2022

Healthcare Hazard Vulnerability Assessment



Region 3 Healthcare Coalition Alliance

Approved: June 15, 2018, Update June 2022 emPower & SVI Data Updated May 2022

REGION 3 HEALTHCARE HAZARD VULNERABILITY ASSESSMENT

2022

TABLE OF CONTENTS

INTRODUCTION2	
BACKGROUND2	
PURPOSE	
PLAN DEVELOPMENT	
METHODS and PROCESS	
HAZARD RISK AND VULNERABILITY - 2022 REVIEW5	
Table 1: Region 3 Healthcare Hazards - 2022 5	
DATA USED TO DETERMINE HAZARD SEVERITY6	
Table 2: REGION 3 emPower DATA6	
REGION 3 SOCIAL VULNERABILITY DATA7	
Figure 1: Region 3 Alliance SVI Vulnerability Levels8	
HAZARD RANKING	
Table 3: Prioritized Healthcare Hazards for Region 3	
USE OF HEALTHCARE HVA DATA9	
DISTRIBTION OF REGION 3 HEALTHCARE HVA RESULTS10	
LIST of RESOURCES	
Attachment 1: Region 3 Alliance emPower Data10	
Attachment 2: Region 3 Alliance SVI data10	

REGION 3 HEALTHCARE COALITION ALLIANCE

2022 HEALTHCARE HAZARD VULNERABILITY ASSESSMENT

INTRODUCTION

The Region 3 Healthcare Coalition Alliance is made up of three existing Healthcare Coalitions: Northeast Florida Healthcare Coalition (NEFLHCC), North Central Florida Health Care Coalition (NCFHCC) and Coalition for Health and Medical Preparedness (CHAMP). The 18 counties served by the Alliance include: Alachua, Baker, Bradford, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Lafayette, Levy, Marion, Nassau, Putnam, St. Johns, Suwannee, and Union Counties. Planning for response and recovery for this 12,000 square mile geographic area can be challenging as it includes immense diversity from rural to urban areas and includes both coastal and inland counties.

BACKGROUND

Each Coalition developed a Hazard Identification and Risk Assessment (HIRA) as a contract deliverable for Fiscal Year 2013-2014 and expanded into a more comprehensive assessment for 2014-2015. These early HIRA reports used data from each County Comprehensive Emergency Management Plans, CEMP, and the Florida Public Health Risk Assessment Tool, FPHRAT, presented by each Coalition to create the first unified assessment of hazard risk, vulnerability, capabilities, resources, and gaps as they impact and relate to the healthcare system in each sub-region. The 2014-2015 HIRA described the methodology used for the assessment, which served as the basis for the 2015-2016 Community Hazard Vulnerability Assessment (CVA).

With the creation of the Region 3 Healthcare Coalition Alliance, and as a contract deliverable for 2017-18, the Alliance developed this Region 3 Healthcare Hazard Vulnerability Assessment. The Alliance created a team of emergency management, public health and planning subject matter experts (SME) to combine and evaluate the regional data to create the 2018 Region 3 Healthcare Hazard Vulnerability Assessment (HVA). Data was updated in 2019, but there were no significant changes requiring changes to the overall strategies and outcomes of the HVA. The 2020-21 response to COVID-19 is used to update and validate the current HVA.

PURPOSE

The Region 3 Healthcare Hazard Vulnerability Assessment is used to identify hazards that will have the highest impact on the regional healthcare system. This assessment of hazards and vulnerabilities to the healthcare system will be used to further develop an assessment of risk and gaps in the response capabilities of the regional healthcare system.

PLAN DEVELOPMENT

The Region 3 Alliance staff works with subject matter experts and the state Healthcare Coalition Working Groups to develop the basic planning template. The Healthcare Hazard Vulnerability Assessment and all supplemental, supporting documents are presented to all healthcare coalition members during a scheduled Board meeting. The draft plan is then emailed to every member and posted on the Alliance website. Members are asked to provide review and input. Comments and feedback from members are analyzed and included in the final planning document presented to each Board for annual approval. This Healthcare Hazard Vulnerability Assessment is considered a "living document," in that it is subject to an annual review and revision based upon recommendations following any type of test of the plan or change in State or Federal guidelines.

The final plan is provided to all Board members for approval annually at the June meeting. A copy of the approved plan is posted on the Coalition Alliance website (<u>www.FLRegion3HCC.org</u>) for use by all Coalition members.

METHODS and PROCESS

The SME team met to review various HVA tools and determined the Regional Hazard Vulnerability Assessment found on the ASPR Tracie website and developed by the South Carolina Department of Health and Environmental Control was the template that best meet the needs of Region 3.

Healthcare Hazard Vulnerability Assessment

Updated June 2022 Region 3 Healthcare Coalition Alliance

					Reg	jional HVA				
			Severity = Magnitude + Mitigation							
	EVENT	Probability	Magnitude (negative consequences of impact)		Mitigation		SEVERITY	RISK (Severity s		
			Human Impact	Property Impact	Business Impact	Regional Preparednes	Internal Resources	Regional Resources		Probability)
		Likelihood this will occur	Possibility of Patient Surge	Response Costs and Damages	Interruption of Services	Pre-planning	Type, Volume and Availability of Resources	Type, Volume and Availability of Resources	Relative Impact if this event occurs	Relative Threat
	Earthquake likely to cause structural damage									0%
Natural	Flood with potential for disruption/harm									0%
Events	Heat Wave									0%
	Hurricane/Tropical Storm									0%
	Ice Storm									0%
	Infectious Disease Pandemic									0%
	Large Wild Fire									0%
	Severe Thunderstorm									0%
	Tornado or Microburst									0%
	Winter Weather Event									0%
	Armed Individual/Active Shooter incident									0%
	Attack biological weapons									0%
	Attack with chemical weapons									0%
MCI & Man-	Incident General Injuries / Trauma (MCI)									0%
Mora Man- Made Events	Major HazMat Incident									0%
made Events	metariolo									0%
	Mental Health Type Incident									0%
	Nuclear Event									0%
	VBIED or IED									0%
	Cyber Terrorism									0%
	Fuel Shortage									0%
	Massive Transportation Disruption / Failure									0%
Facility &	Regional Communications Disruption									0%
Technologica	Regional Electrical Failure (i.e. blackout)									0%
I Events	Regional Natural Gas Disruption									0%
	Regional Sewer / Water Treatment Failure									0%
	Regional Water Disruption / Interruption									0%

The SME Team then reviewed previous Coalition CVA documents; county Comprehensive Emergency Management Plans (CEMP) and healthcare facility HVA documents to determine a baseline of the primary natural, manmade and technological hazards events impacting the healthcare system for these north Florida counties.

Using the de-identified data from emPOWER **Attachment 1 emPower data** and the Social Vulnerability Index (SVI) **Attachment 2 SVI data** each identified regional hazard was then scored on Probability and Severity to determine the Level of Risk Region 3 faces as a result of each event type occurring in the Region.

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Probability = Likelihood it will occur
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Severity = Magnitude + Mitigation
Magnitude (Human + Property + Business Impacts)
Magnitude (Regional Preparedness + Internal and Regional Resources)
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After scoring all hazards across all categories, the **Risk** or **Relative Threat** to Region 3 was determined as a percentage. The hazards were then ordered from highest to lowest and grouped into Major, Moderate and Minor severity levels.

The hazard severity levels were presented to each Coalition Board for feedback and approval in its respective April 2018 Board meeting. Each Board approved the process and agreed with the results.

Each succeeding annual update consists of a review of the previous year's data (updating where appropriate), and integration of relevant new information as it becomes available. The annual Region 3 Healthcare HVA update also considers lessons learned and corrective actions identified through plan updates and revisions, exercises, and real-world events.

HAZARD RISK AND VULNERABILITY - 2022 REVIEW

Review of hazard risk and vulnerability data from the multiple data sources identified the following hazards for healthcare in Region 3. These were the hazards used to complete the Regional HVA Tool.

Region 3 Healthcare Hazards				
Cause	Hazard			
	Flooding with potential for disruption / harm			
	Temperature Extremes			
Natural Hazards	Hurricane / Tropical Storm (including storm surge)			
(Acts of nature)	Pandemic			
	Infectious Disease			
	Multi-Jurisdictional Wild Fire			
	Tornado or Microburst			
	Winter Weather Event			
	Armed Individual/Active Shooter incident			
Human Caused (Intentional Actions)	MCI Incident General Injuries			
	MCI involving chemical, biological or radiological materials			
	MCI involving conventional weapons			
	Cyber Terrorism			

Healthcare Hazard Vulnerability Assessment

Updated June 2022 Region 3 Healthcare Coalition Alliance

Technological (failure of systems)	Multiple Facility Evacuations
	Widespread Supply Chain Interruption
	Widespread Transportation Disruption / Failure
	Regional Fuel Shortage(s)
	Regional Electrical Failure (i.e. blackout)
	Regional Communications Disruption
	Regional Sewer / Water Treatment Failure
	Regional Water Disruption / Interruption

DATA USED TO DETERMINE HAZARD SEVERITY

Historical data found in each county CEMP and facility HVA provided the information for probability. The use of emPower and SVI data assisted in determining the severity scores for each hazard.

County	Medicare Beneficiaries	Electric Dependent Beneficiaries
Alachua	50441	1849
Baker	5044	331
Bradford	5257	355
Clay	44842	2202
Columbia	16732	870
Dixie	4209	283
Duval	172434	7983
Flagler	40298	1372
Gilchrist	4120	221
Hamilton	3259	160
Lafayette	1122	77
Levy	11737	583
Marion	115627	4980
Nassau	24729	1098
Putnam	19425	1092
St. Johns	65752	2168
Suwannee	11537	608
Union	2325	170
Totals	598890	26402

Table 2: REGION 3 emPower DATA

Data from https://empowermap.hhs.gov/ May 2022

Data updated, as of May 2022. No major changes requiring changes to the overall strategies and outcomes of the HVA.

REGION 3 SOCIAL VULNERABILITY DATA

The Social Vulnerability Index (SVI) uses U.S. Census data to determine the social vulnerability of every Census tract. Census tracts are subdivisions of counties for which the Census collects statistical data. The SVI ranks each tract on 14 social factors, including poverty, lack of vehicle access, and crowded housing, and groups them into four related themes. Each tract receives a separate ranking for each of the four themes, as well as an overall ranking. The map below provides an overall view of the social vulnerability rankings in Region 3. The most current maps available from the CDC are 2018. <u>https://svi.cdc.gov/prepared-county-maps.html</u> Individual County maps are included in **Attachment 2**.

Region 3 Healthcare Coalition Alliance

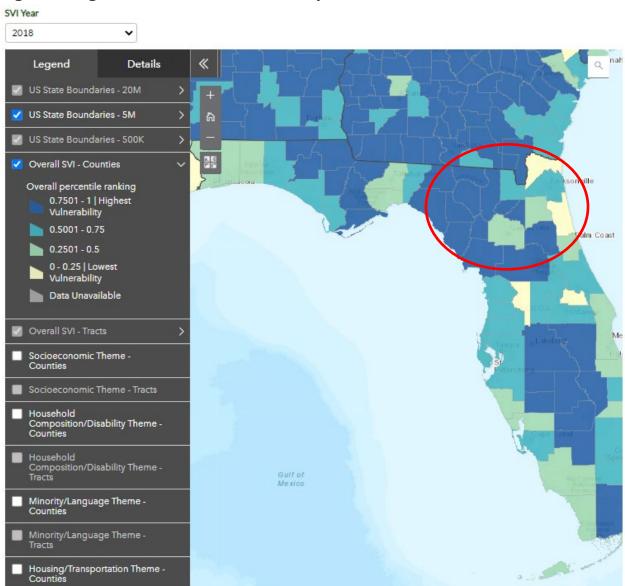


Figure 1: Region 3 Alliance SVI Vulnerability Levels

Data from 2018 https://svi.cdc.gov/map.html Updated June 2021

HAZARD RANKING

Results of the probability and severity scoring using the Regional HVA tool determined the following priority levels of hazards.

Region 3 Healthcare Coalition Alliance

Table 3: Prioritized	Healthcare	Hazards fo	r Region 3
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	Region 3 Healthcare Hazards
Level of Risk	Hazard
	Hurricane / Tropical Storm (including storm surge)
	Regional Electrical Failure (i.e. blackout)
Major	Flooding with potential for disruption / harm
inajoi	Cyber Terrorism
	Infectious Disease
	MCI Incident General Injuries
	Regional Communications Disruption
	Multi-Jurisdictional Wild Fire
	Widespread Supply Chain Interruption
	Armed Individual/Active Shooter incident (Large Scale)
Moderate	Tornado or Microburst
	Pandemic
	Multiple Facility Evacuations
	Regional Sewer / Water Treatment Failure
	Regional Water Disruption / Interruption
	Widespread Transportation Disruption / Failure
Minor	Regional Fuel Shortage(s)
	Temperature Extremes
	MCI involving chemical, biological or radiological materials
	MCI involving conventional weapons
	Winter Weather Event

USE OF HEALTHCARE HVA DATA

Future activities planned for this analysis include identifying the capabilities of the regional healthcare system to respond to the identified impacts found in the HVA. Evaluation of these capabilities will better define the gaps across the region, which will better inform the future planning, training and exercises and special funding projects for the Region 3 Healthcare Coalition Alliance.

The annual work plan is determined from the grant requirements, as well as the gaps found using this HVA data. Future training and exercise priorities are based in the results of the HVA. A majority of the HCC budget provides training, exercises and equipment projects for members to fill facility and regional gaps. These activities are reflected in the annual workplan. The goal of the HCC is to help develop a more resilient healthcare

system, which includes activities to prepare for the hazards that have the greatest impact on the regional healthcare system.

DISTRIBTION OF REGION 3 HEALTHCARE HVA RESULTS

This Region 3 Healthcare Hazard Vulnerability Assessment is combined with the Healthcare Risk Assessment (JRA) and provided to all Coalition Board members. Coalition membership includes Emergency Management, EMS and Public Health officials and other organizations involved in the healthcare delivery system.

Copies of these reports are be posted on each Coalition's website for use by Coalition members. Members are encouraged to use this data to develop projects that will improve the capabilities of the regional healthcare response.

LIST of RESOURCES

- Health and Human Services emPower Map 2.0
- Agency for Toxic Substances and Disease Registry (ATSDR) Social Vulnerability Index
- Florida Department of Health, CHARTS, vulnerable populations profile reports
- DOH Public Health risk Assessment (PHRAT) for 11 counties in the region
- Comprehensive Emergency Management Plans for counties in the region
- County Mitigation Plans for counties in the region

Attachment 1: Region 3 Alliance emPower Data

Attachment 2: Region 3 Alliance SVI data

Geography	Beneficiaries	Electricity-Dependent Beneficiaries
Alachua	50441	1849
Baker	5044	331
Bradford	5257	355
Clay	44842	2202
Columbia	16732	870
Dixie	4209	283
Duval	172434	7983
Flagler	40298	1372
Gilchrist	4120	221
Hamilton	3259	160
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Levy	11737	583
Marion	115627	4980
Nassau	24729	1098
Putnam	19425	1092
St. Johns	65752	2168
Suwannee	11537	608
Union	2325	170
Alliance TOTAL	598890	26402

Data from <u>https://empowermap.hhs.gov/</u> May 2022



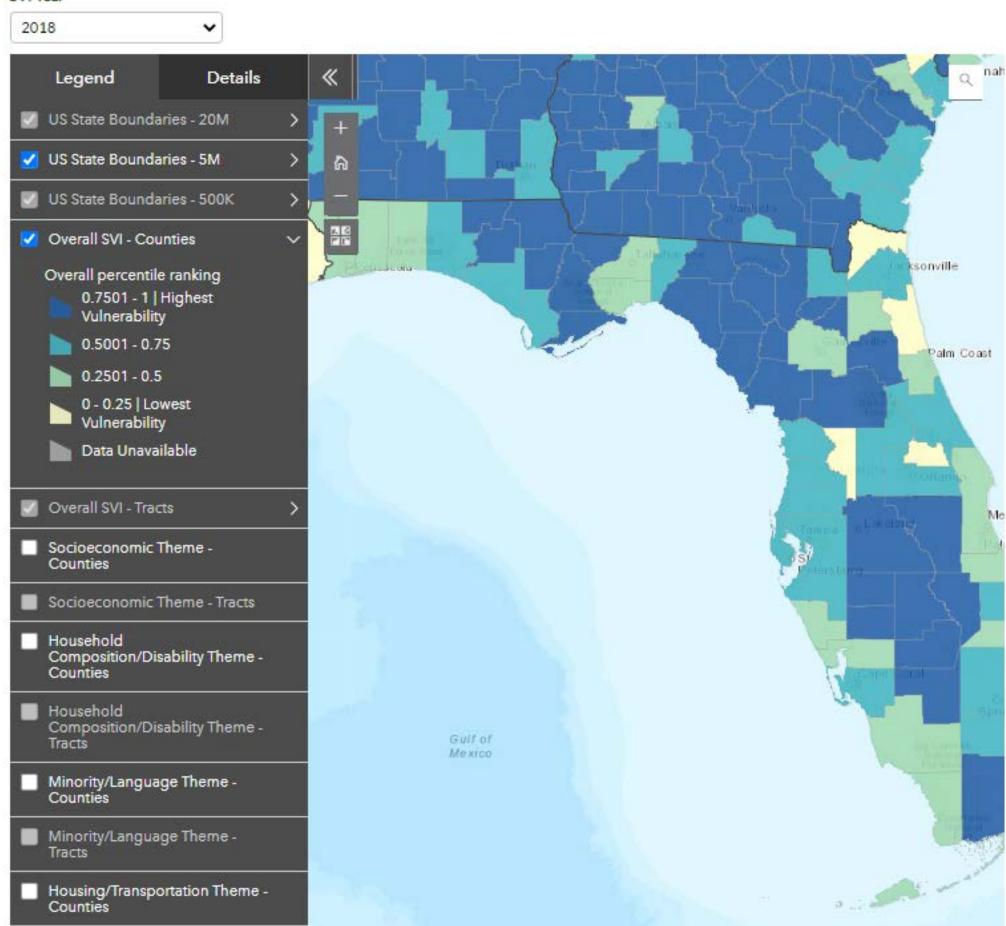
HHS emPOWER Map	OWNLOAD HISTORICAL DATASETS
	OWNEORD HISTORICAE DATASETS
INTERACTIVE MAP CROSS-JURISDICTIONAL TOTALS DATA INFORMATION	
Medicare Electricity-Dependent Populations by Geography	IEDICARE DATA TOTALS
The summarian experience of the second structure and second structure of experimental experime	DTAL BENEFICIARIES: 598,890 DTAL ELECTRICITY-DEPENDENT BENEFICIARIES: 26,402
Hover over or select attributes to display Medicare data for a state, or county(ies) or ZIP Code(s) within a state, and natural hazard data. Download selected Medicare data in the table below.	
Select a state Select a county Natural hazards (Optional) Map style (Optional) Florida V Union Select natural hazard Select Basemap RESET MAP	
SELECTED GEOGRAPHIES	
Alachua X) (Baker X) (Bradford X) (Clay X) (Columbia X) (Dixle X) (Duval X) (Flagler X) (Glichrist X) (Hamilton X) (Lafayette X) (Levy X) (Marion X) (Nassau X) (Putnam X) (Saint Johns X) (Suwannee X)	x Union x
tym Haren Panama by Orling Electricity-Dependent Scale 0 - 0 1 + 133	Patri Coast
134 - 237 238 - 396 397 - 1,276	Dationa Beach PortOrange Deltona Esri, HERE, Garmin, FAO, USGS, EPA, NPS

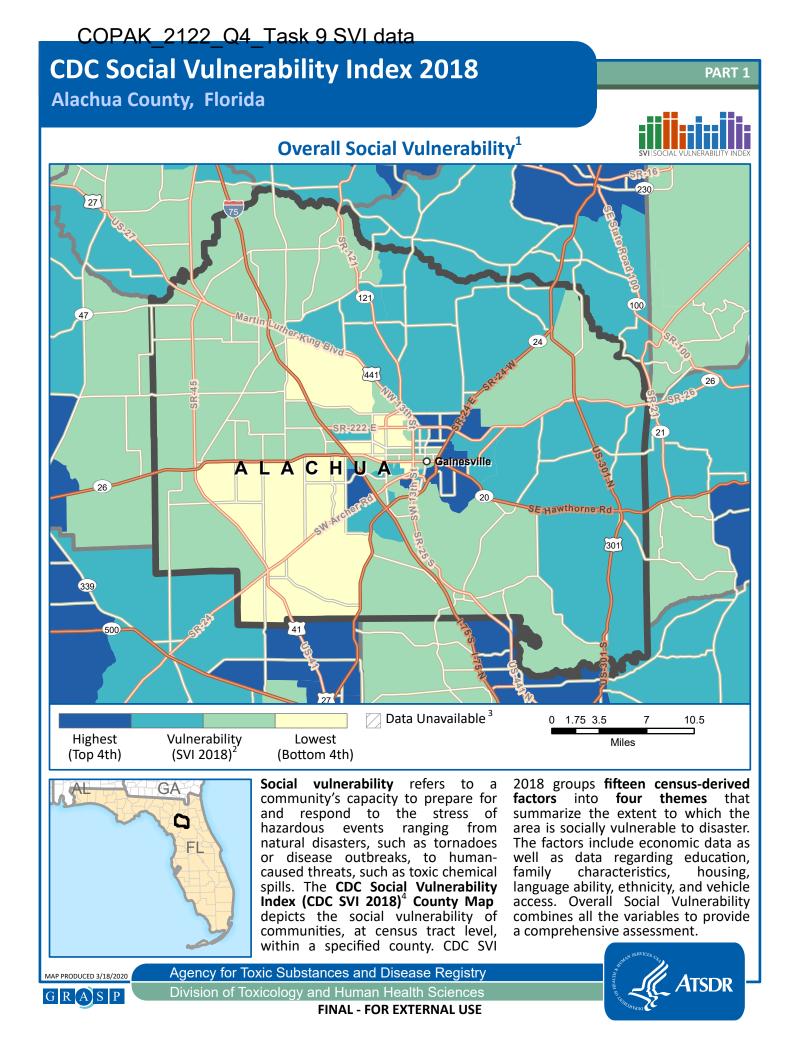
MEDICARE DATA TOTALS

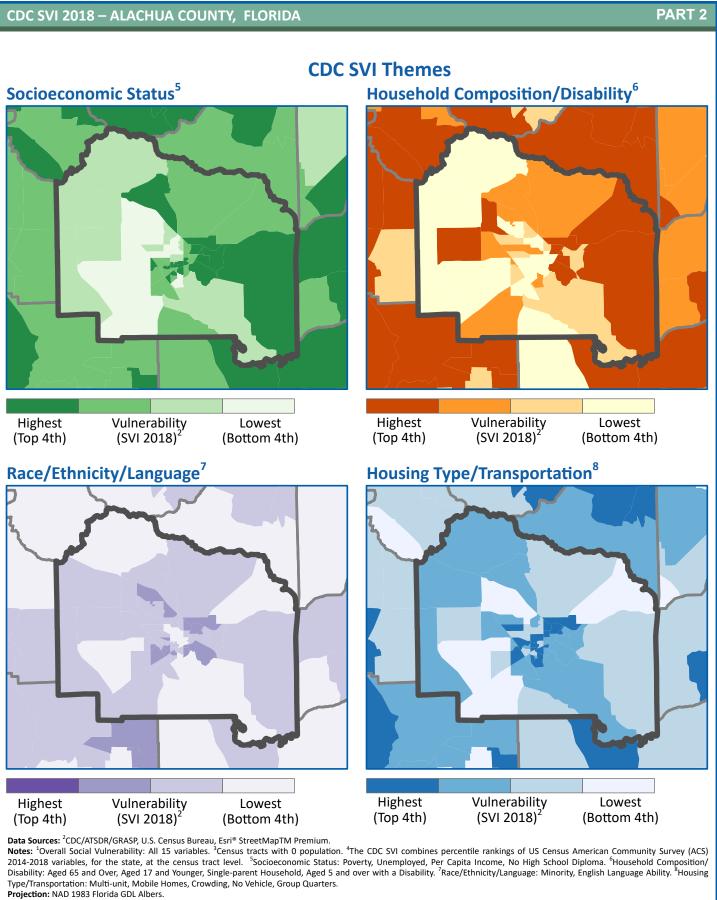
TOTAL BENEFICIARIES:	598,890
TOTAL ELECTRICITY-DEPENDENT BENEFICIARIES:	26,402

COPAK_2122_Q4_Task 9 SVI data

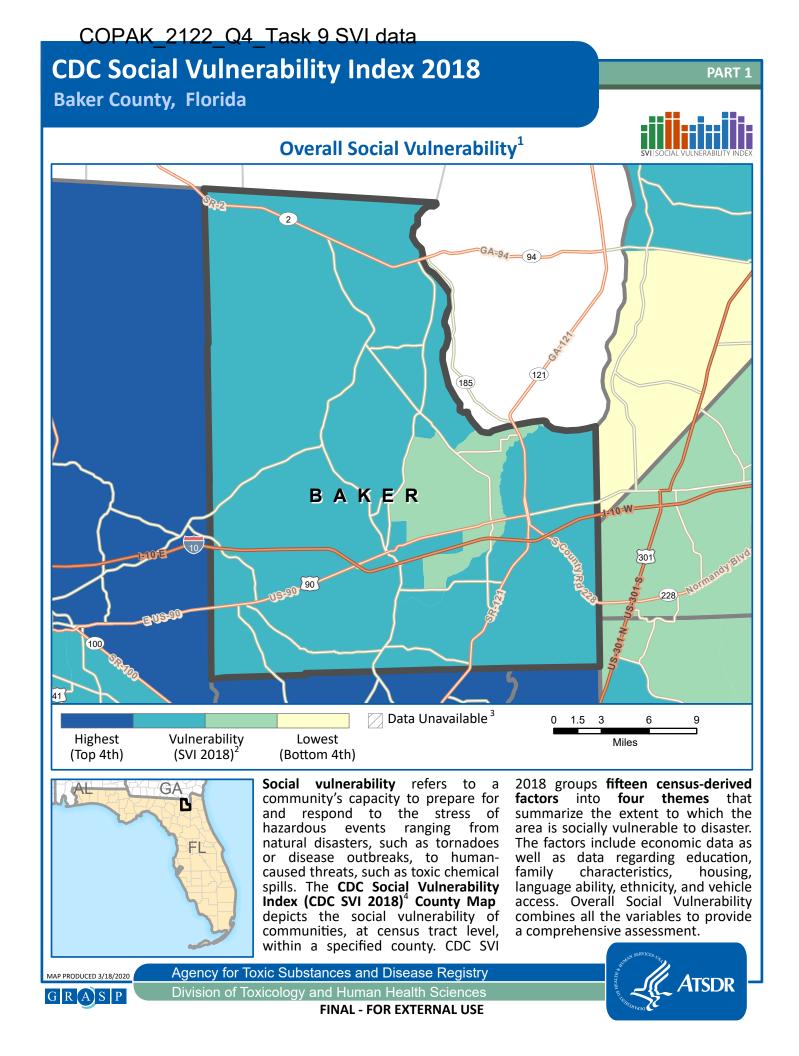
SVI Year

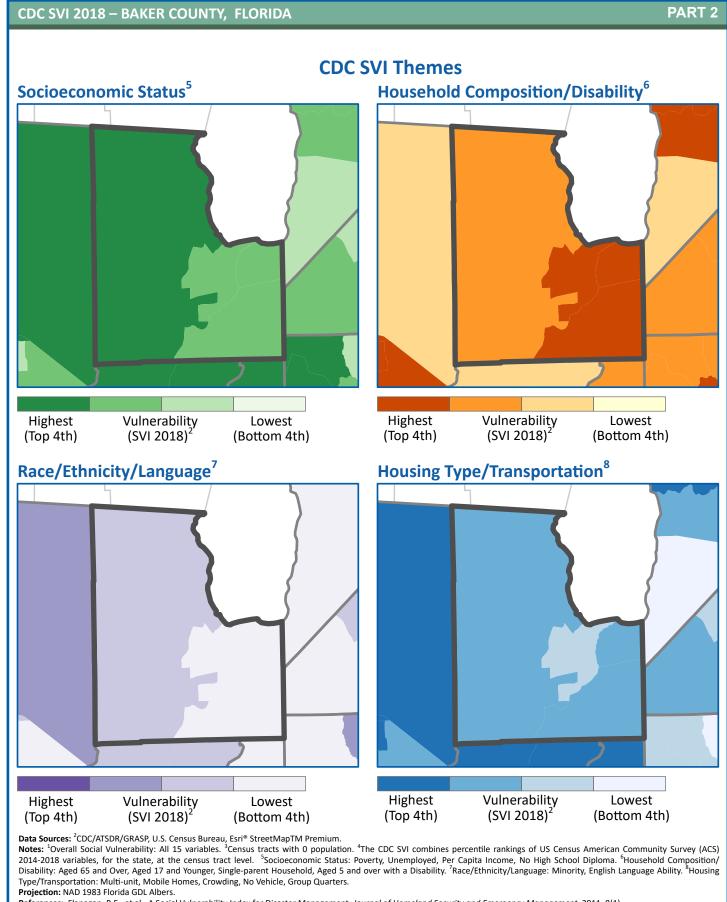




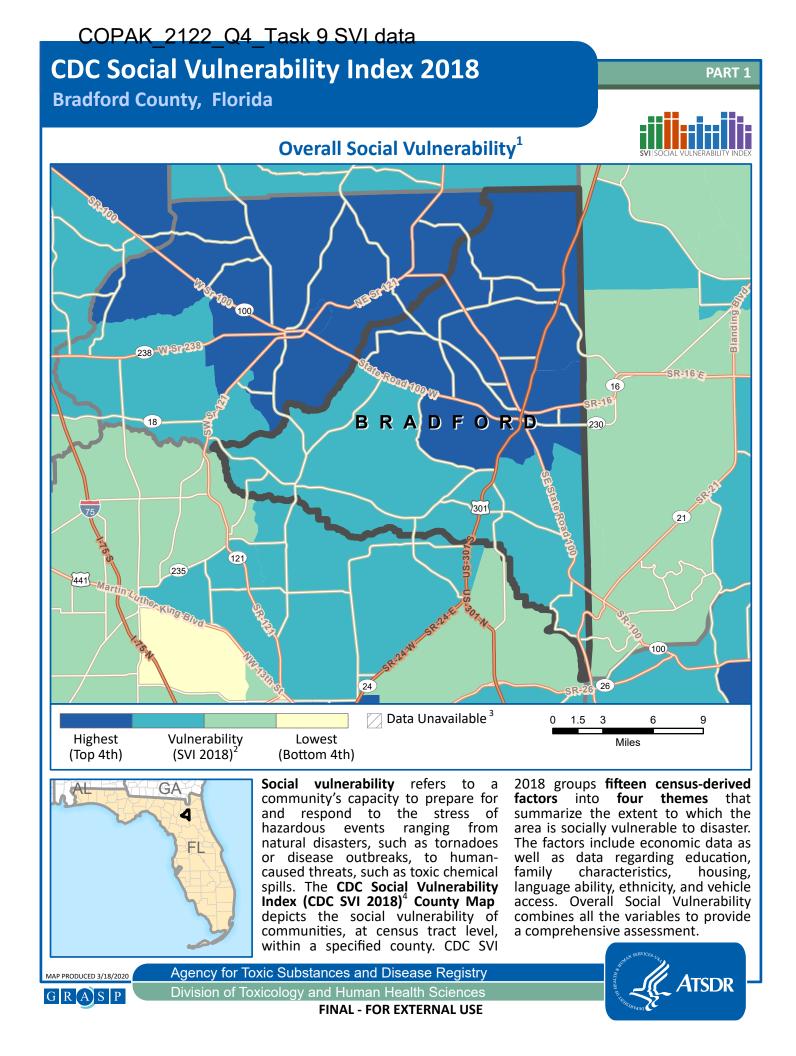


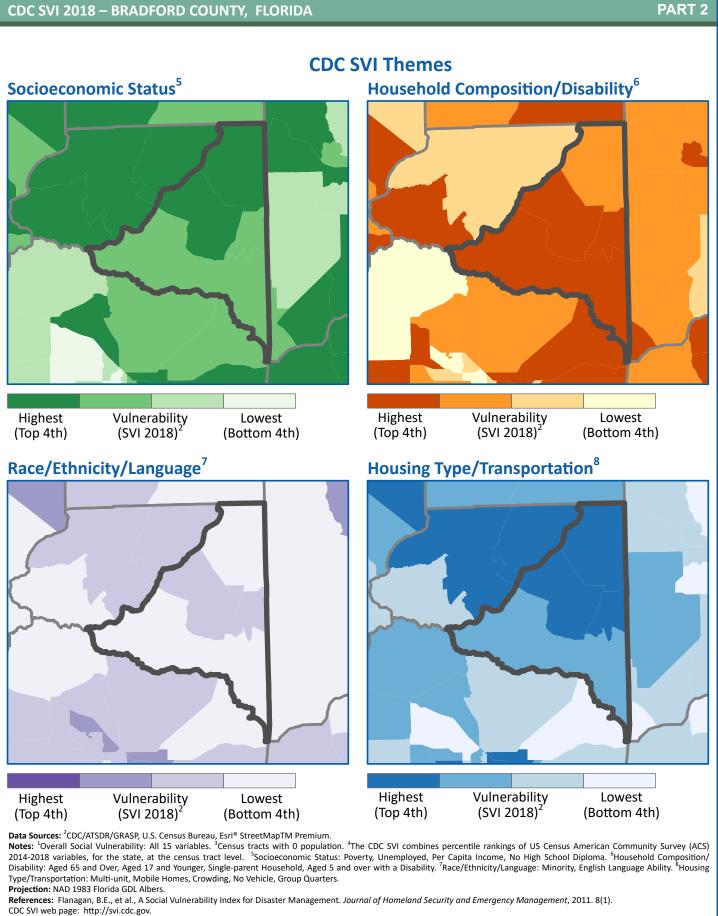
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. Journal of Homeland Security and Emergency Management, 2011. 8(1). CDC SVI web page: http://svi.cdc.gov.

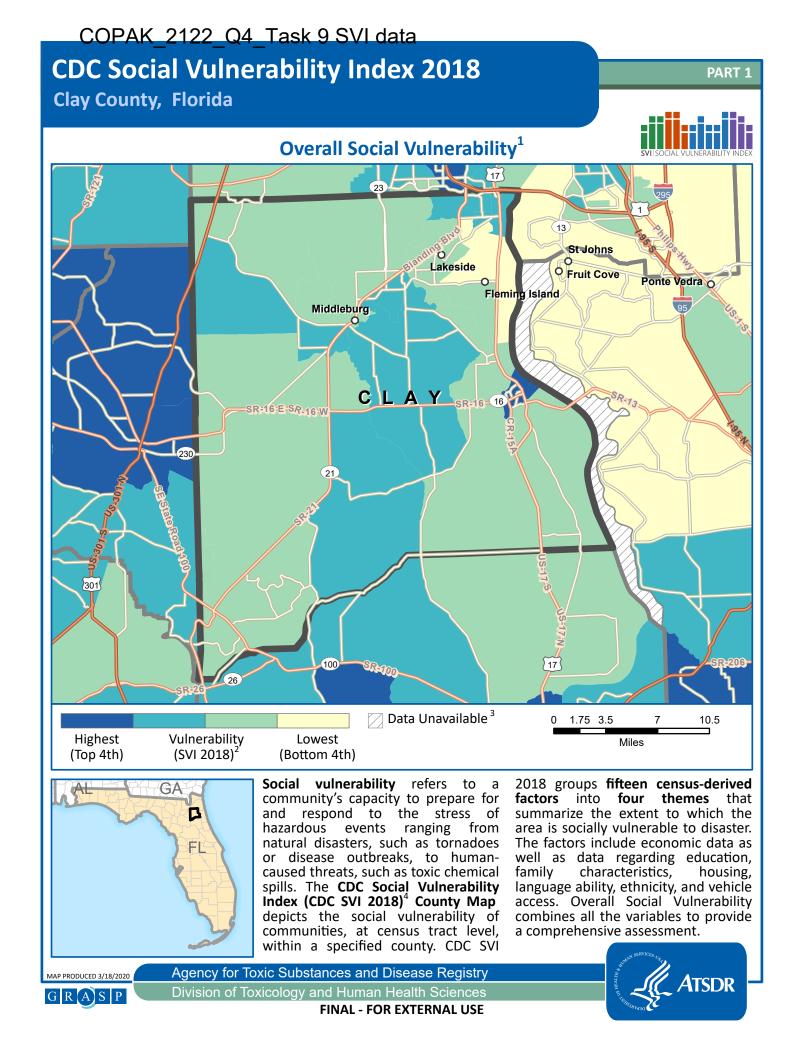


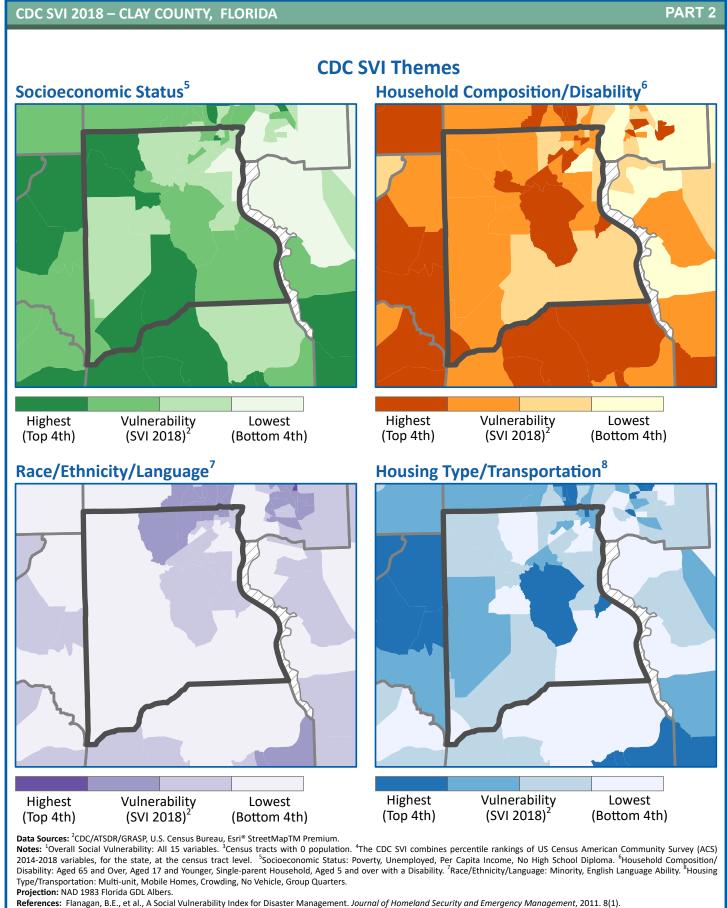


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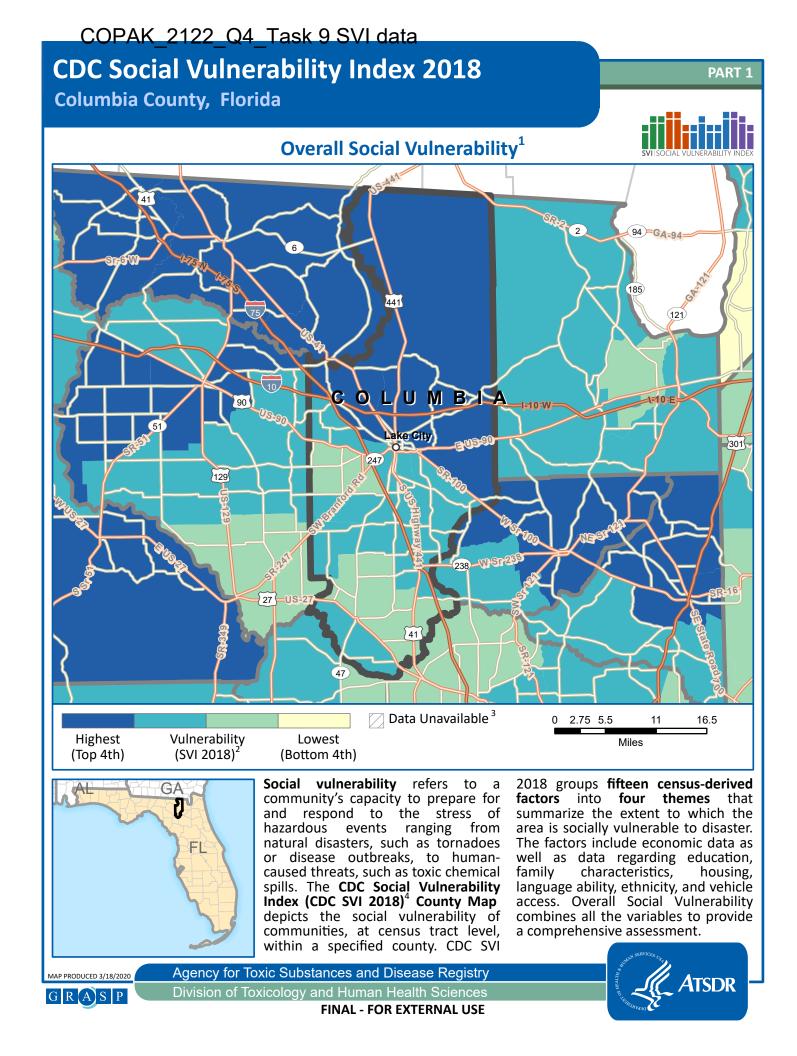


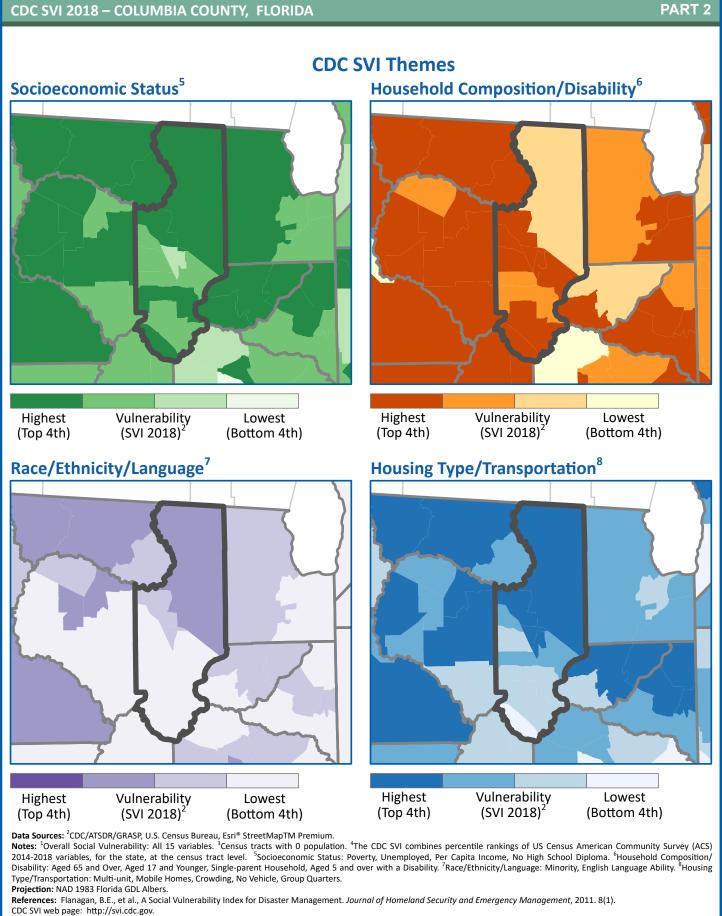


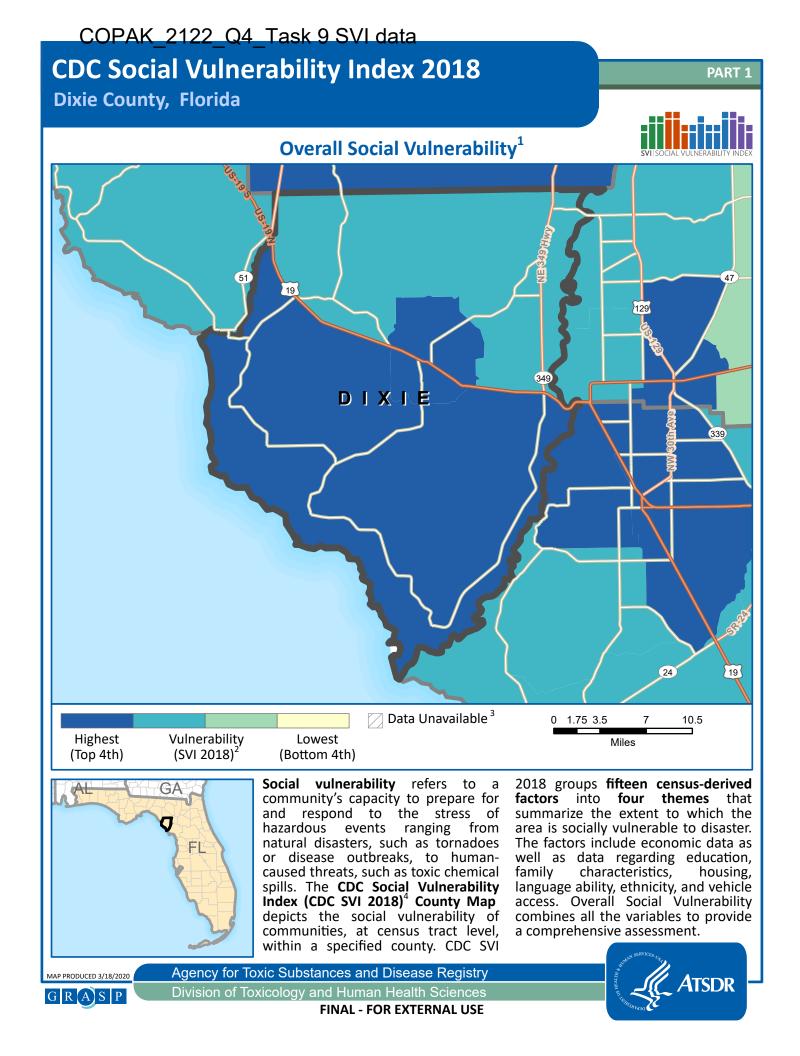


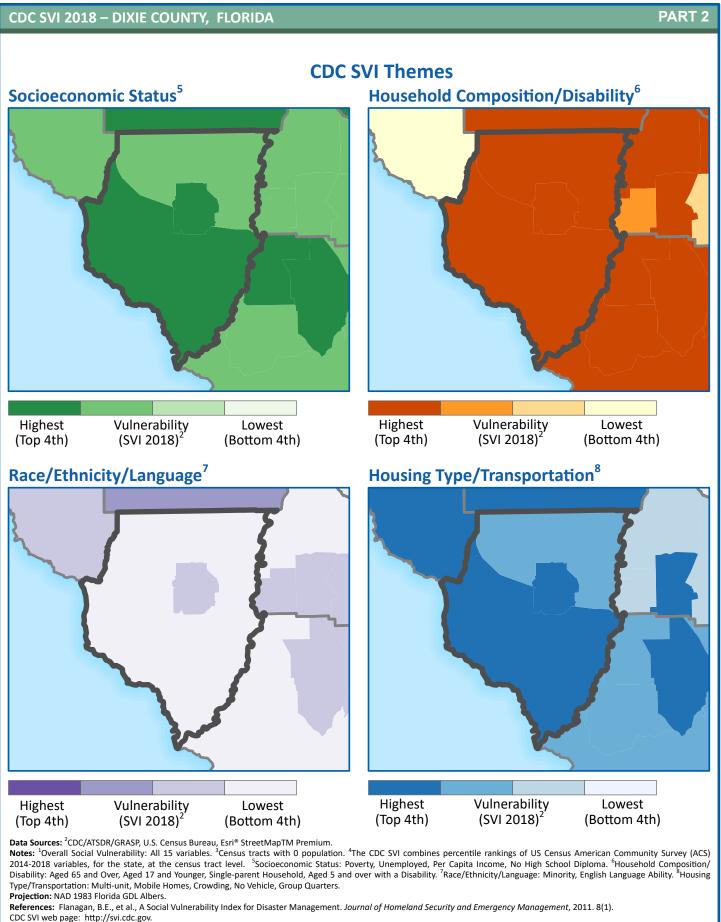


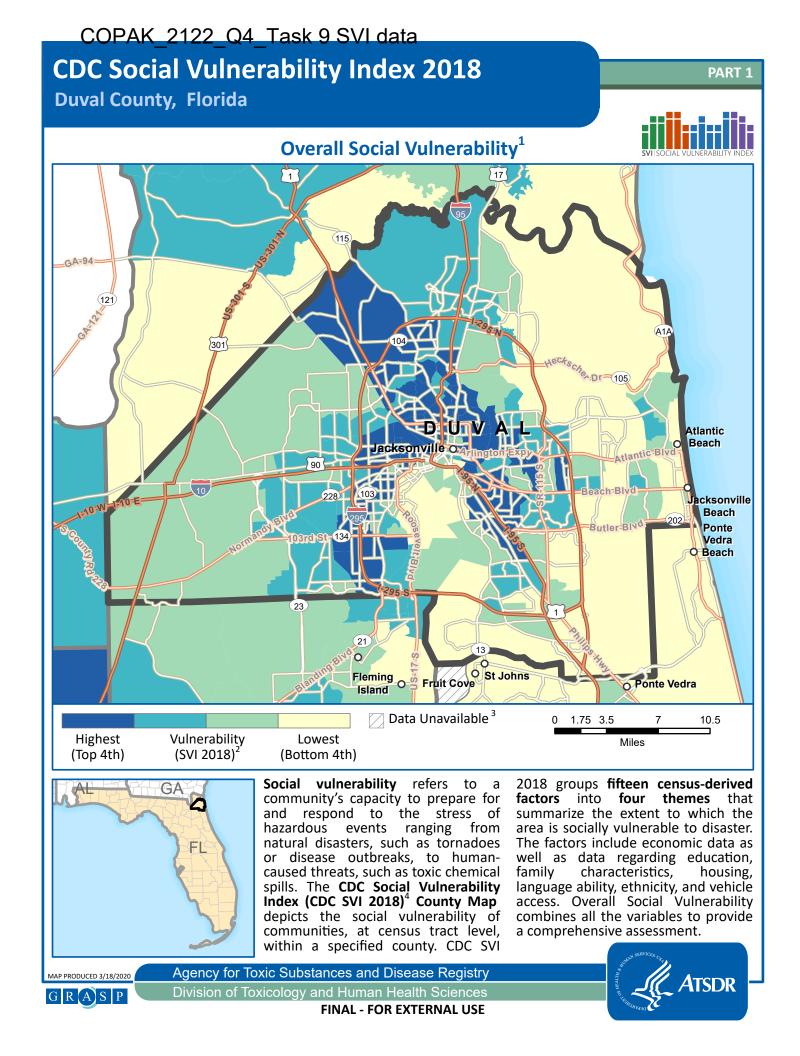
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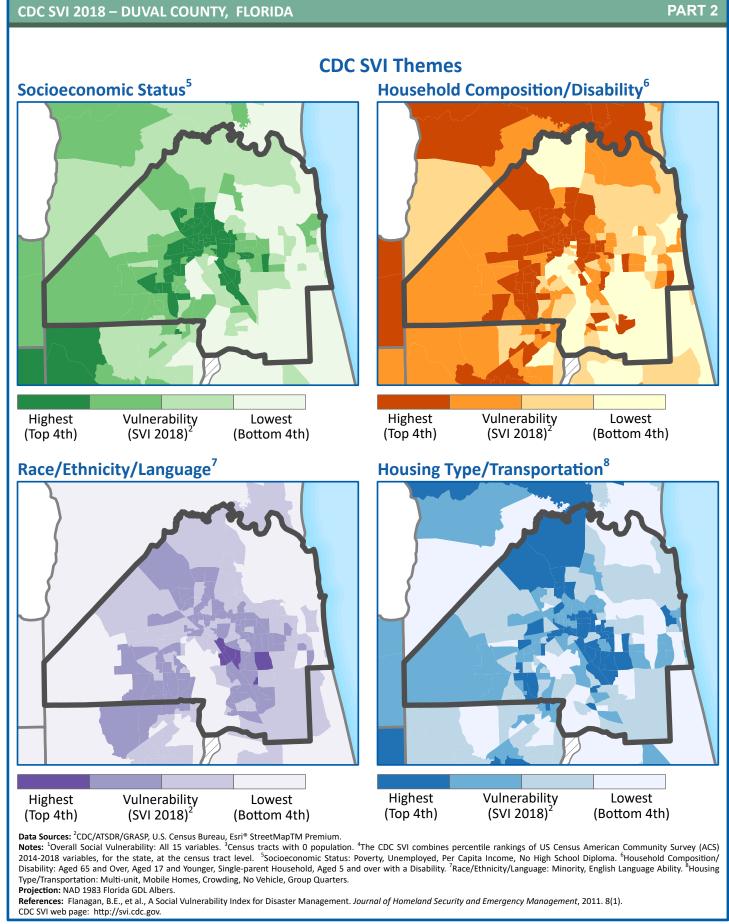


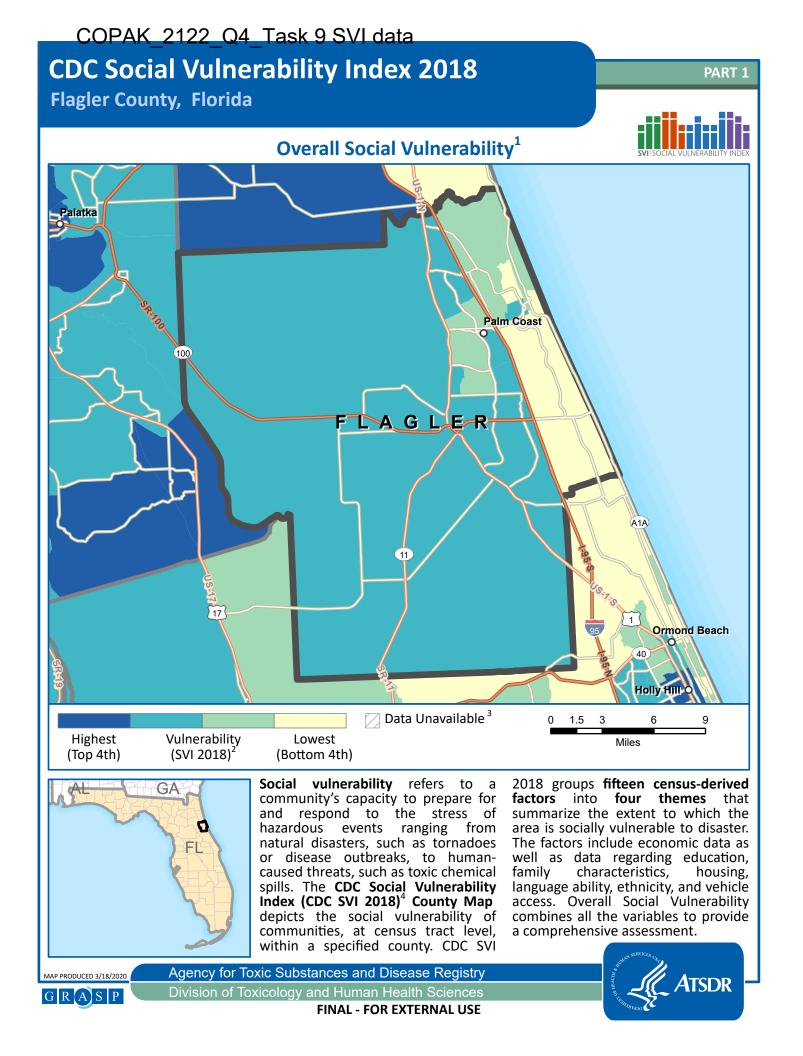


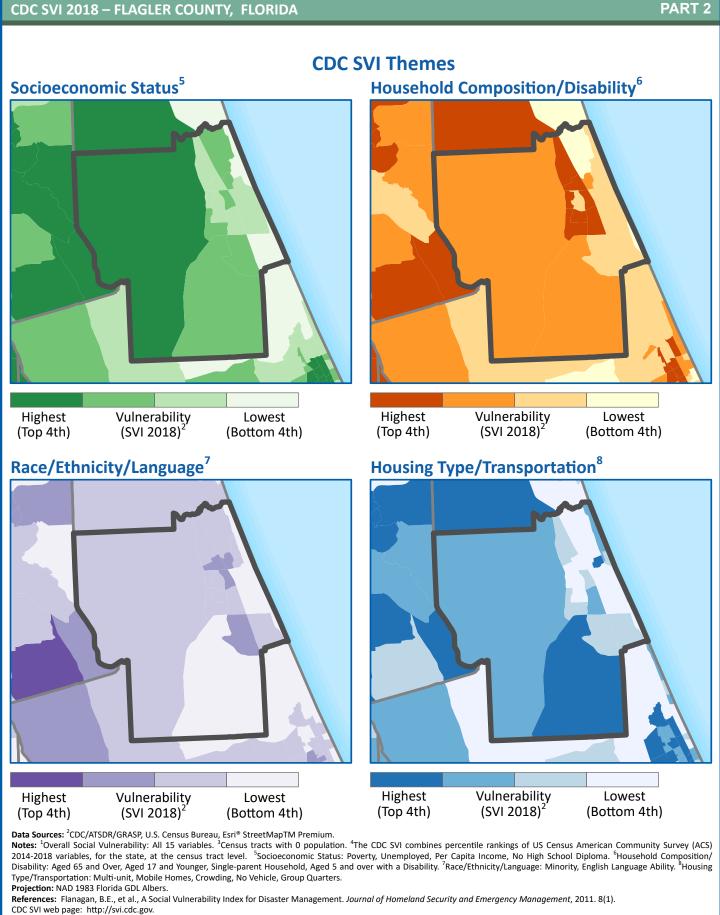


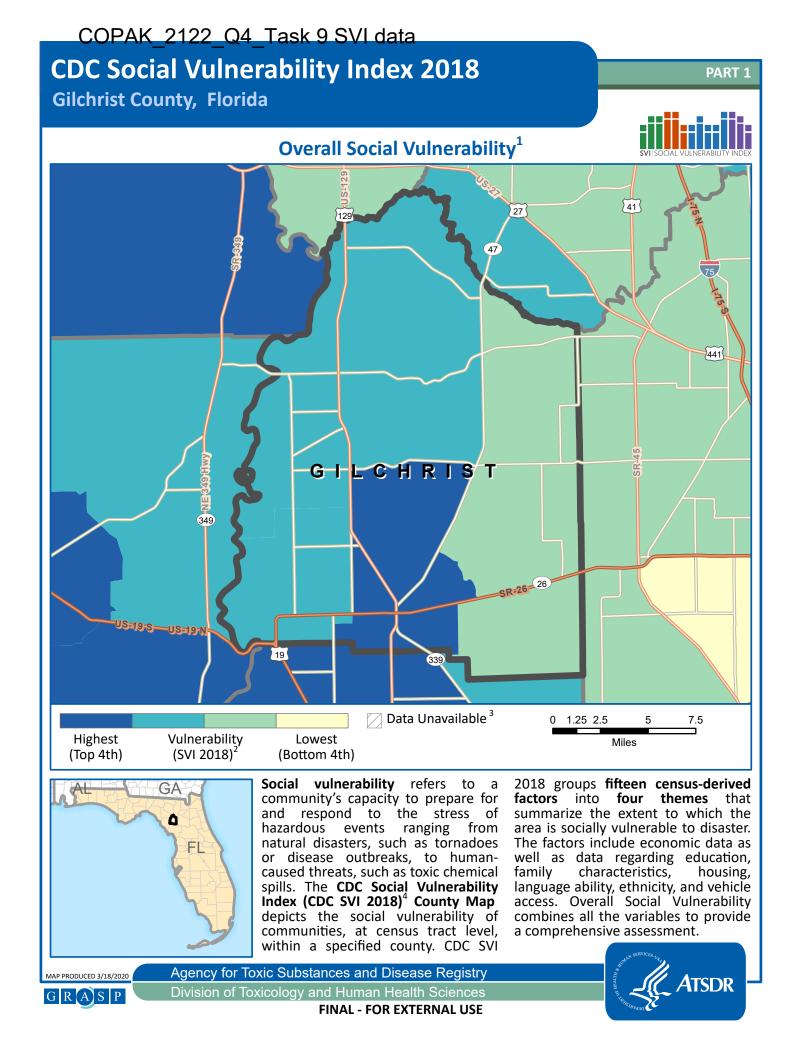


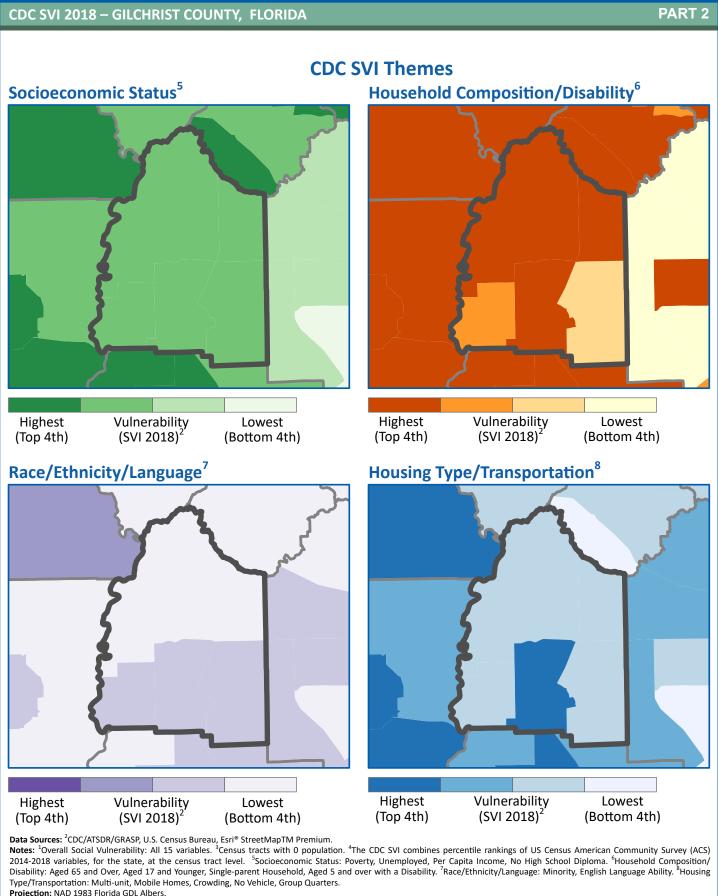




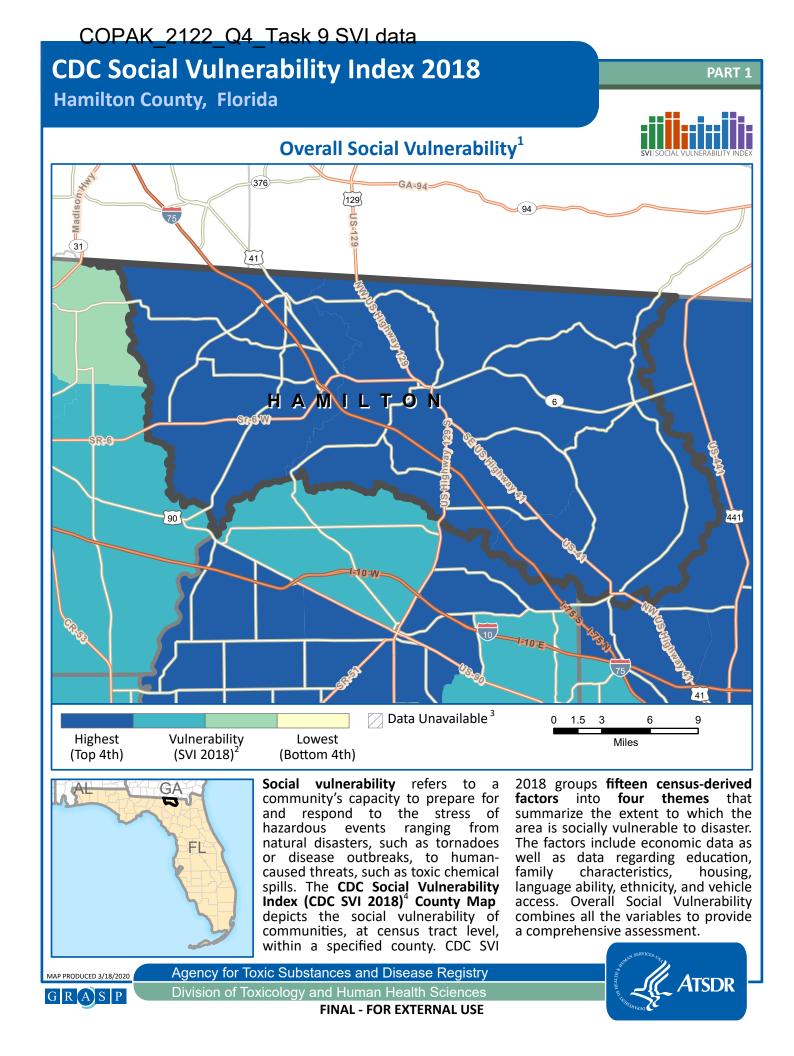


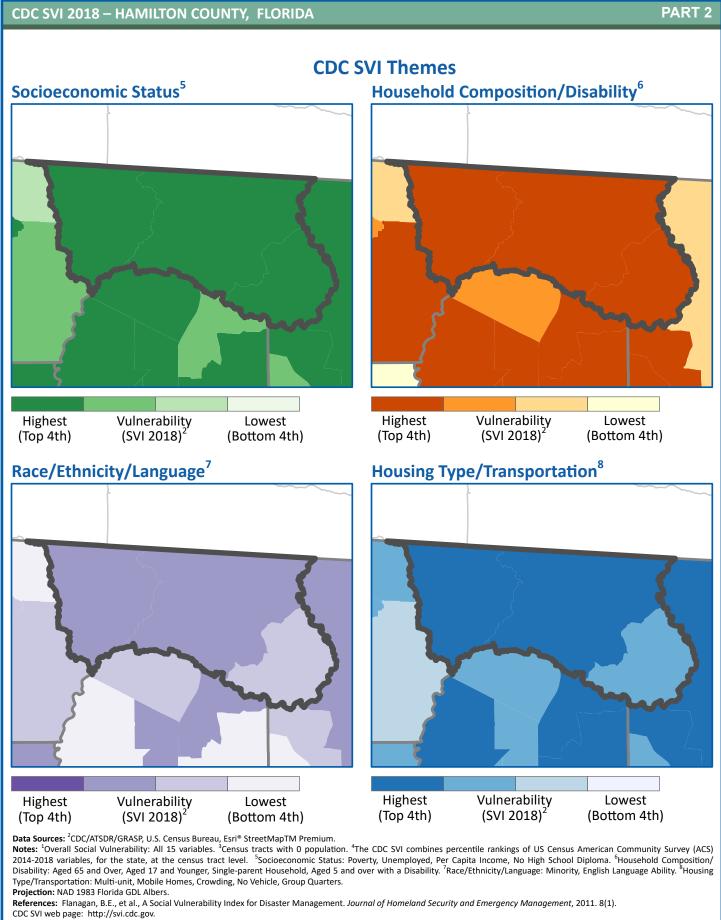


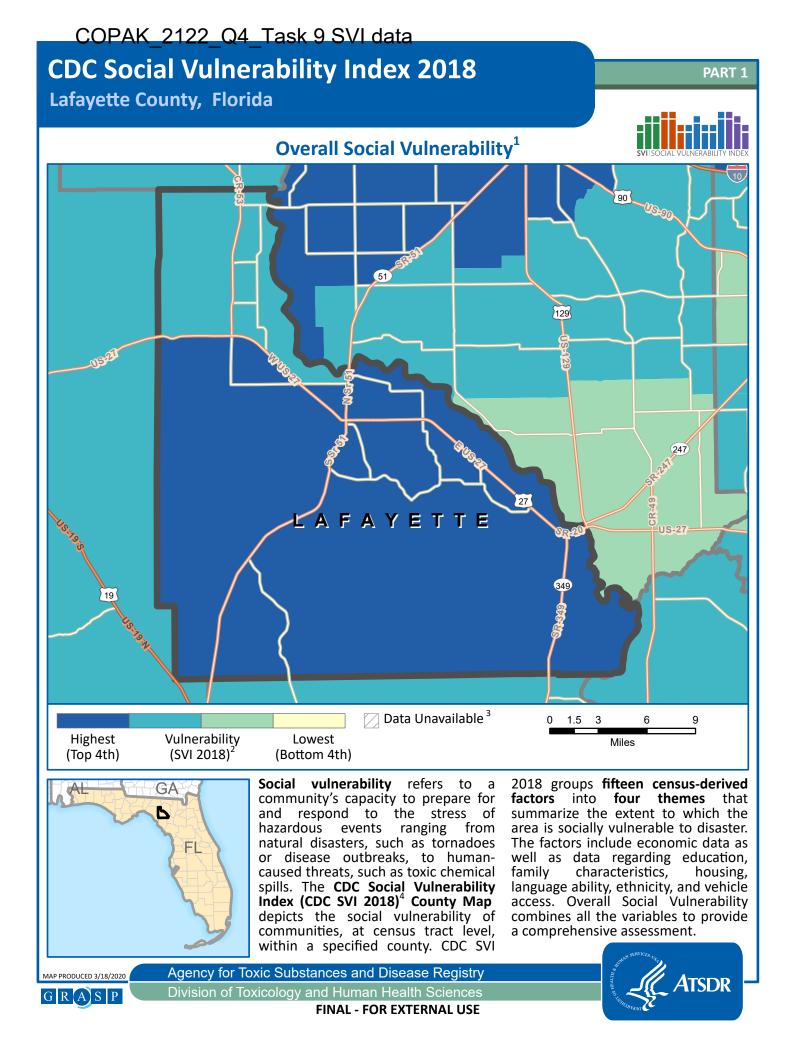


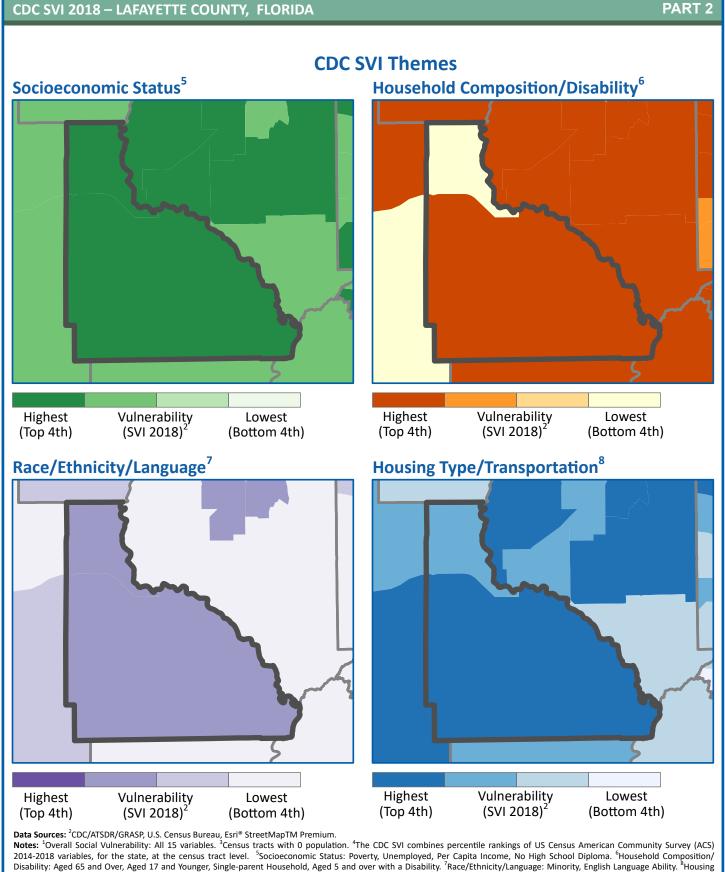


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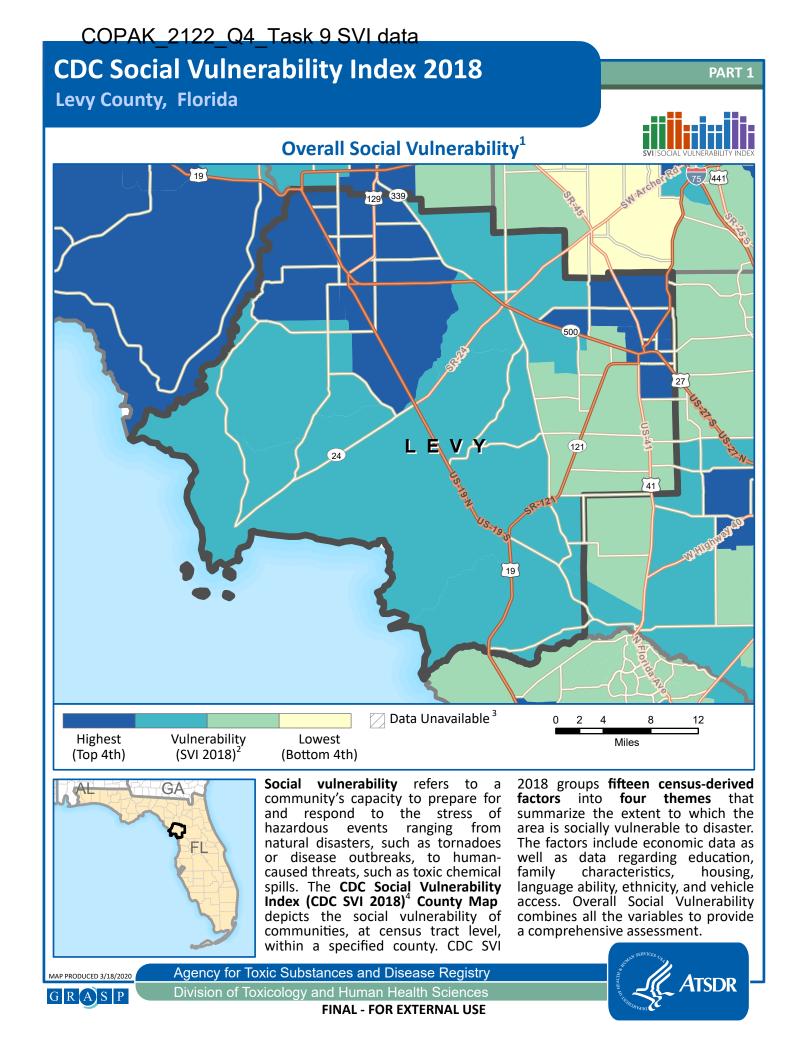


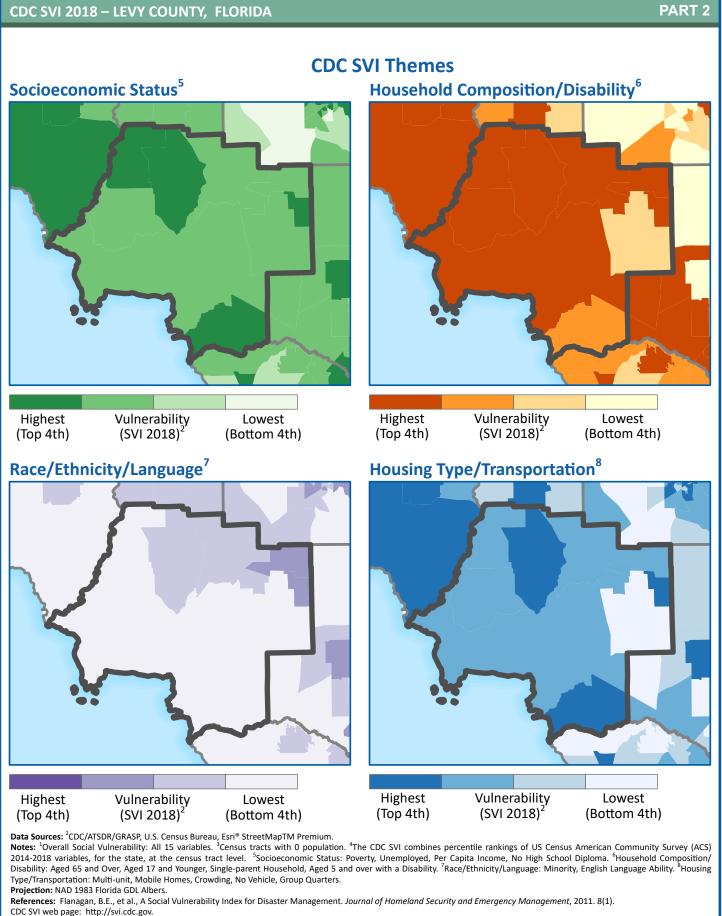


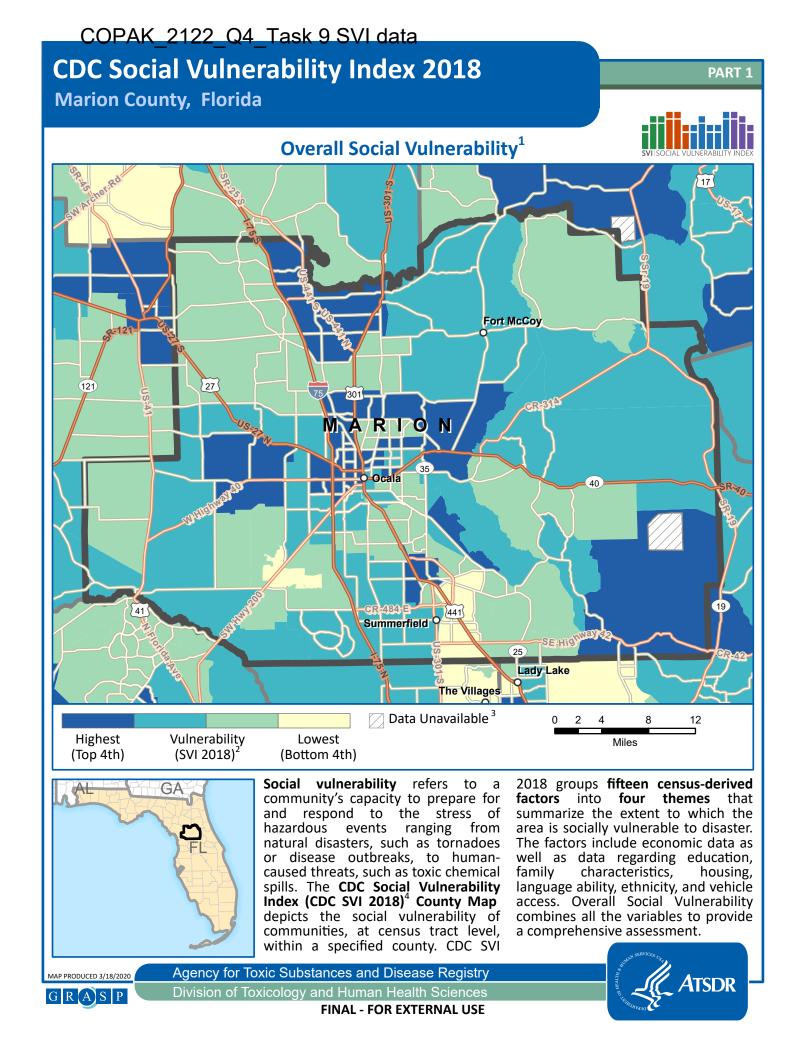


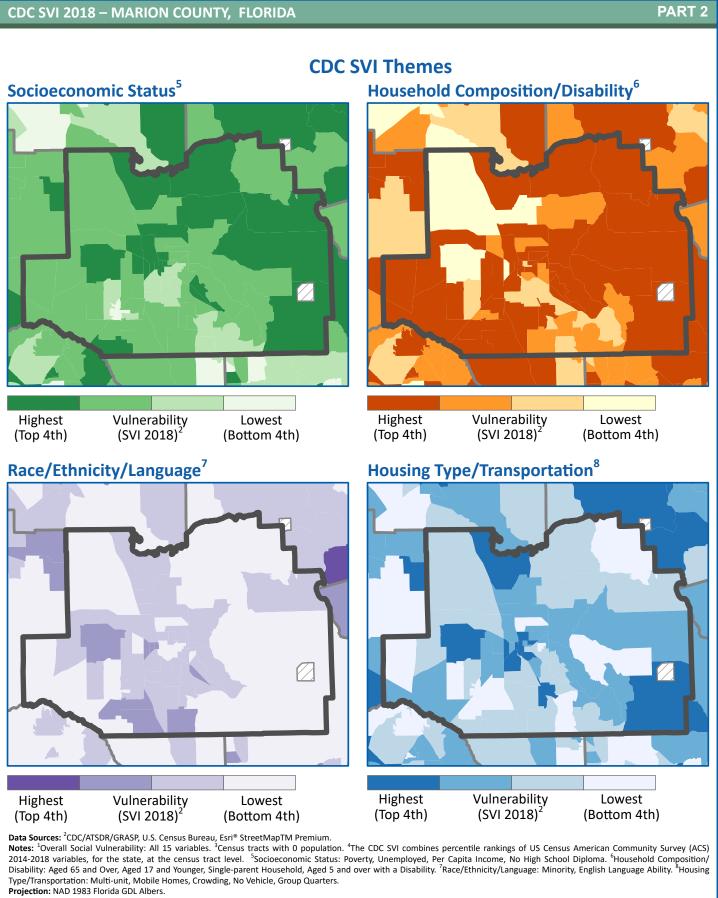
Type/Transportation: Multi-unit, Mobile Homes, Crowding, No Vehicle, Group Quarters Projection: NAD 1983 Florida GDL Albers. References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. Journal of Homeland Security and Emergency Management, 2011. 8(1).

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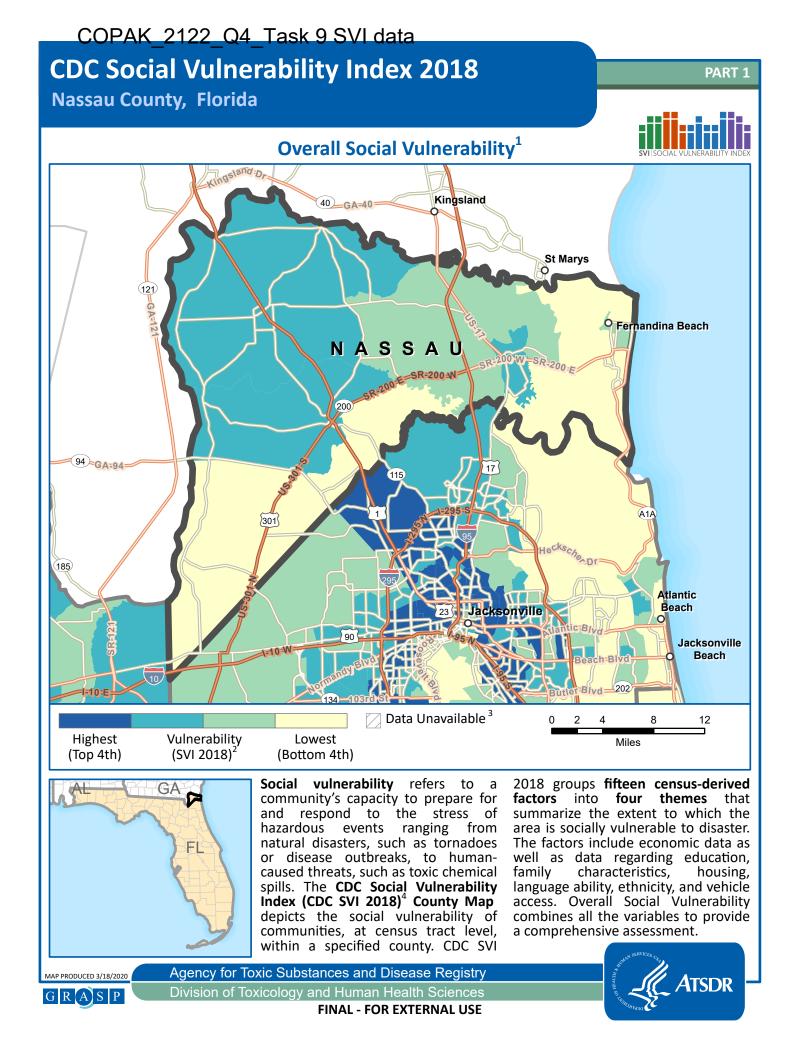


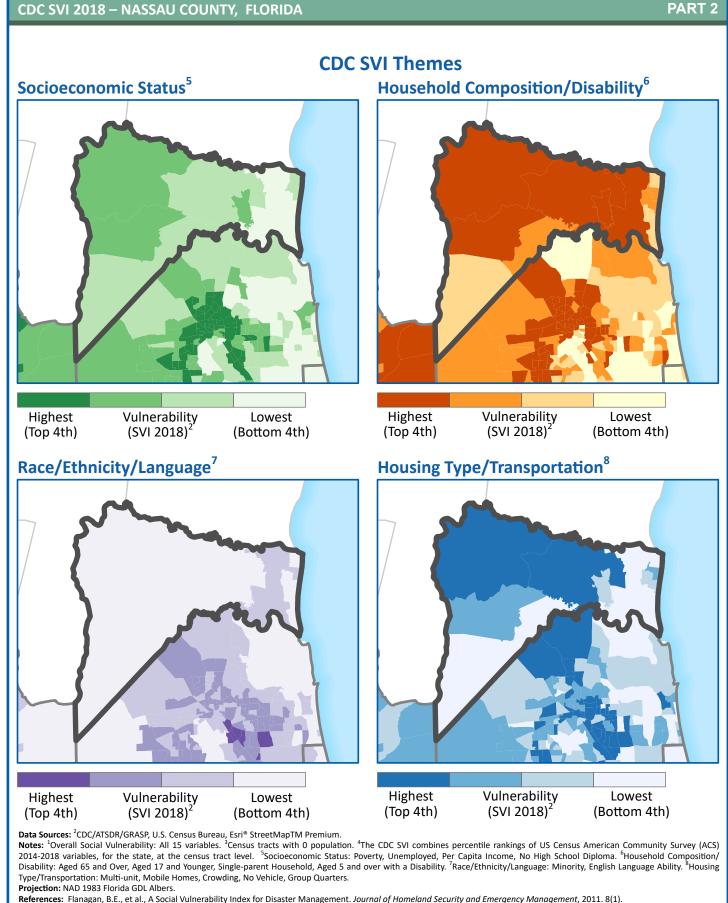




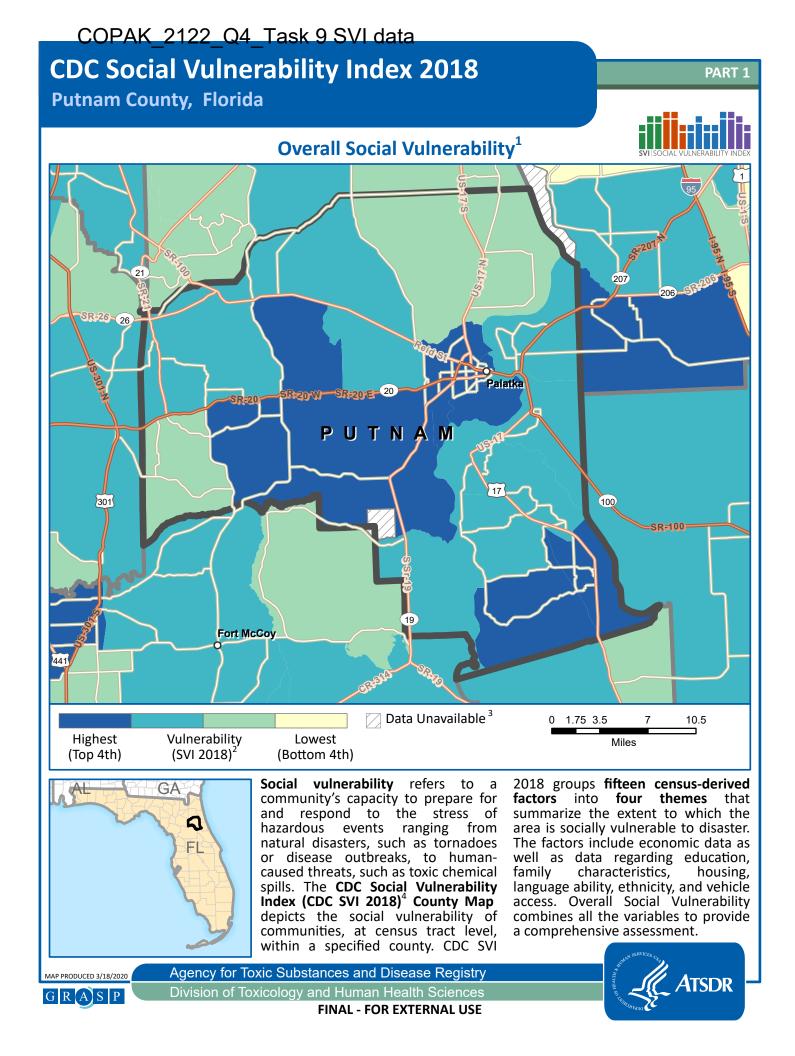


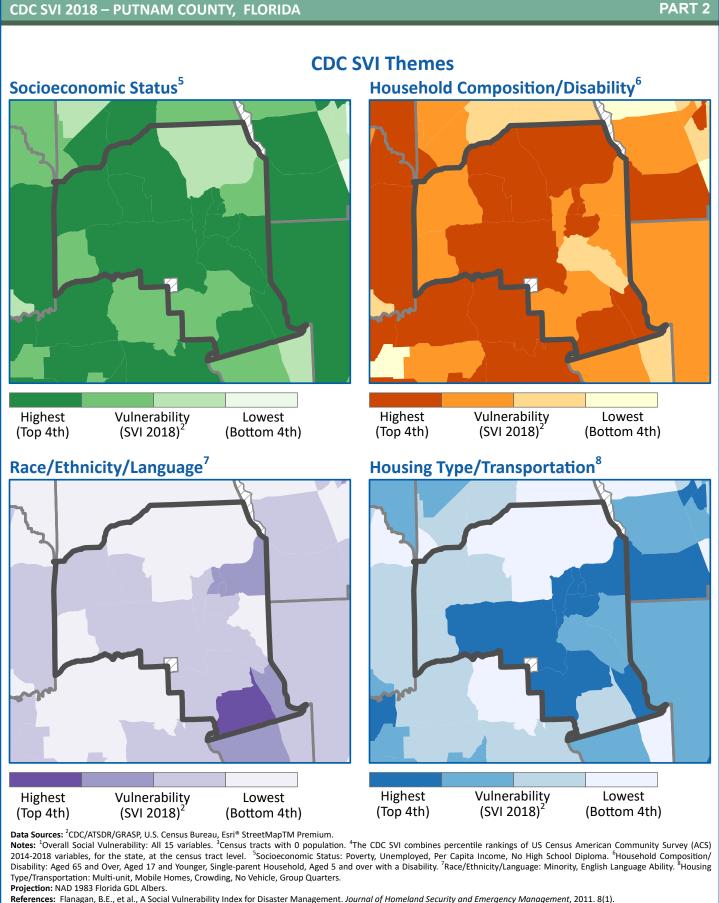
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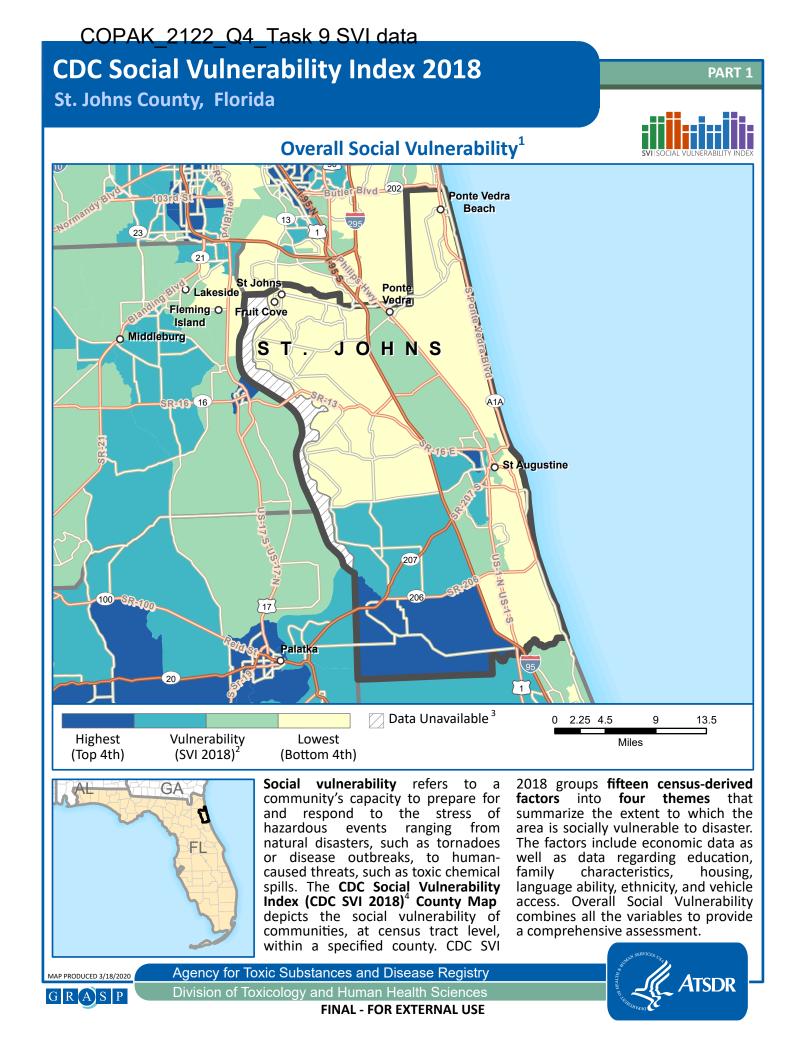


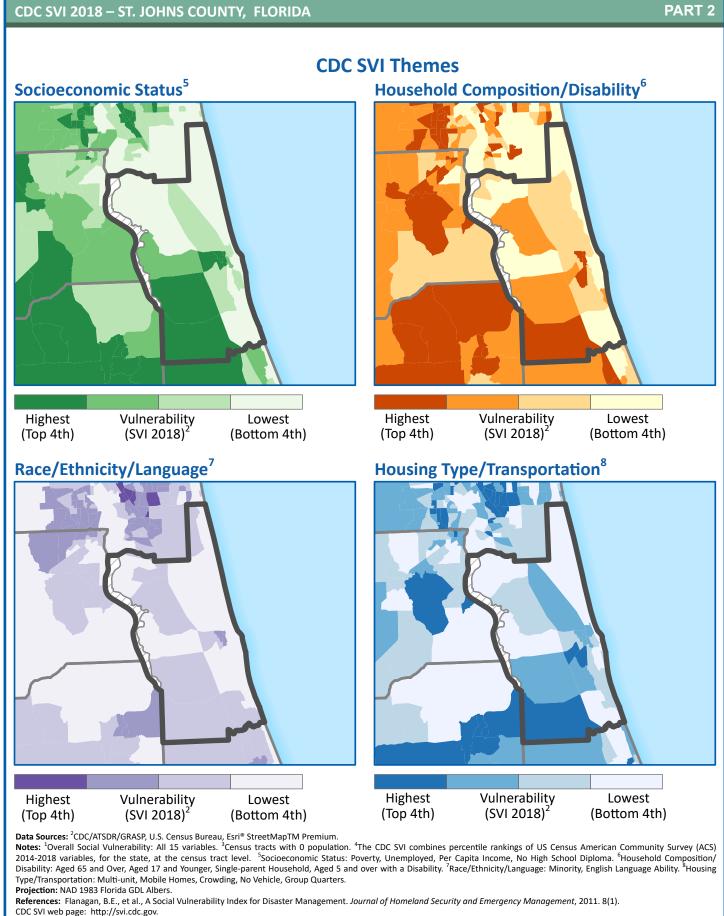
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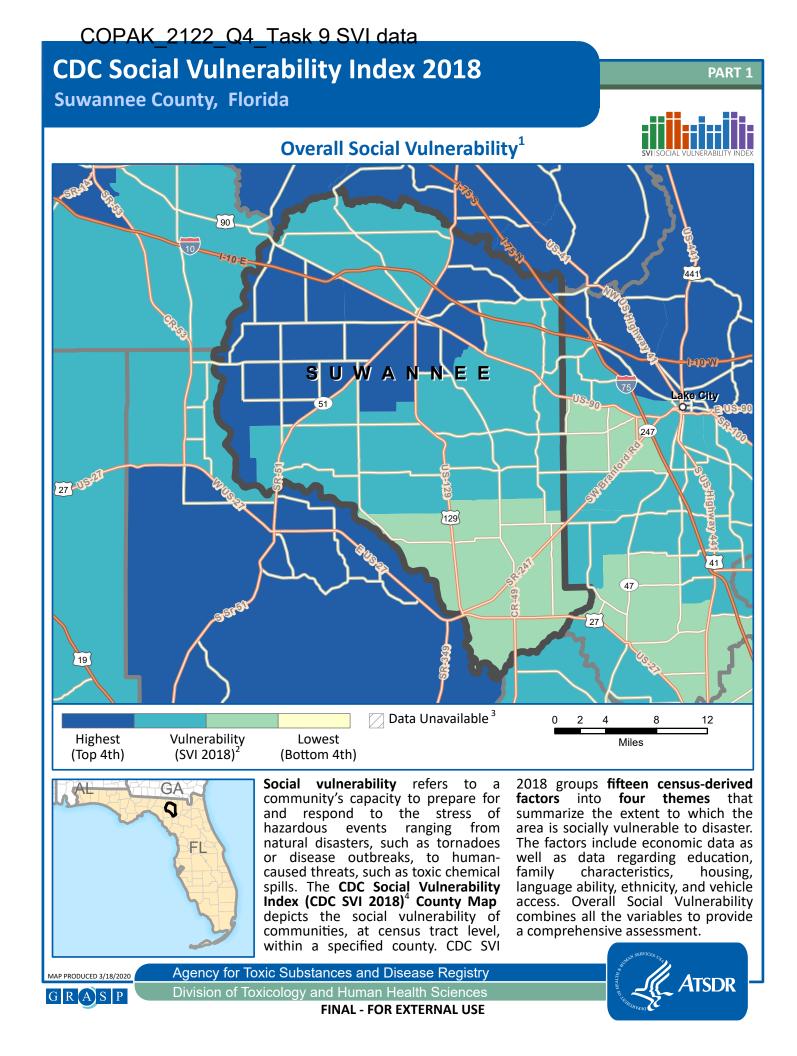


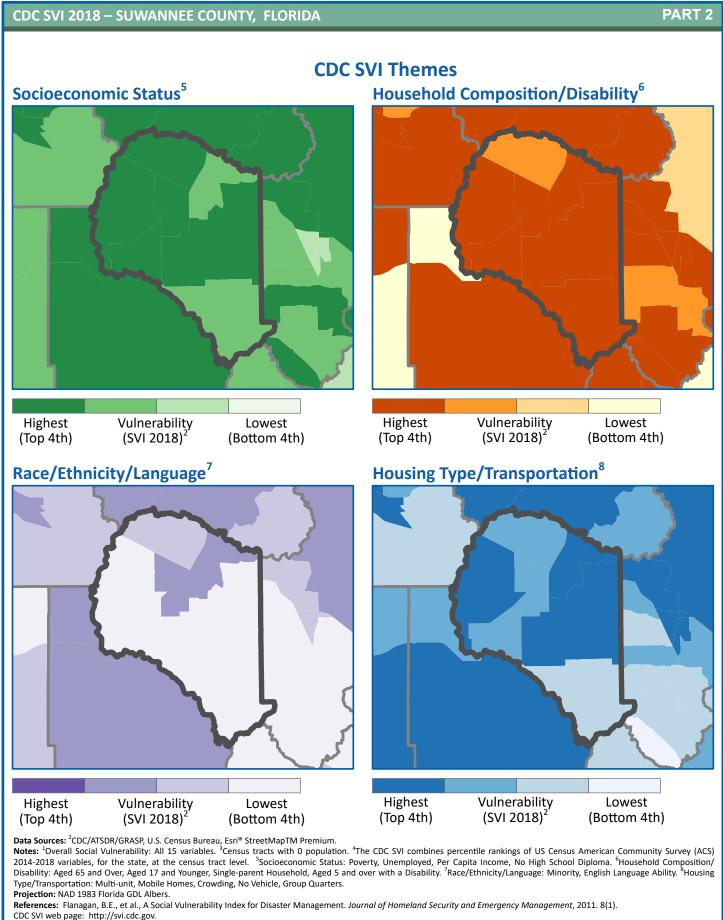


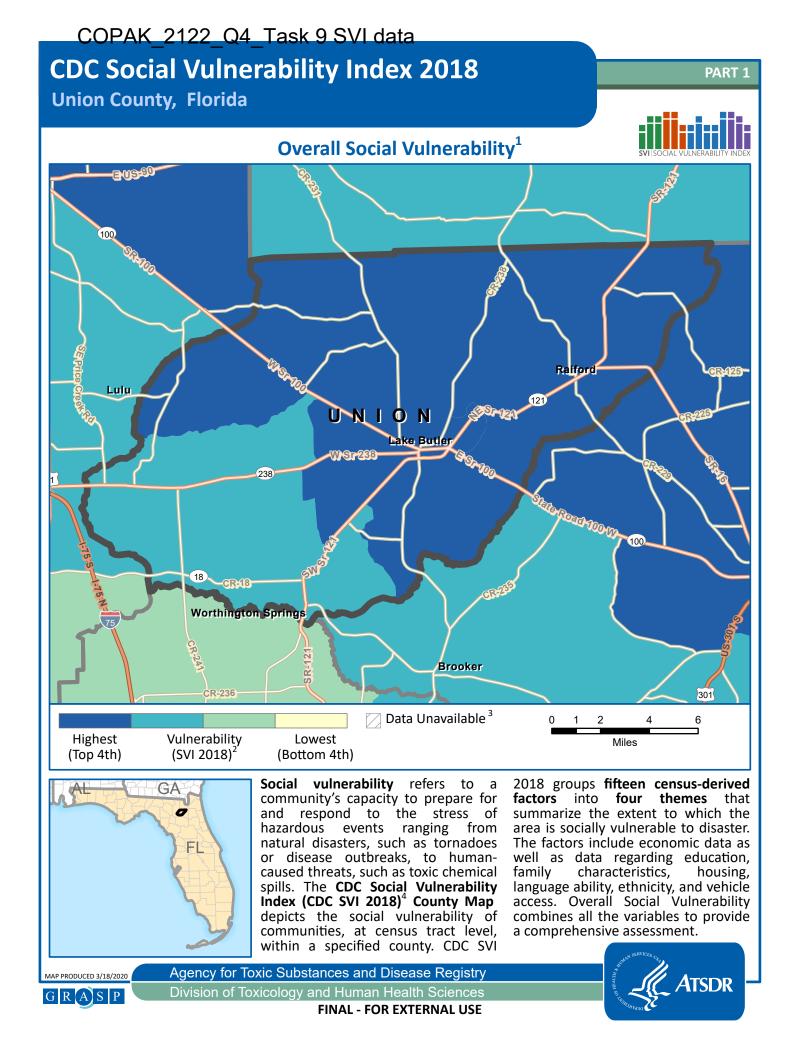
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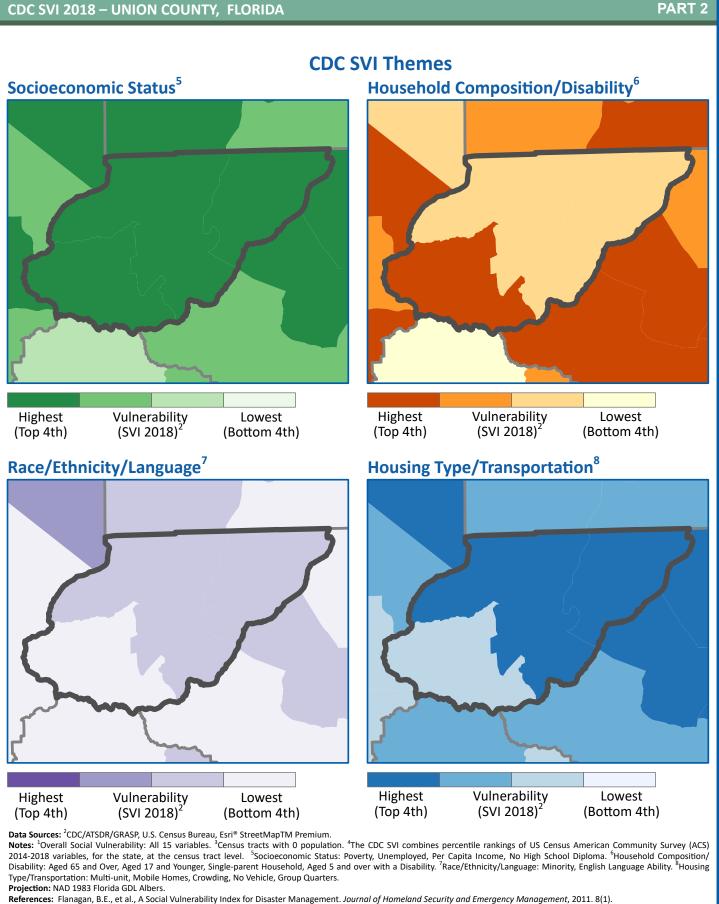












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