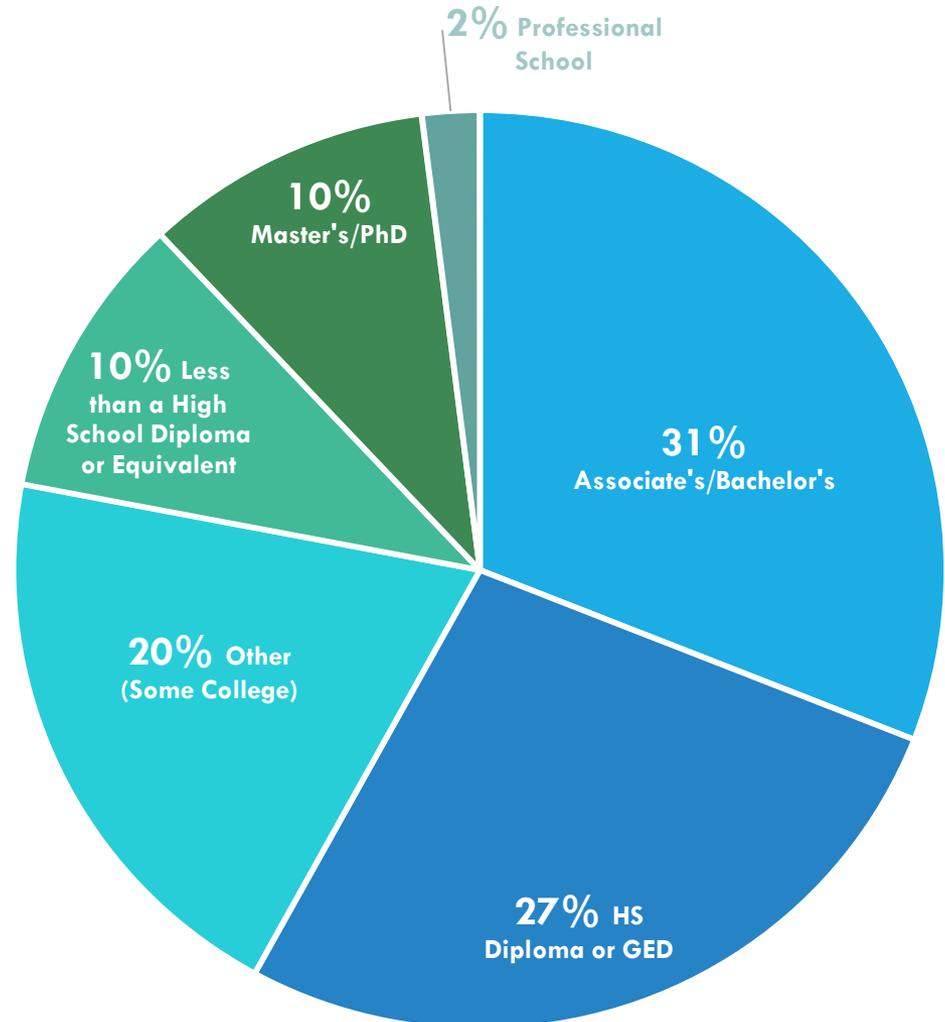


Total Population (76% of Population is Over 25)

| | |
|---|-----|
| 459 (x) 76% = | 349 |
| Associate's/Bachelor's | 108 |
| HS Diploma or GED | 94 |
| Other (Some College) | 70 |
| Less than a High School Diploma or Equivalent | 35 |
| Master's/PhD | 35 |
| Professional School | 7 |

Key Find:

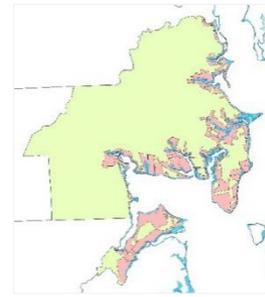
The majority of Warwick's population has a **HS DIPLOMA OR GED** or **ASSOCIATE'S/BACHELOR'S DEGREE**.



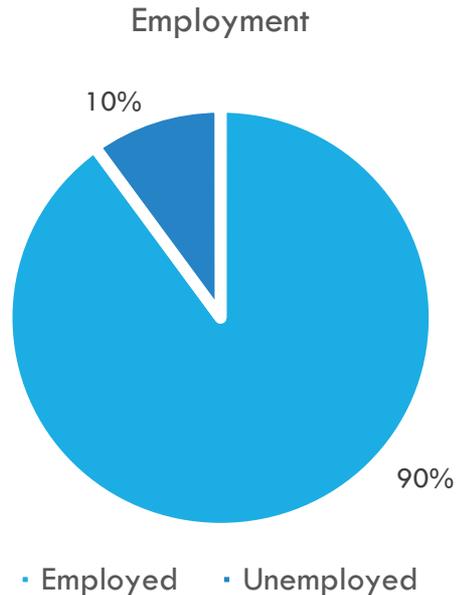
CASE STUDY: WARWICK, RI

SLR 5 FT Findings

EMPLOYMENT

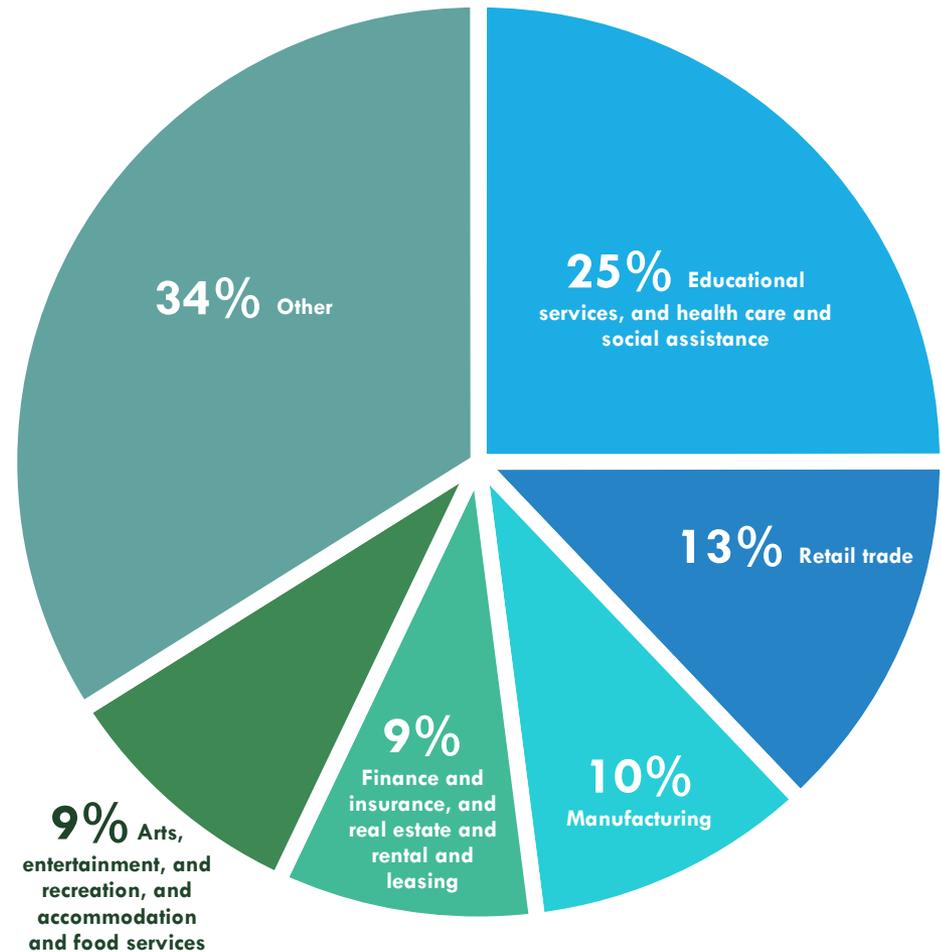


| | |
|---|------------|
| Total Population in Labor Force (71% of 459 or Total Pop.) | 326 |
| Employed | 293 |
| Unemployed | 33 |



Key Find:
 More 90% of Warwick's population potentially impacted at a 5FT inundation zone is **EMPLOYED**, and jobs in **EDUCATION, HEALTH CARE & SOCIAL SERVICES** represent the largest employment industry encompassing 25% of jobs.

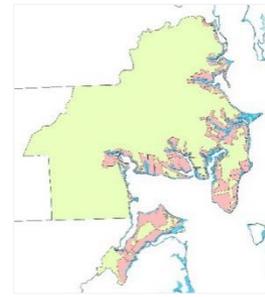
TOP 5 INDUSTRY TYPES IN WARWICK (5FT)



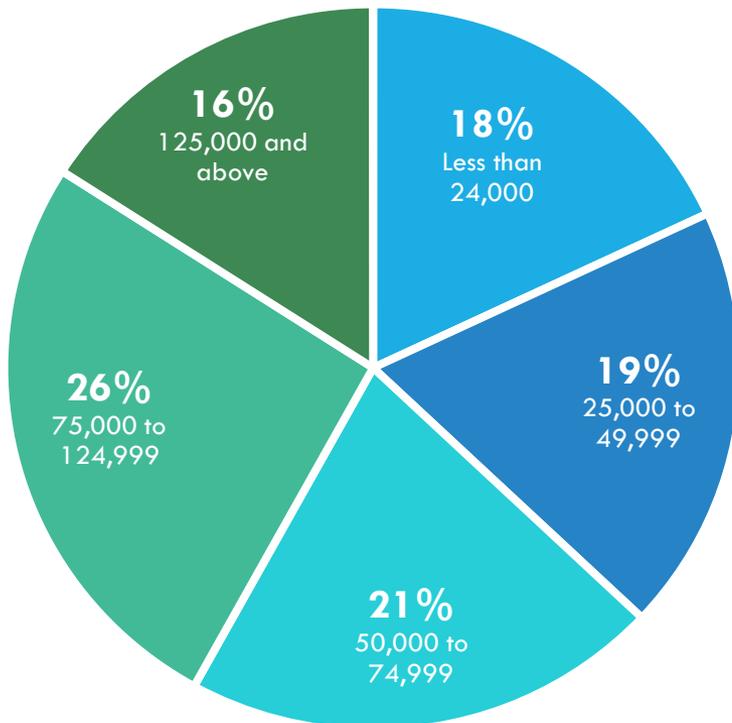
CASE STUDY: WARWICK, RI

SLR 5 FT Findings

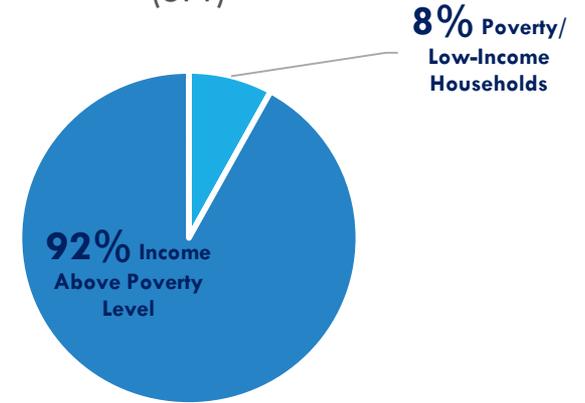
HOUSEHOLD INCOME



| Total Occupied Households | 197 |
|---------------------------|-----|
| Less than 24,999 | 35 |
| 25,000 to 49,999 | 37 |
| 50,000 to 74,999 | 41 |
| 75,000 to 124,999 | 51 |
| 125,000 and above | 31 |



Poverty (Occupied Households) in Warwick (5FT)



| Total Occupied Households | 197 |
|-----------------------------------|-----|
| Poverty/ Low-Income Households | 16 |
| Income Above Poverty Level | 181 |

Key Find:

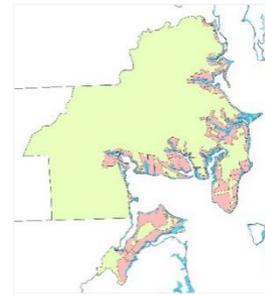
The majority of Warwick households potentially impacted at a 5FT zone are **ABOVE THE POVERTY LEVEL**, while 26% of occupied households earn \$75k-\$124,999k annually.

**Between 1 and 2 FT. of SLR by 2040 based on NOAA projections

CASE STUDY: WARWICK, RI

SLR 5 FT Findings

HOUSING



| SLR Inundation zone | Residential Units | Occupied Unit (calculation) Total Units * Occ. Housing Unit Rate in SLR zone | Population (calculation) Occupied Units (x) Warwick Avg. HH Size |
|---------------------|-------------------|---|---|
| 5FT. | 185 SF, 17 MF | 197 (90% occ. HU) | 459 |

Assessed Value of e911 structures in 5FT SLR inundation zone is approximately:

\$48 Million*,

a conservative estimate.

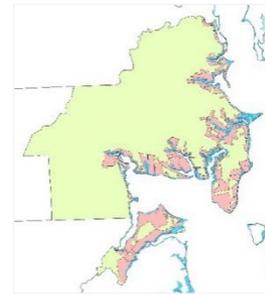
*Based on available Warwick tax assessor data (valuation year 2016)



Conimicut Point, Warwick RI
Sept. 30, 2015 King Tide, Photo Courtesy of Mycoast.org,
captured by Janet Freedman.

**Between 1 and 2 FT. of SLR by 2040 based on NOAA projections

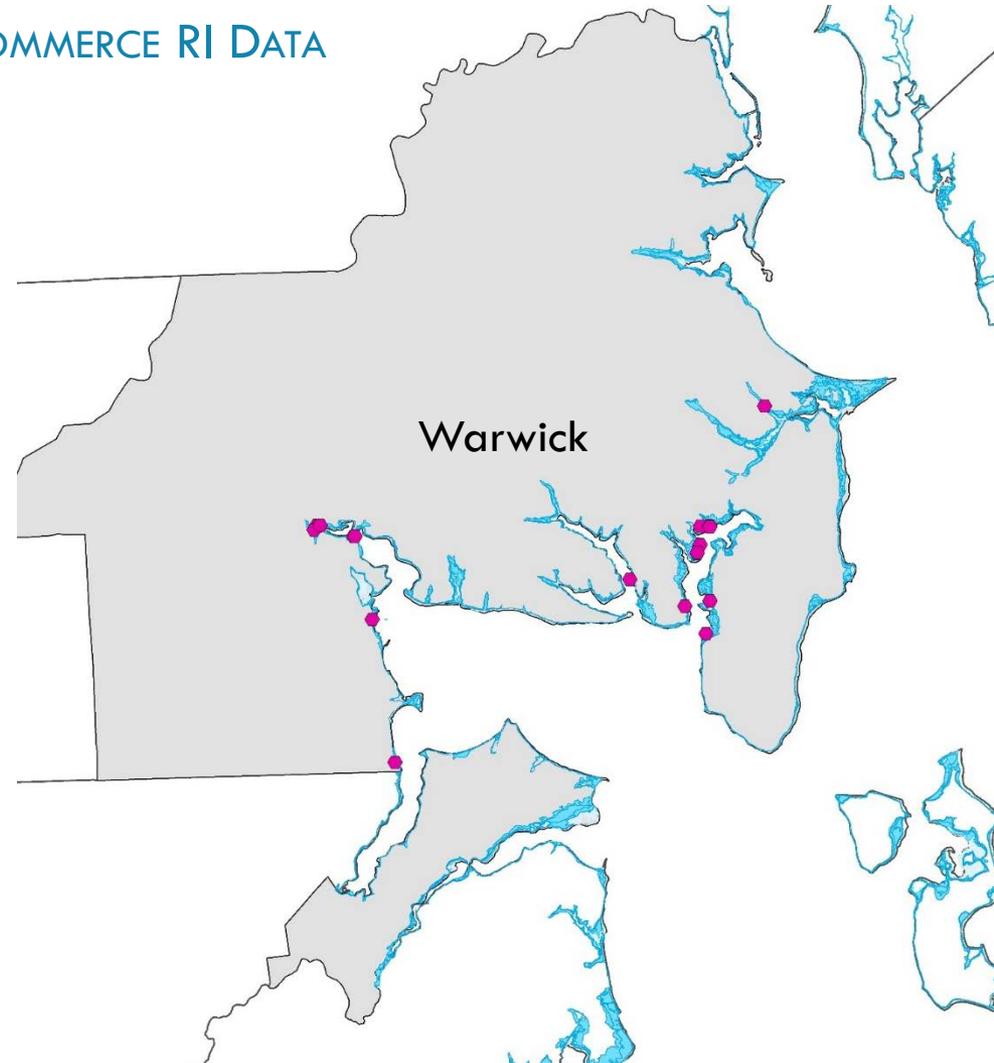
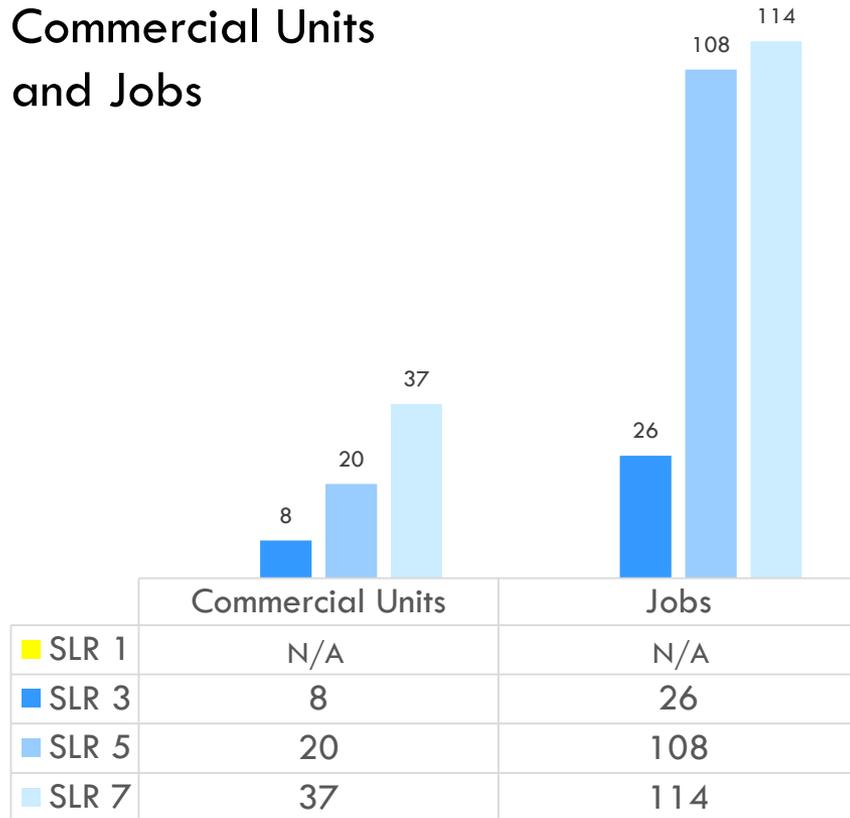
CASE STUDY: WARWICK, RI



SLR zones + **COMMERCIAL UNITS AND JOBS**

UTILIZING E911 COMMERCIAL DATA AND COMMERCE RI DATA

Commercial Units and Jobs



**Between 1 and 2 FT. of SLR by 2040 based on NOAA projections

CASE STUDY: WARWICK, RI

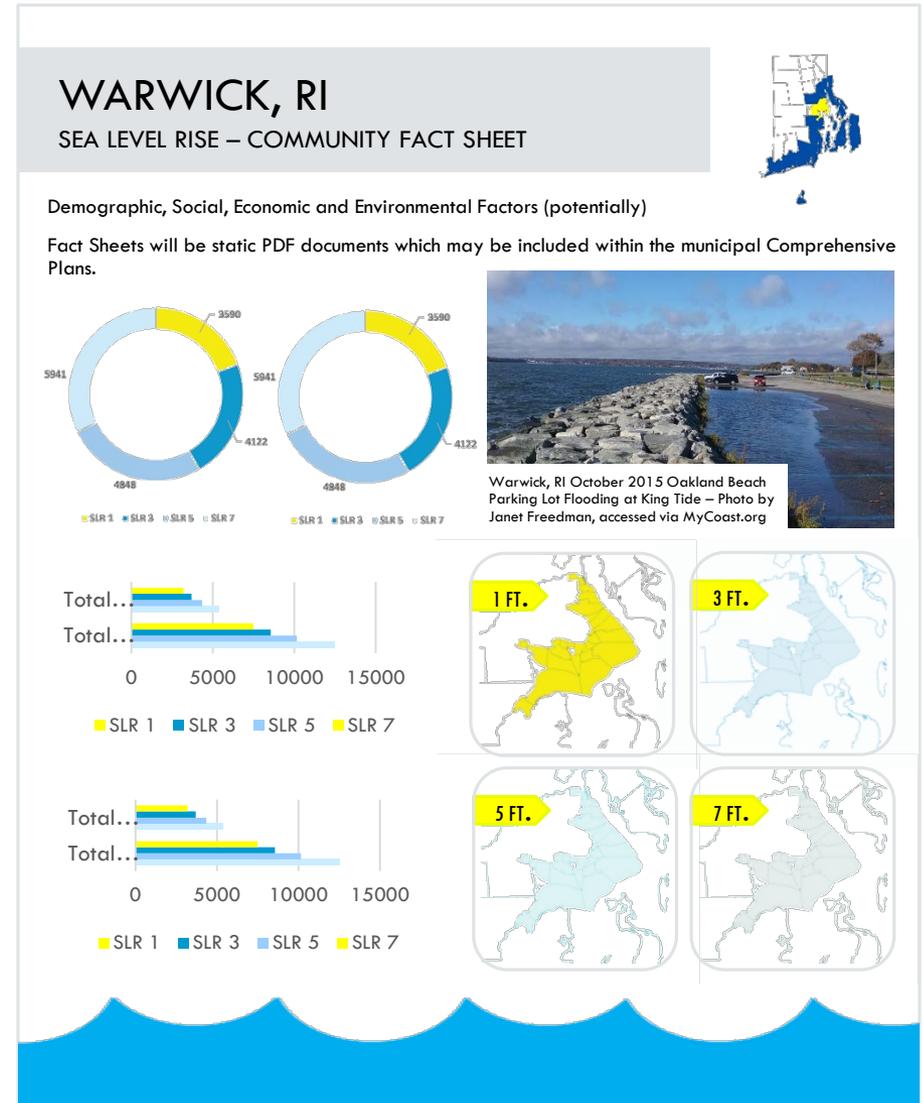


• Key WARWICK Findings (5FT)

- **RACE:** White population is the majority potentially impacted (93.9%)
- **AGE:** Adults 45-64 represent 35%, while adults 25-44 represent 2nd largest age category at 25%
- **EDUCATION:** 31% of the Warwick population has an Associate's or Bachelor's degree.
- **EMPLOYMENT:** 90% of population is employed, 10% is unemployed
- **INCOME:** 8% Below Poverty
- **COMMERCIAL UNITS/JOB**s – There are 20 Commercial Units, and 25% of jobs are in educational services, health care and social assistance industry

• Fact Sheets

- 21 coastal factsheets
- 1 RI Coastal Summary Factsheet
- Summary Report
- Demographic, Social, Economic, Housing
- Fact Sheets will be static PDF documents which may be included within the municipal Comprehensive Plans.



FINDINGS

- **LIMITATIONS**

- Data is approximate, using best available which might be an estimate where margin of error is present
- Best attempt to identify **WHO** using most reliable data

- **BENEFITS**

- New information previously unavailable locally without additional cost
- Insight on people impacted/exposed.

- **HOW THIS CAN BE USED**

- This data can be used by local officials for capital improvement planning, transportation planning, and overall long-range planning in communities
- Potentially be used to target any available funds/resources via grants in the future

