

Energy & Sustainability Program Updates

Climate Change Task Force

November 12, 2015

Environmental Planning & Community Resilience Division

SURA Coastal Resilience Modeling Workshop Results

► 4 Challenges

► University Collaboration

- Social Media Analysis- Situational Awareness

► Community Resilience in Dania Beach

- Social Vulnerability/ Community Disaster Resilience Index

- USACE Resilience Assessment

► Redistributions of Functions across Community

- Scenario Development

► Water Resource Contamination

- Reclamation Cost/ Benefits, Adaptation Options

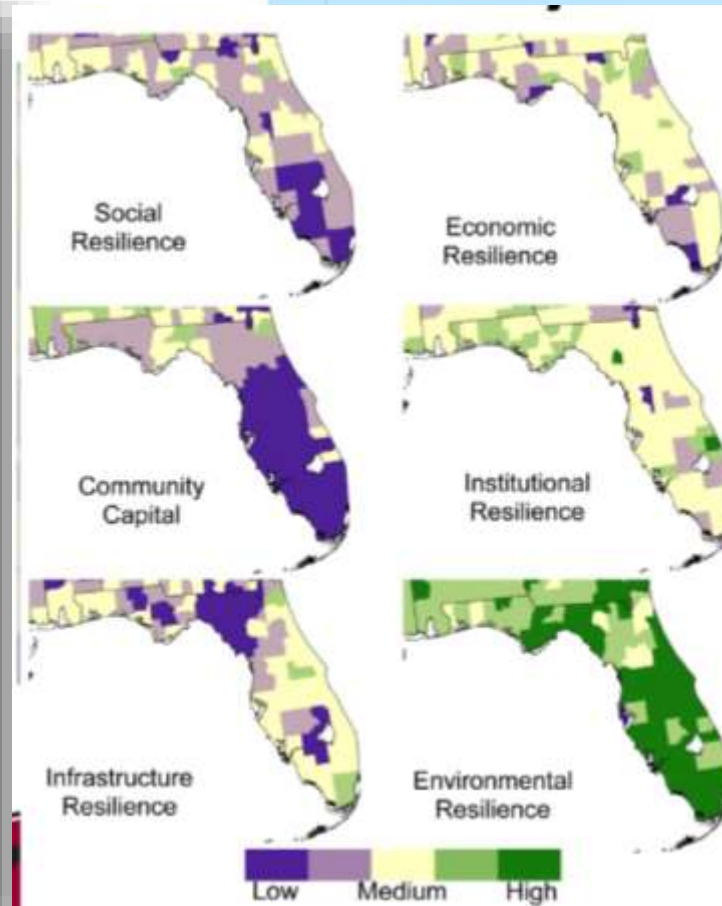
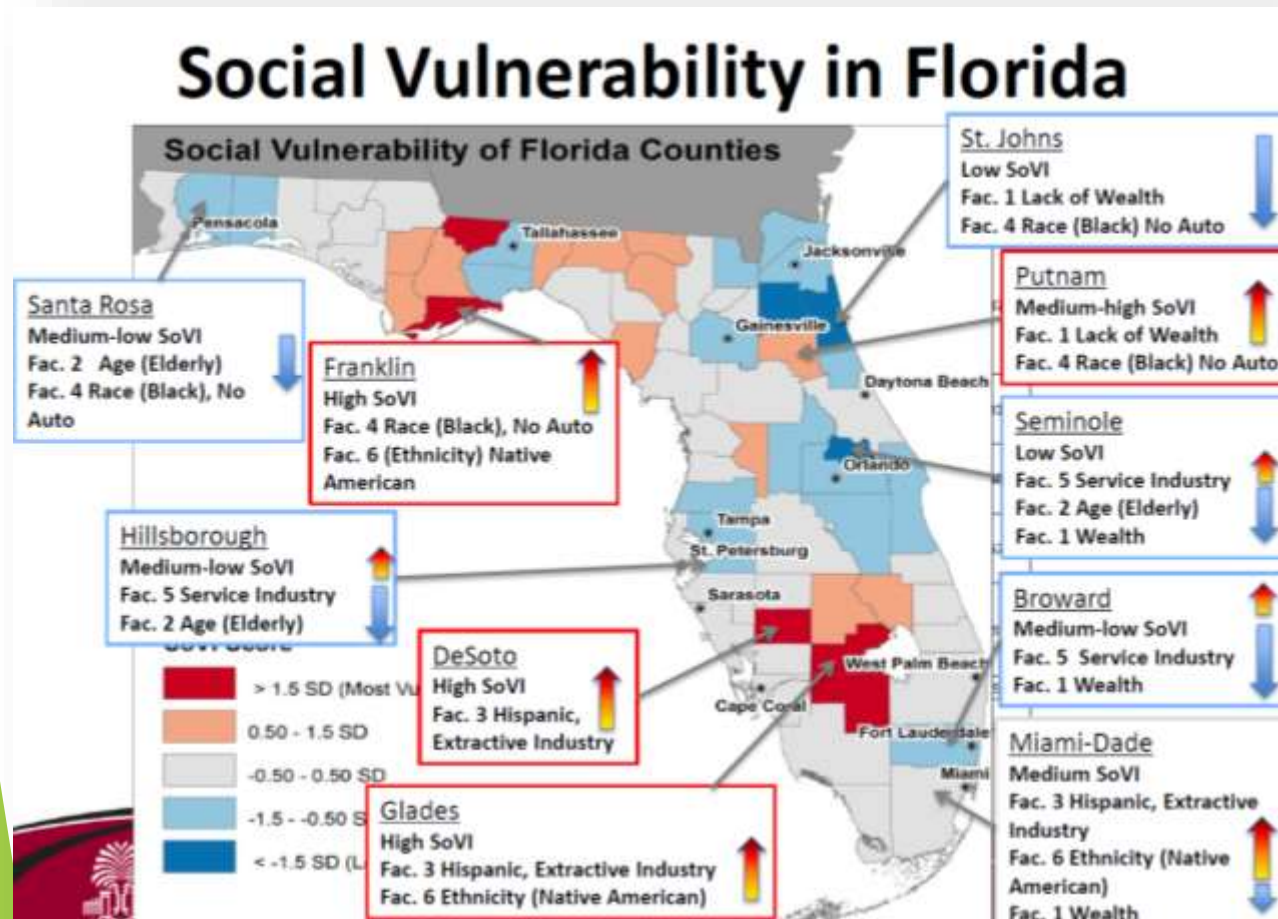
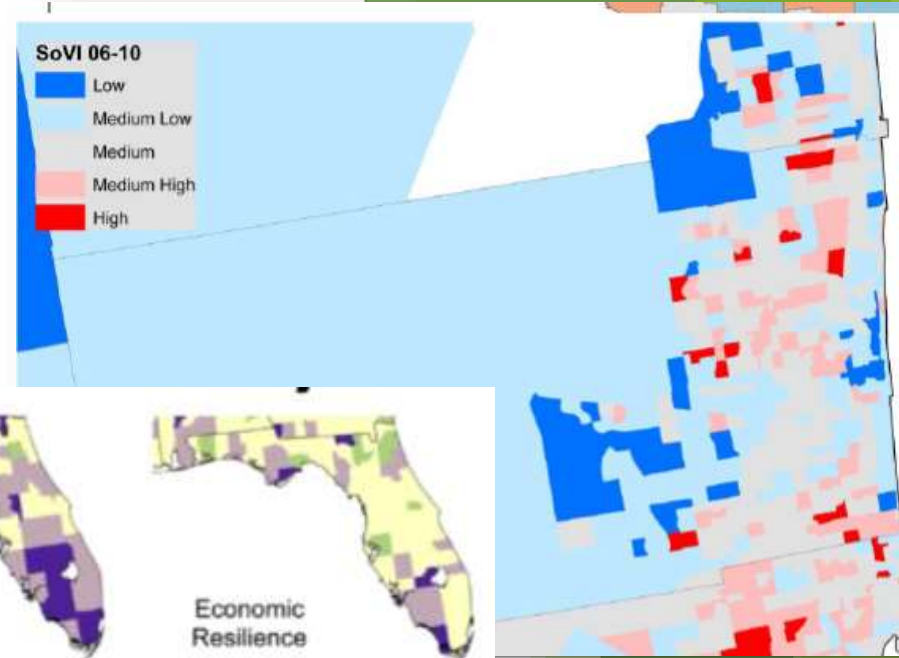


SURA

The Science of Collaborative Research

Social Vulnerability

-Dr. Emrich, Univ. South Carolina



USACE Resilience Matrix Assessment

Results

Case Study 1: Rockaway Peninsula, NY

The Rockaway Peninsula of Queens, New York City is largely residential and bore the brunt of Hurricane Sandy in the NY area.

Critical Function Assessed: Housing/Shelter

Data Sources: Post-Sandy state and federal After Action reports; NY Rising community reconstruction plans, newspaper articles documenting recovery, 7 telephone interviews with residents.

Results: Figure 2 shows the relative performance of different sectors of the housing system, see Fox-Lent et al. 2015 for full data. Results show that the housing/shelter in the community has greater capacity to prepare for and absorb coastal storm events than to recover from them and adapt accordingly. Similarly, it has somewhat greater capacity across the social and physical domains compared to the information and cognitive domains. Low scores are largely due to the inadequately long time period to perform tasks, rather than an outright lack of resources. This pattern is expected in many coastal environments. In addition to the interpretation of the results, the RM approach provides the opportunity to open communication and establish relationships. Figure 3 displays a non-exhaustive list of the agencies and groups that may have responsibilities or capabilities related to supporting the function of the system components of a community.



Figure 2. Heat map of matrix results for housing function at Rockaway Peninsula.

	Prepare	Absorb	Recover	Adapt
Physical	USACE	USACE	USACE	USACE
Information	NYC	NYC	NYC	NYC
Cognitive	NYC	NYC	NYC	NYC
Social	NYC	NYC	NYC	NYC

Figure 3. Potential collaborative partners for Rockaway Peninsula resilience.

Case Study 2: Mobile Bay, AL

The Mobile region of Alabama has a nationally important port and rail transportation system in addition to an ecologically sensitive bay and robust beach tourism industry.

Critical Functions Assessed: Housing/Shelter, Tourism Industry, Port/Shipping Industry, Ecosystem Health

Data Sources: Scoring exercise at two-day workshop with representatives from regional commerce, emergency management, and gulf coast waterways.

Results: Figure 2 In this demonstration (Figure 4) we see that different components of the system have different levels of expected performance. The baseline assessment can now be used to evaluate proposed resilience improvement projects to ensure that they are addressing the true needs (areas of low performance) nor simple the easiest, or most obvious actions. In addition, the stakeholder engagement at the workshop provides context and specific information to explain areas of high or low performance.



Figure 4. Resilience matrix performance results for 4 critical functions. Blue bars indicate relative total performance across each stage or domain.

Prepare

Absorb

Recover

Adapt

Physical

Information

Cognitive

Social

Broward Sherriff's Office Collaboration

- ▶ Meeting with Sherriff's Office
- ▶ Energy and Water Audits of 3 Facilities
- ▶ 4 Phase Approach
 - ▶ Outreach
 - ▶ Seal of Sustainability Certification of Programs
 - ▶ Renewable Energy & Energy Efficiency Projects
 - ▶ Greening Vehicle Fleet



Adaptation Action Area Online Resources

- ▶ Guidebook
- ▶ Policy Options
- ▶ Video and Podcasts
- ▶ Compendium of National, State and Local Adaptation Projects
- ▶ AAA's in County (Proposed or in Process)

The screenshot shows the DEO website's 'Adaptation Planning' page. The header includes the DEO logo, 'FLORIDA DEPARTMENT OF ECONOMIC OPPORTUNITY', and navigation links for Home, News, Calendar, FAQs, Help Center, Office Directory, and About Us. A secondary navigation bar lists Reemployment Assistance Service Center, Business Growth & Partnerships, Labor Market Information, Community Planning, Development & Services, and Workforce Board Resources. The main content area is titled 'Adaptation Planning' and includes a breadcrumb trail: Home > Community Planning, Development and Services > Community Planning > Community Planning Table of Contents > Adaptation Planning. A sidebar on the left contains a 'Community Planning Table of Contents' with links to various reports and documents. The main text area is titled 'Adaptation Planning - Planning for Coastal Flooding and Sea Level Rise' and provides an overview of adaptation strategies, followed by a numbered list of four strategies: Protection, Accommodation, Strategic Relocation, and Avoid development in high-risk areas.

The 'Contacts' section features the name 'Sean Reiss' and provides contact information: an 'E-mail' icon and the phone number '(850) 717-6511' with a phone icon.

The 'Featured Community' section highlights 'Broward County recently adopted Broward County Climate Change' with a small image of a building.



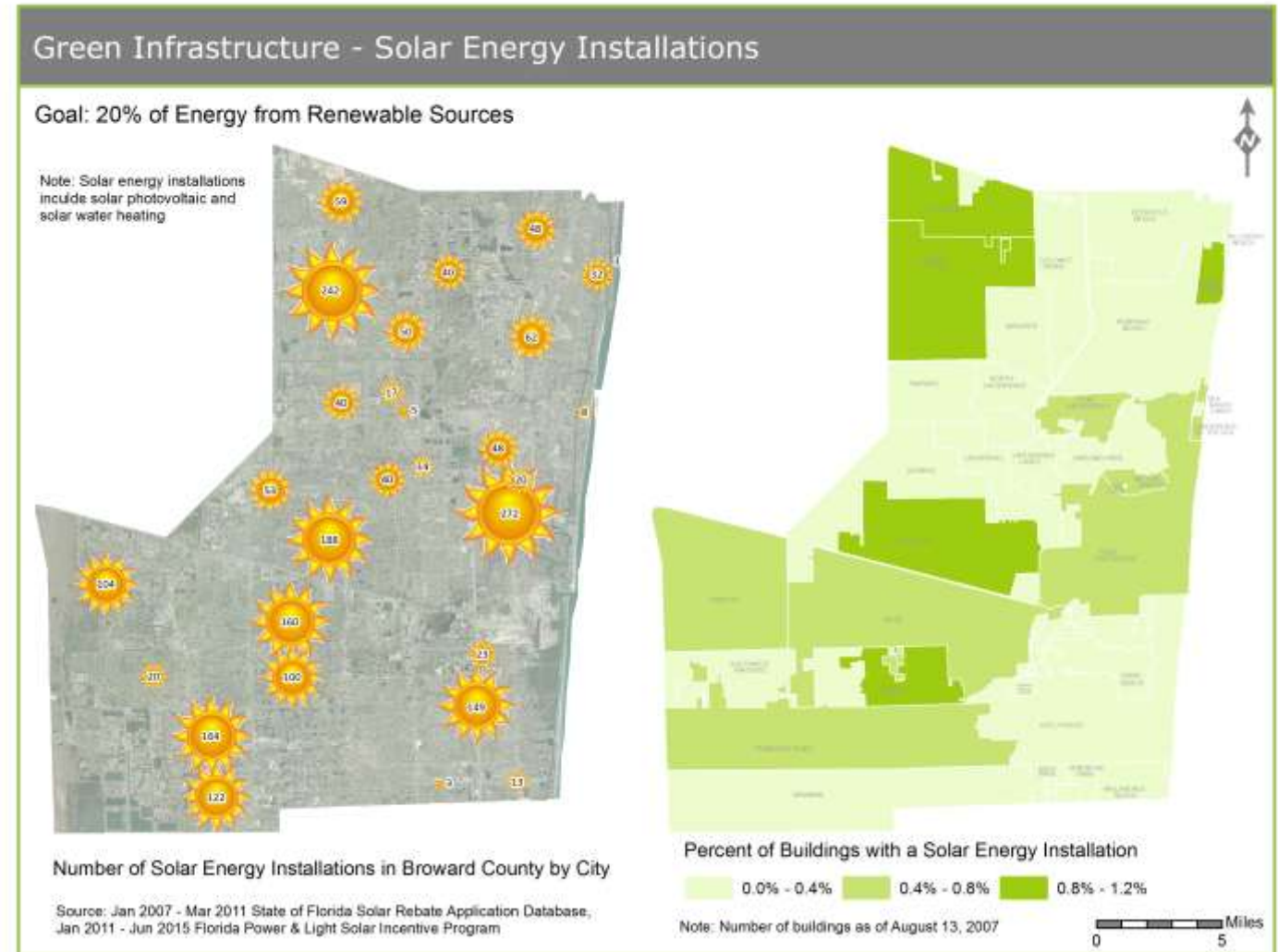
Healthy Community Zone Update

- ▶ Community Action Plan
- ▶ Built Environment
 - ▶ Complete Streets
 - ▶ 27th Ave
 - ▶ Sistrunk Blvd
 - ▶ Multi-modal Connections
 - ▶ Cultural place-making at transit stops
- ▶ Inspired additional grants for BMSD
 - ▶ EPA Urban Waters



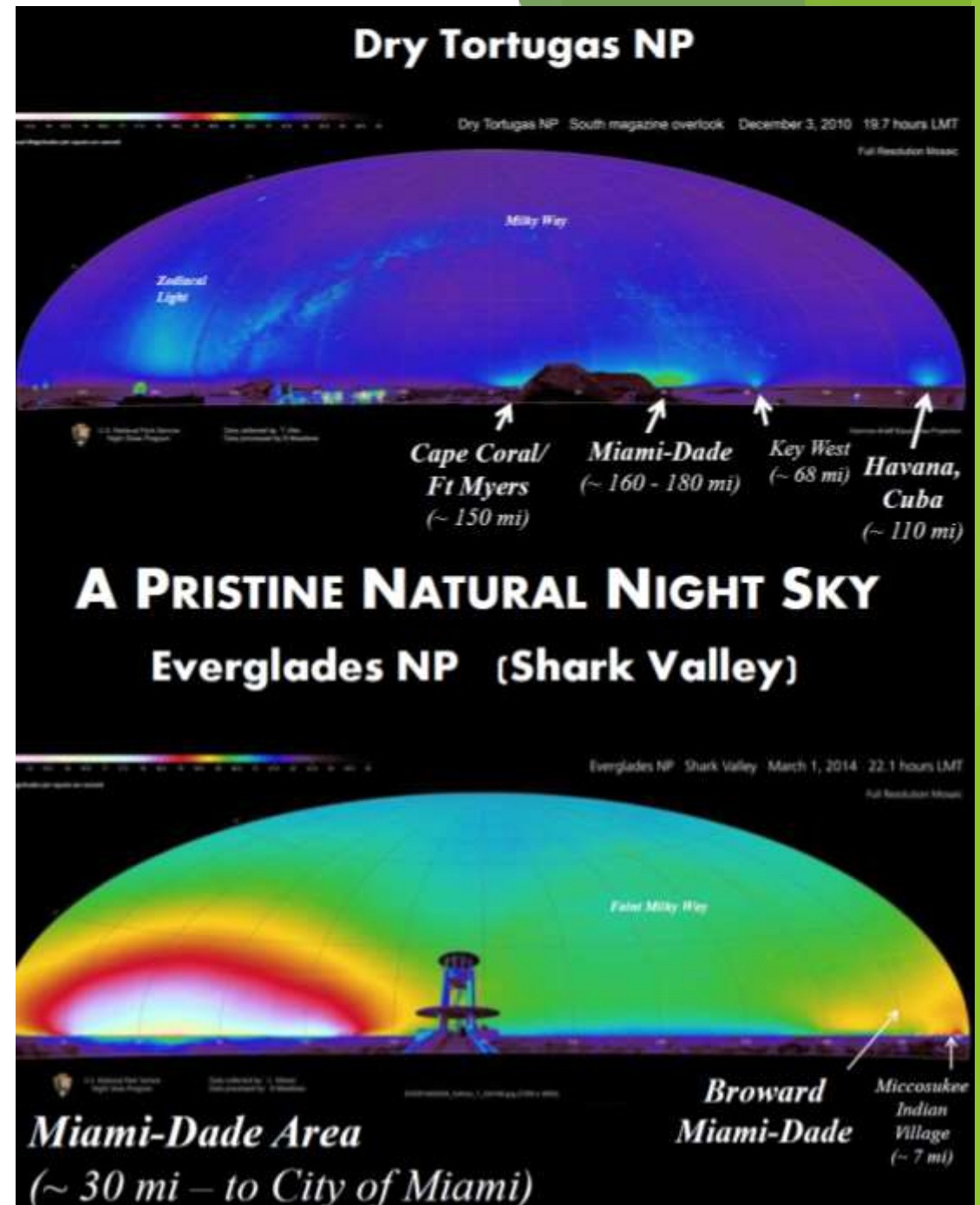
Solar Installation Map

- ▶ Use of rebates for Solar PV increasing
 - ▶ Solar: 7.5% in 2011 → 21.3% in 2015
- ▶ # of solar rebates decreased 27% from 2011 to 2015
- ▶ Commercial prefers Solar PV vs. Residential prefers SWH
- ▶ No obvious trends across municipalities.



Dark Sky Movie Night with Sustainability Stewards

- ▶ December 11th
- ▶ Anne Kolb Nature Center
- ▶ Energy efficiency, safety, health



Stand Up For Sustainability

- ▶ Local Climate March - looking for speakers, vendors, and educational outreach participants
- ▶ November 29, Fort Lauderdale
- ▶ Volunteer meeting this Sat. If you want to get involved email Carrie ckashar@broward.org.



COB31·CW611
DE CLIMATE CHANGE CONFERENCE