

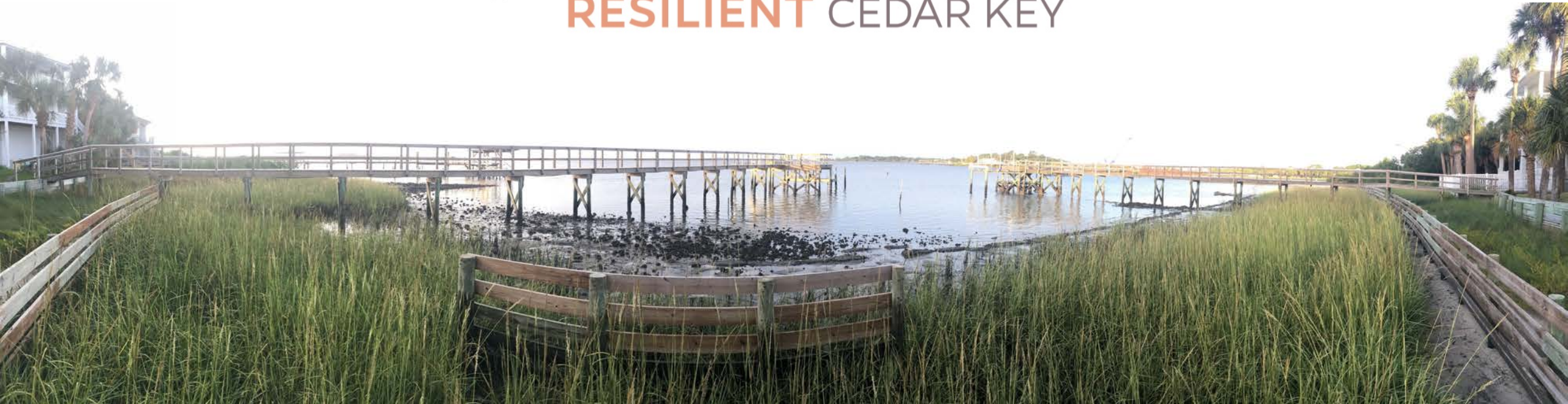
UF UNIVERSITY of
FLORIDA



Sea Grant
Florida



RESILIENT CEDAR KEY



Project Collaborators

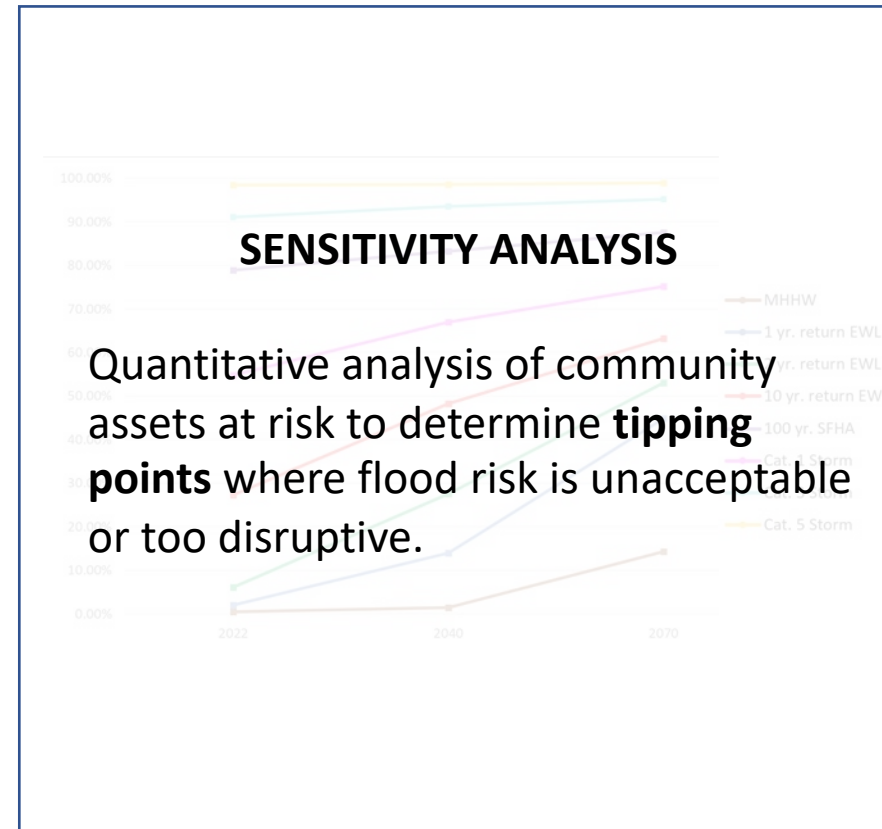
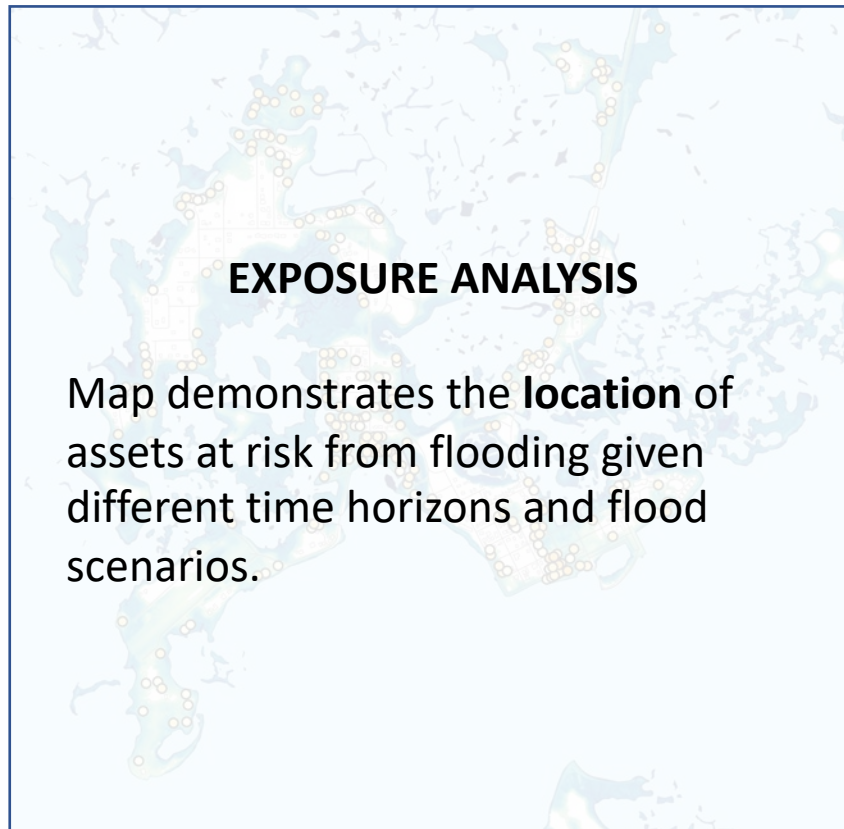


Partnership between:

- City of Cedar Key
- UF Florida Institute for Built Environment Resilience (FIBER)
- UF Center for Landscape Conservation Planning (CLCP)
- UF Shimberg Center for Housing Studies
- UF/IFAS Nature Coast Biological Station
- UF/IFAS Food and Resource Economics Dept.
- Florida Sea Grant



Exposure + Sensitivity Analysis



Datasets Used

- **Topography.** A digital elevation model (DEM) was obtained for Cedar Key from the United States Geological Survey's (USGS) 1-meter National Elevation Dataset, published in October, 2022. The team used the most recently available topography data at the time the flood modeling process was performed to ensure that the flood depth models most accurately represented current conditions.
- **Storm surge.** Storm surge data was obtained from the NOAA's National Weather Service in the form of a conical grid. This data provided mean and high SLOSH storm surge heights for each hurricane category, referenced as a height above NAVD88. This data was interpolated and compared to the DEM to create a surface layer showing the extent and depth of flooding from storm surge in the region.
- **Critical assets.** Using local and statewide data sources, the team assembled an inventory of locally and regionally significant assets relating to transportation, critical infrastructure, critical community and emergency facilities, and natural, cultural, and historic resources, consistent with FDEP guidelines. GIS data was used to visually depict the location of these assets and to describe their attributes. All assets were reviewed through a QA/QC process to ensure their accuracy and relevance to the study.

Vulnerability Assessment- Category 1 Hurricane

- The following includes results from the impacts of a **Category 1** storm on Cedar Key. Storm surge data was obtained from NOAA's National Weather Service.
- This **does **not** depict the impacts of Hurricane Idalia** specifically. However, this information may be useful for context to understand the hurricane impacts CK is facing.
- For more, visit:
<https://resilientcedarkey.web.app/>

Resilient Cedar Key

A Dashboard to explore the impacts of compound flooding with different storm events under different sea-level rise scenarios.



GET STARTED

Disclaimer

The data and maps in this tool illustrate the scale of potential flooding, not the exact location, and do not account for erosion, subsidence, or future construction. Although every effort has been made to ensure that information is comprehensive and accurate, errors and omissions may exist. The data and the information included therein is provided on an "as is" basis. The Florida Institute for Built Environment Resilience (FIBER), Florida Sea Grant, the University of Florida, or any of their respective faculty, staff, or administration specifically disclaim any warranty, either expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular use. The entire risk as to quality and performance is with the user. This tool should be used strictly as a planning reference tool and not for navigation, permitting, or other legal purposes.

Vulnerability Assessment- Housing

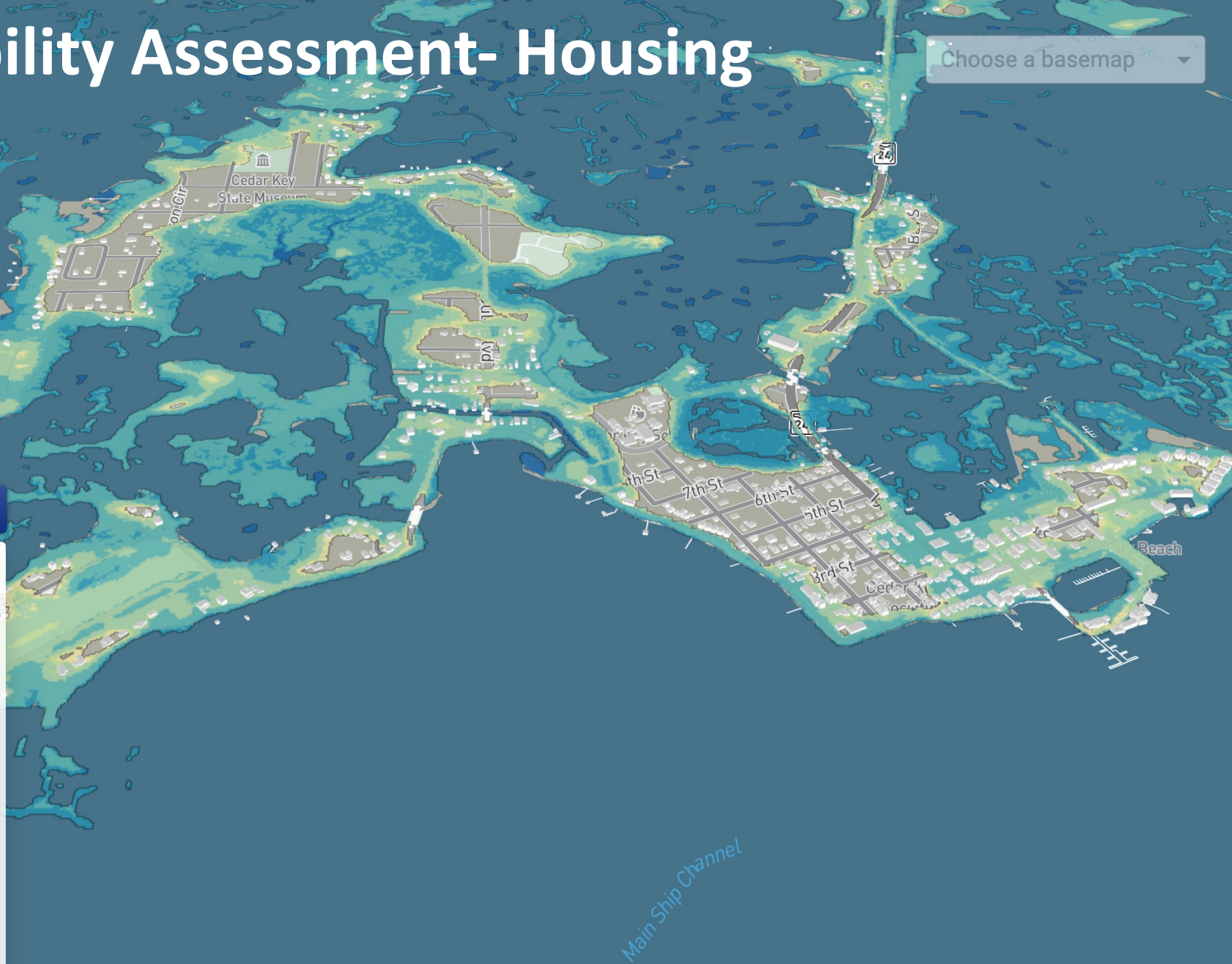


Choose a basemap

Hide Legend

Depth of flooding

0.1 - 0.5 ft
0.51 - 1 ft
1.1 - 3 ft
3.1 - 6 ft
6.1 - 9 ft
9.1 - 18 ft
18.1 - 27 ft
> 27 ft

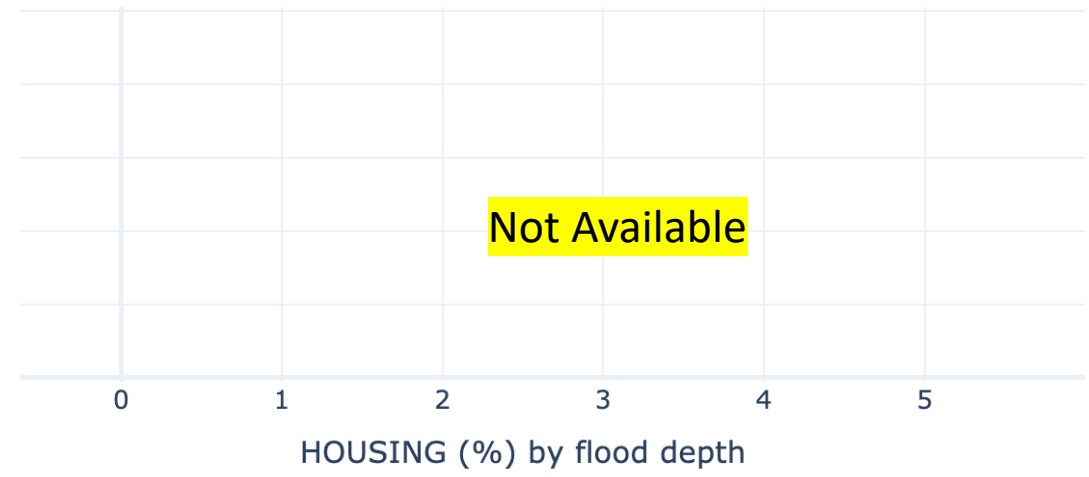
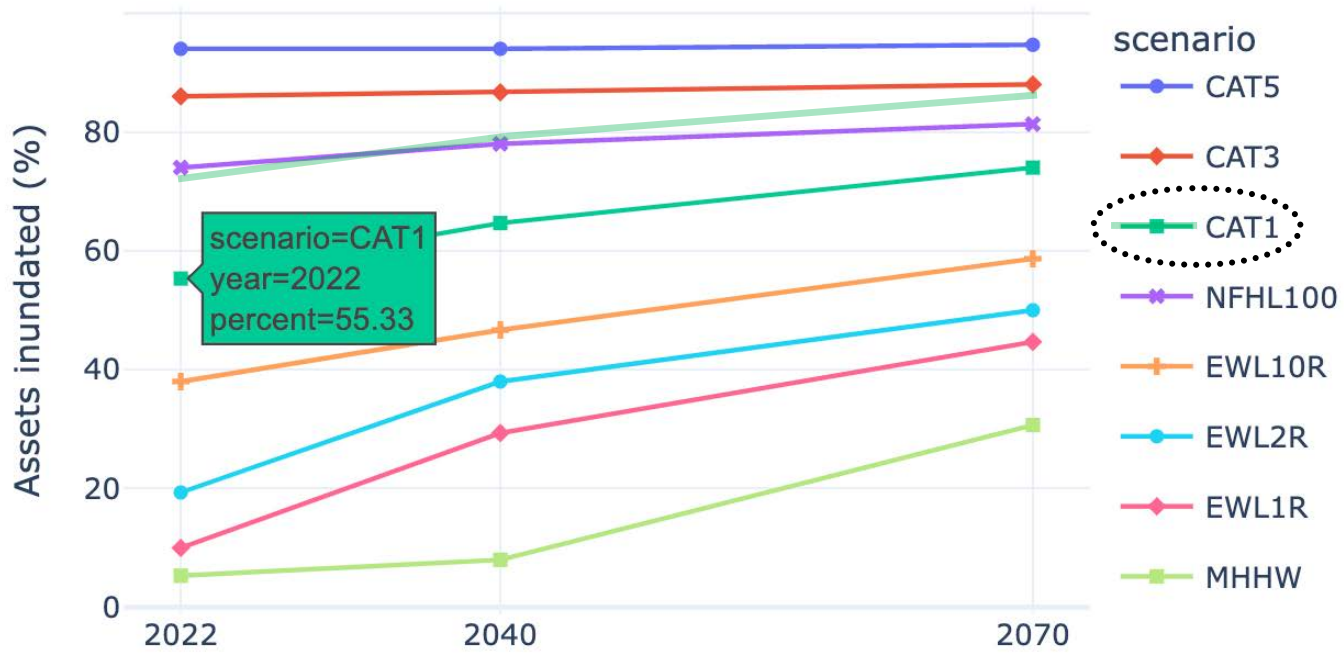


A Category 1 Storm would flood nearly **55%** of residential structures in the city limits.

Resilient Cedar Key | Vulnerability Assessment
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Vulnerability Assessment- Housing (Cat 1)



Vulnerability Assessment- Transportation Assets

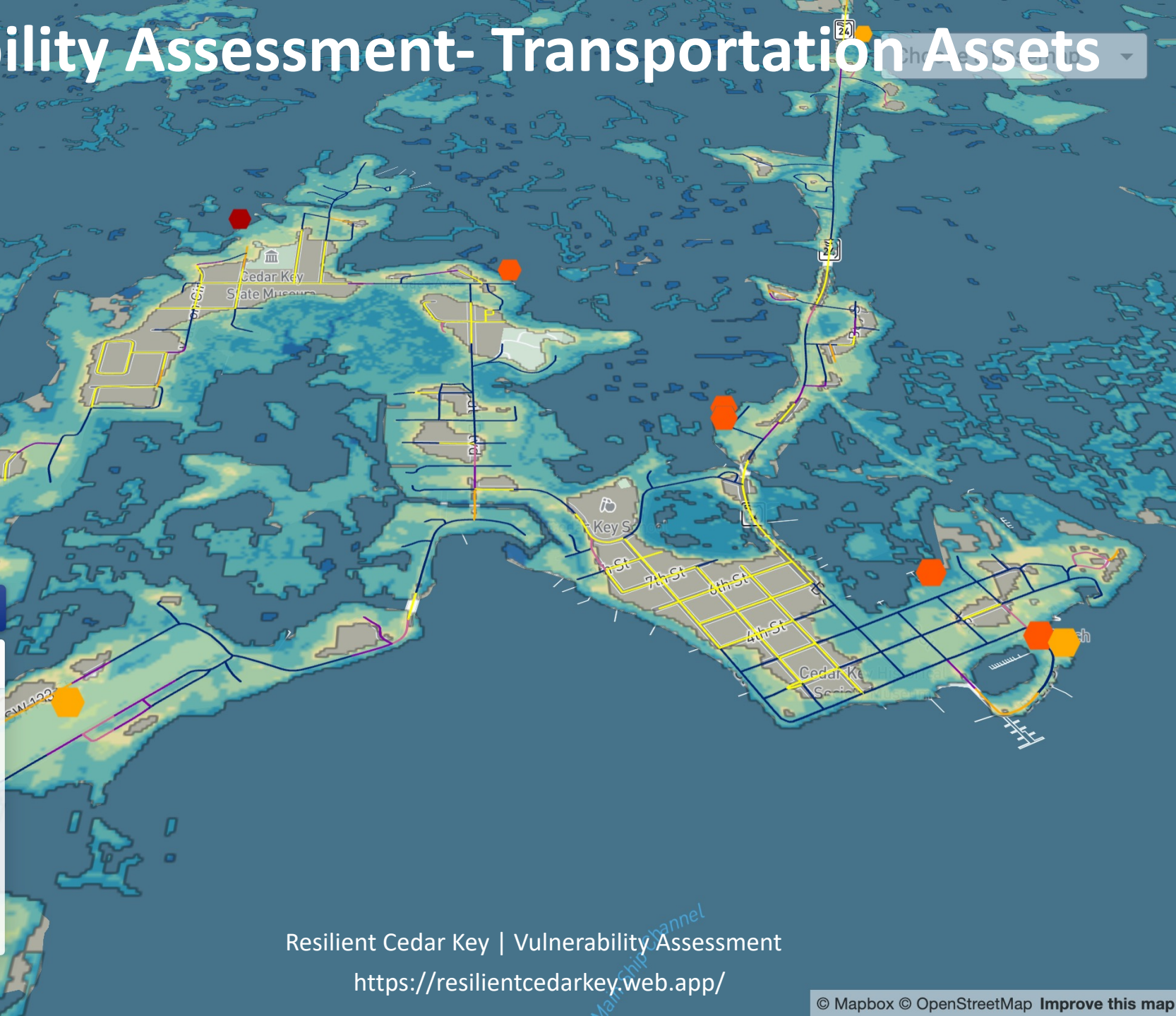
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A Category 1 Storm would flood nearly **92%** of transportation assets in the city limits.

Hide Legend

Depth of road flooding

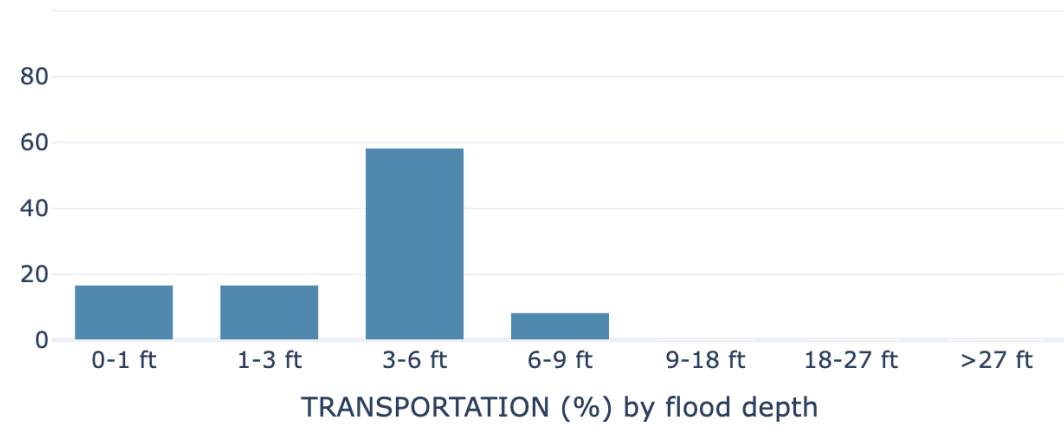
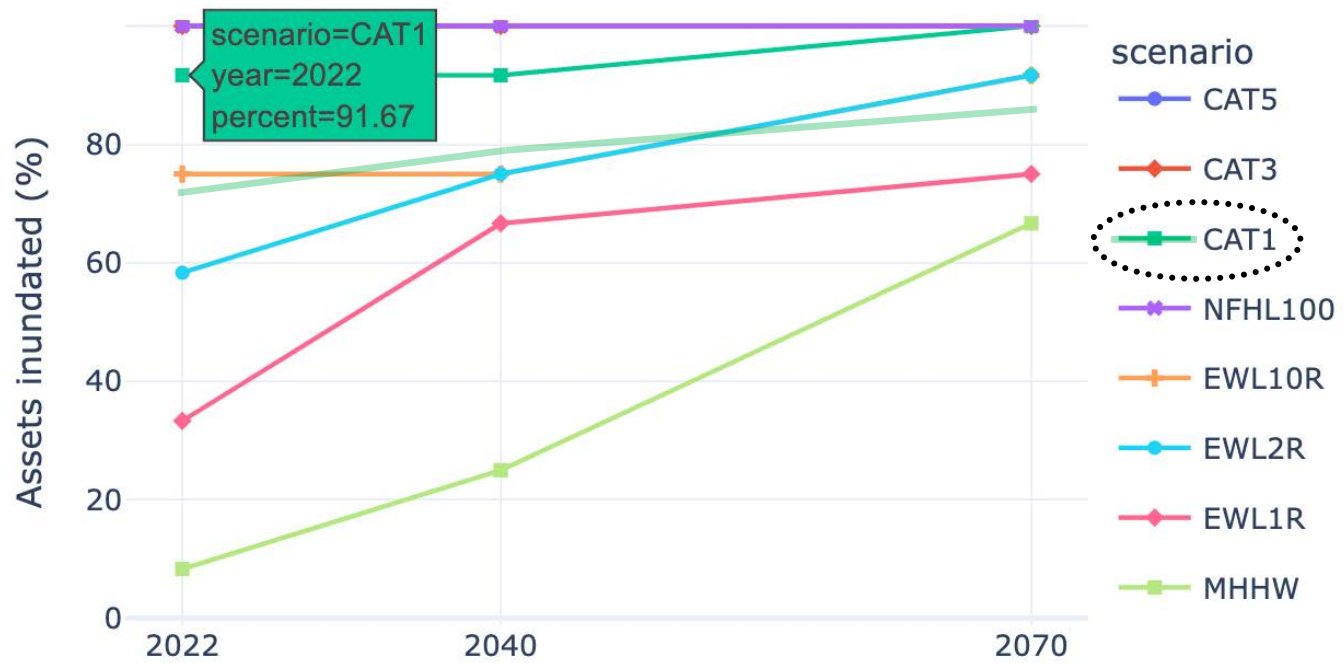
0.1 - 0.5 ft
0.51 - 1 ft
1.1 - 1.5 ft
1.51 - 2 ft
> 2 ft



Resilient Cedar Key | Vulnerability Assessment
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Vulnerability Assessment- Transportation Assets (Cat 1)



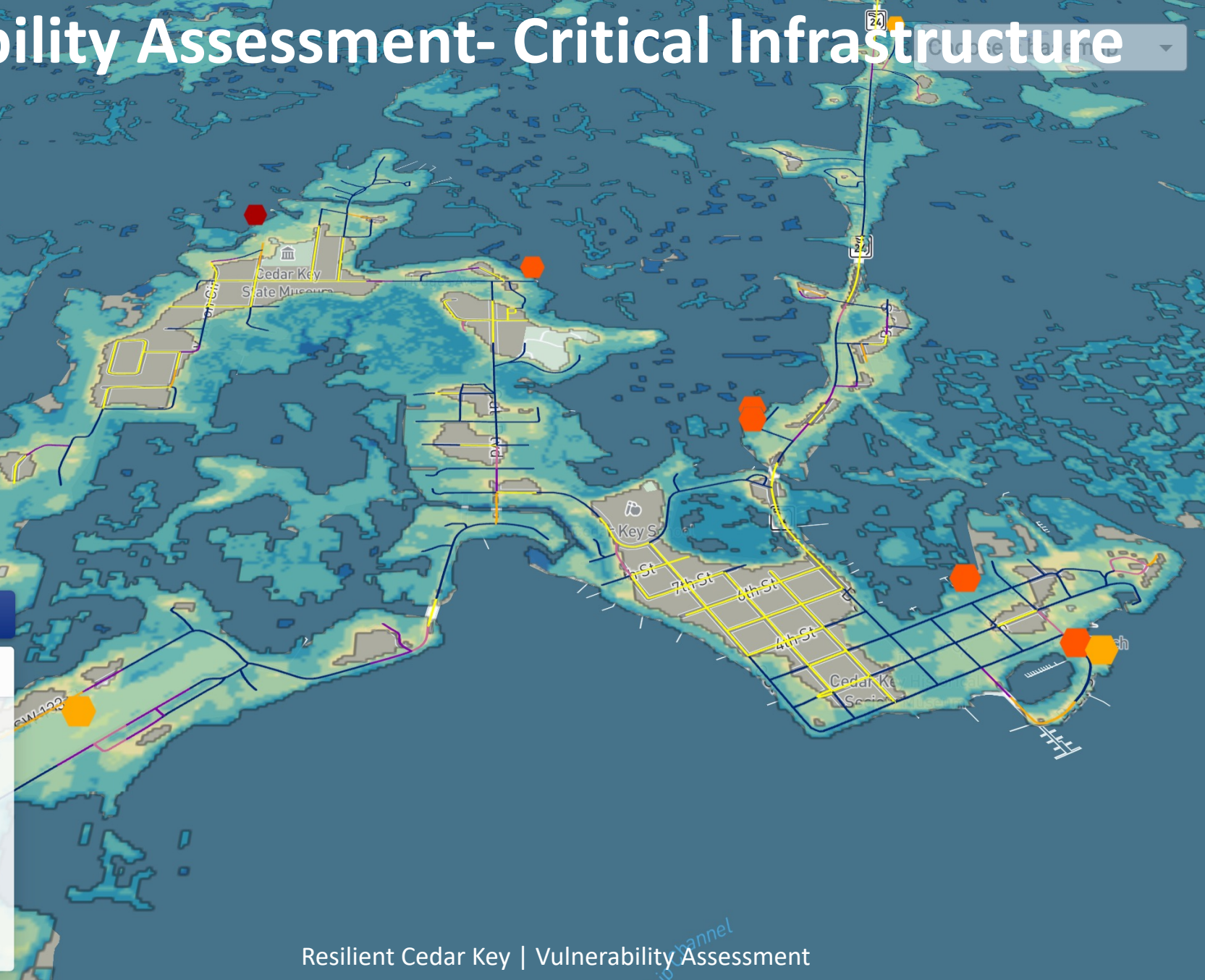
Vulnerability Assessment- Critical Infrastructure



A Category 1 Storm would flood nearly **65% of critical infrastructure** in the city limits.

Hide Legend

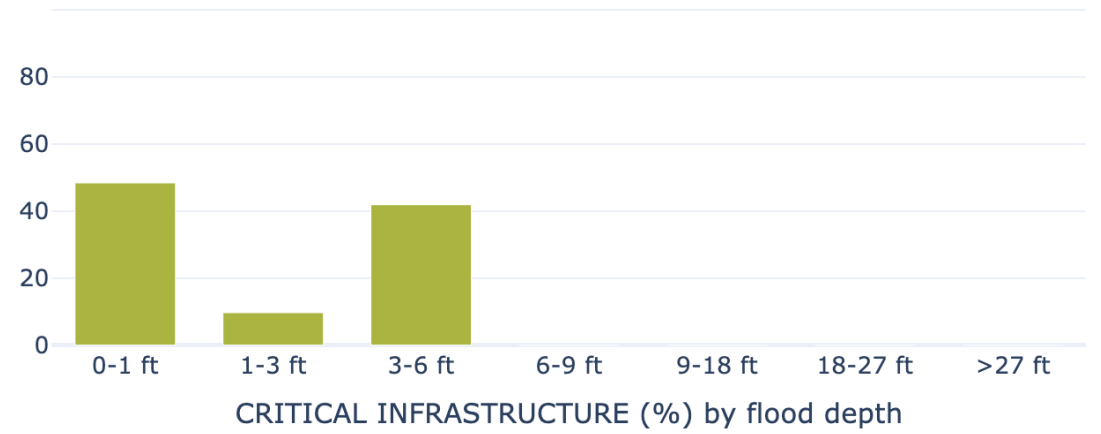
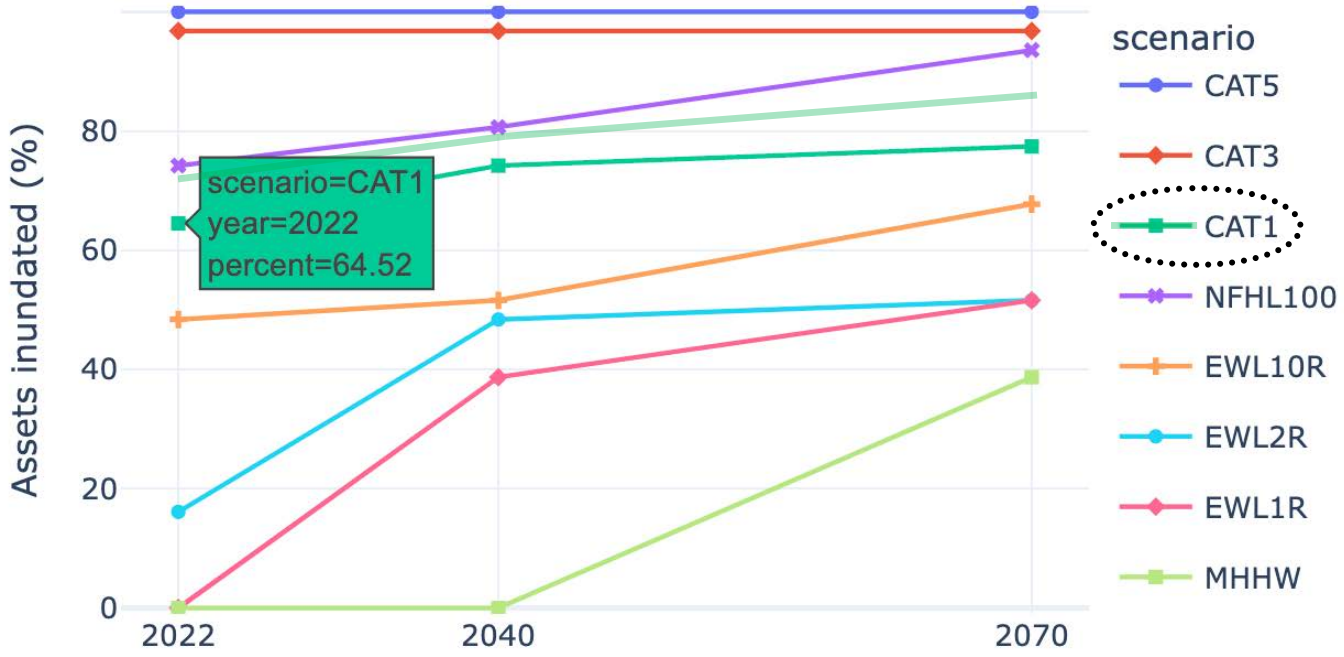
Depth of road flooding	
Yellow	0.1 - 0.5 ft
Orange	0.51 - 1 ft
Pink	1.1 - 1.5 ft
Purple	1.51 - 2 ft
Dark Blue	> 2 ft



Resilient Cedar Key | Vulnerability Assessment
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Vulnerability Assessment- Critical Infrastructure (Cat 1)



Vulnerability Assessment- Community Services

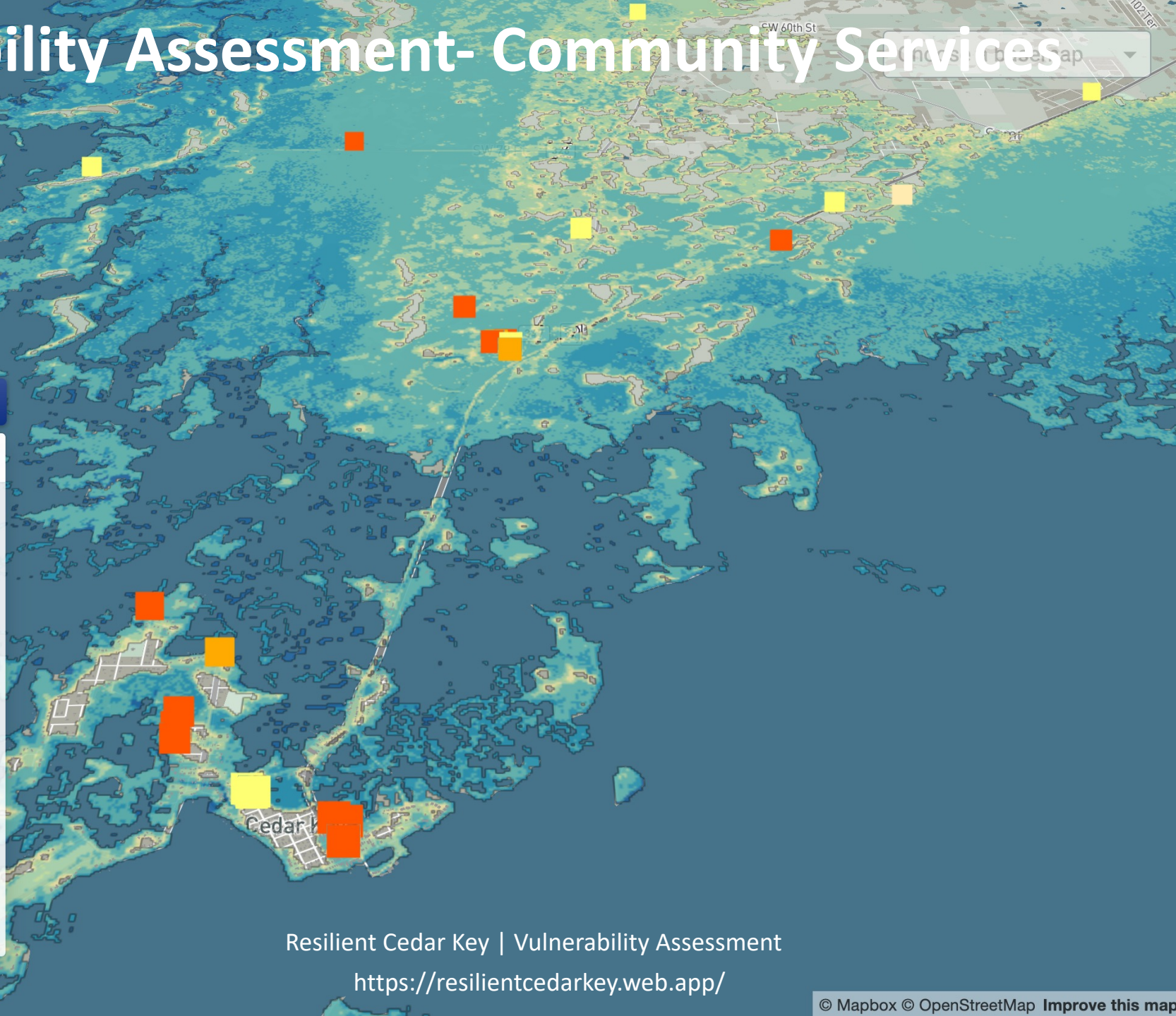


Hide Legend

Depth of asset flooding

Based on First Floor Elevation (FFE) or relevant level to asset

- 0.1 - 0.5 ft
- 0.51 - 1 ft
- 1.1 - 3 ft
- 3.1 - 6 ft
- 6.1 - 9 ft
- 9.1 - 18 ft
- 18.1 - 27 ft
- > 27 ft



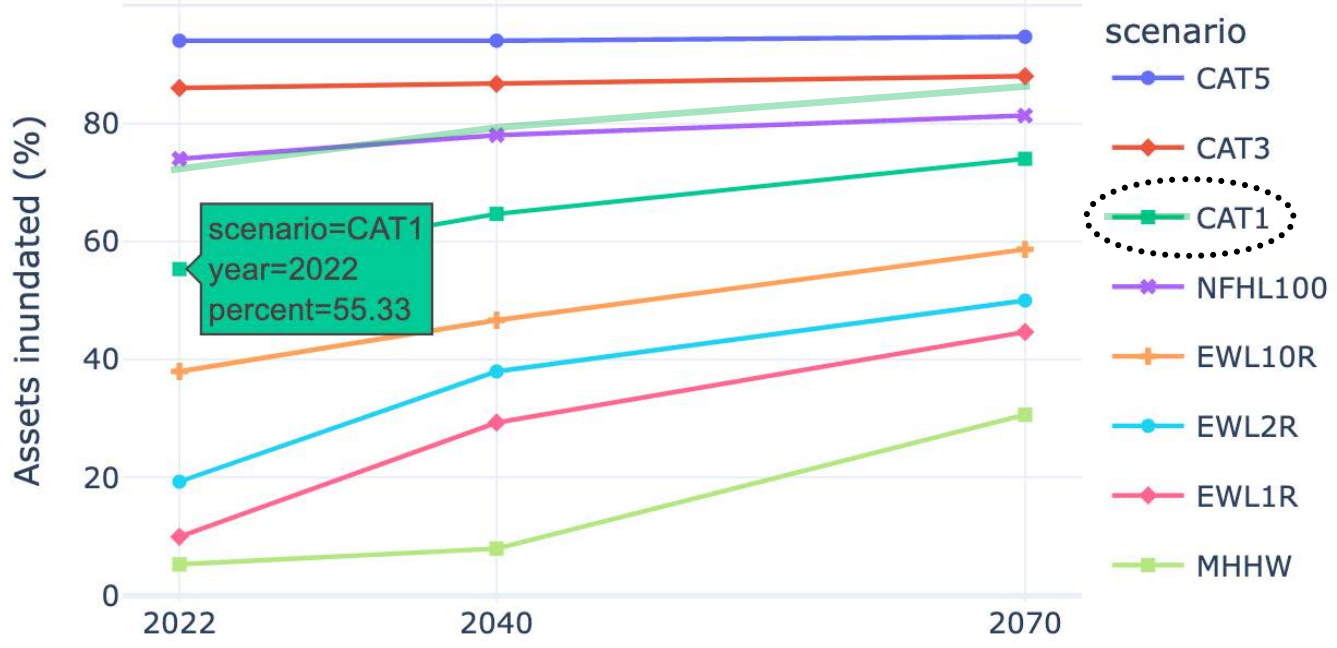
A Category 1 Storm would flood nearly **55% of community service assets** in the city limits.

Resilient Cedar Key | Vulnerability Assessment

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Vulnerability Assessment- Community Services (Cat 1)



Vulnerability Assessment- Local Economy



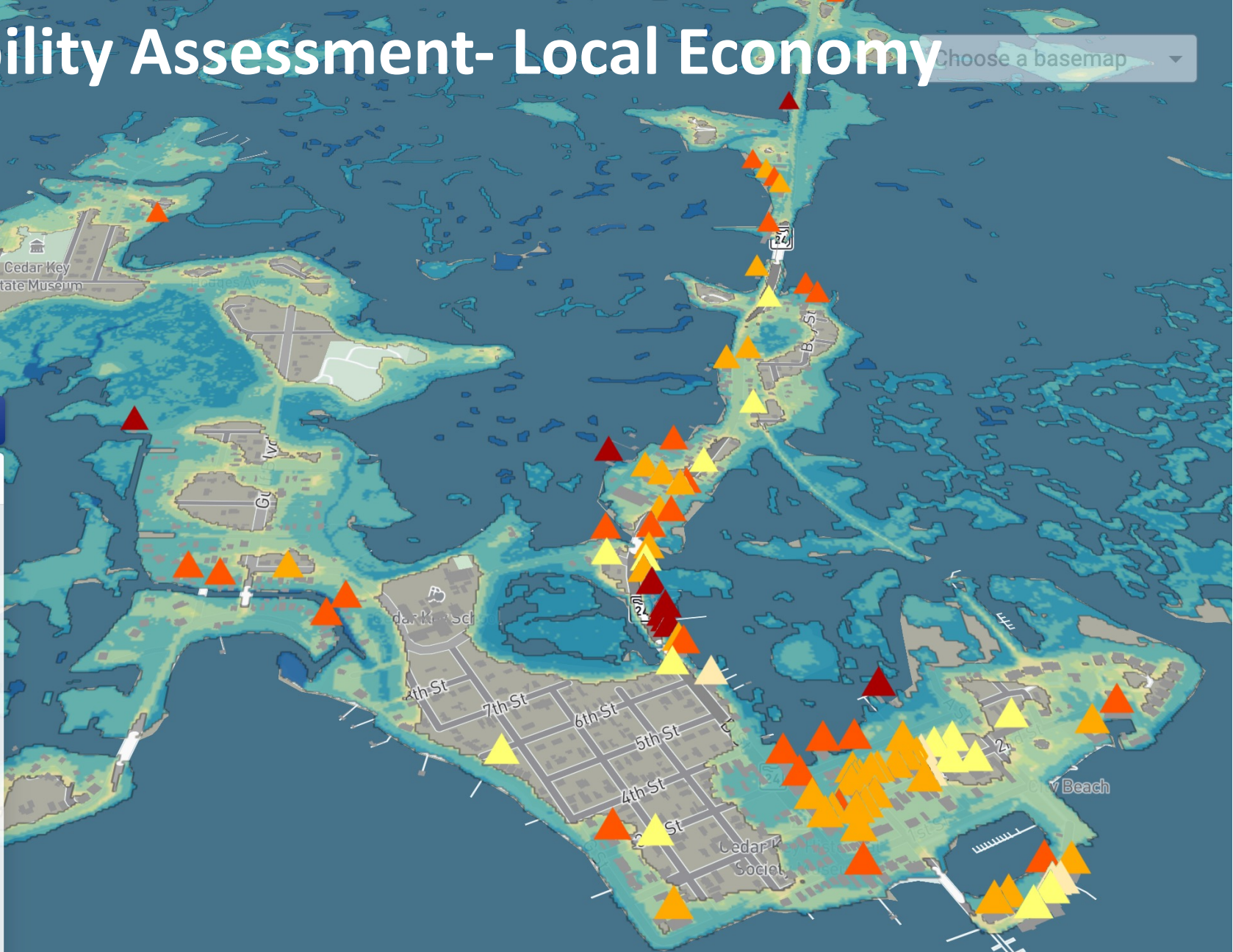
Choose a basemap ▾

Hide Legend

Depth of asset flooding

Based on First Floor Elevation (FFE) or relevant level to asset

- 0.1 - 0.5 ft
- 0.51 - 1 ft
- 1.1 - 3 ft
- 3.1 - 6 ft
- 6.1 - 9 ft
- 9.1 - 18 ft
- 18.1 - 27 ft
- > 27 ft



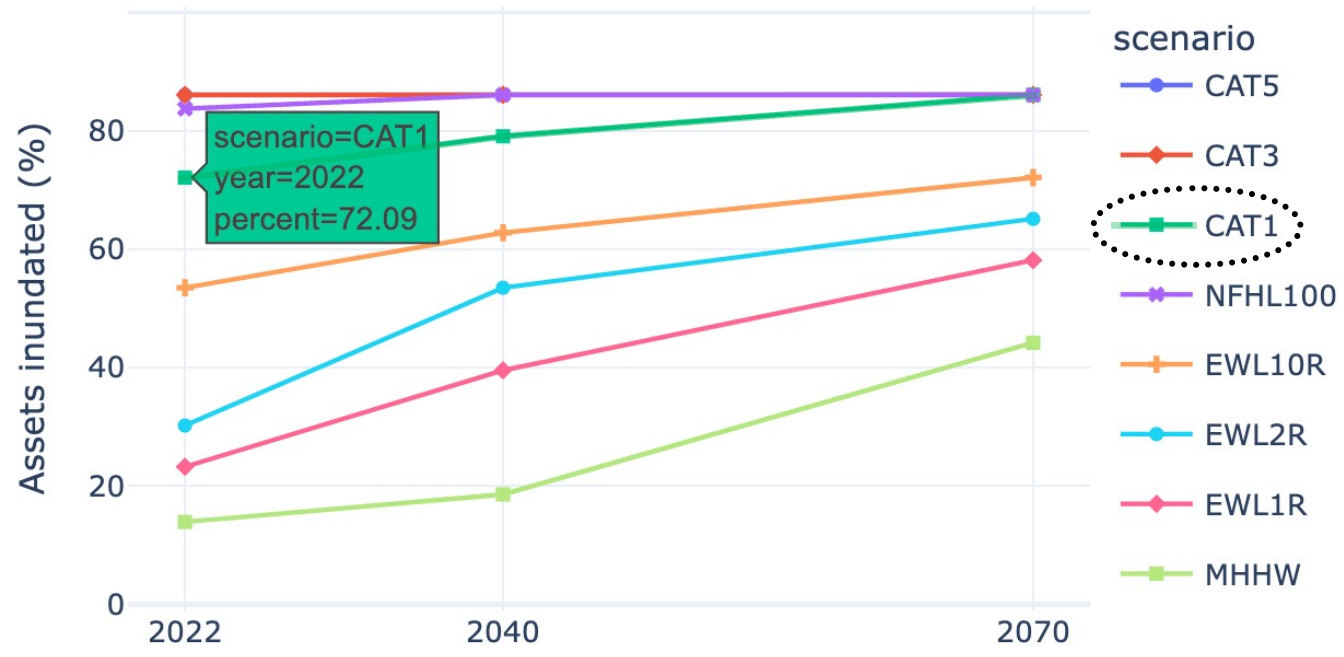
A Category 1 Storm would flood nearly **72%** of economic assets in the city limits.

Resilient Cedar Key | Vulnerability Assessment

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Vulnerability Assessment- Local Economy (Cat 1)



Vulnerability Assessment- Cultural/Historic/Natural Resources

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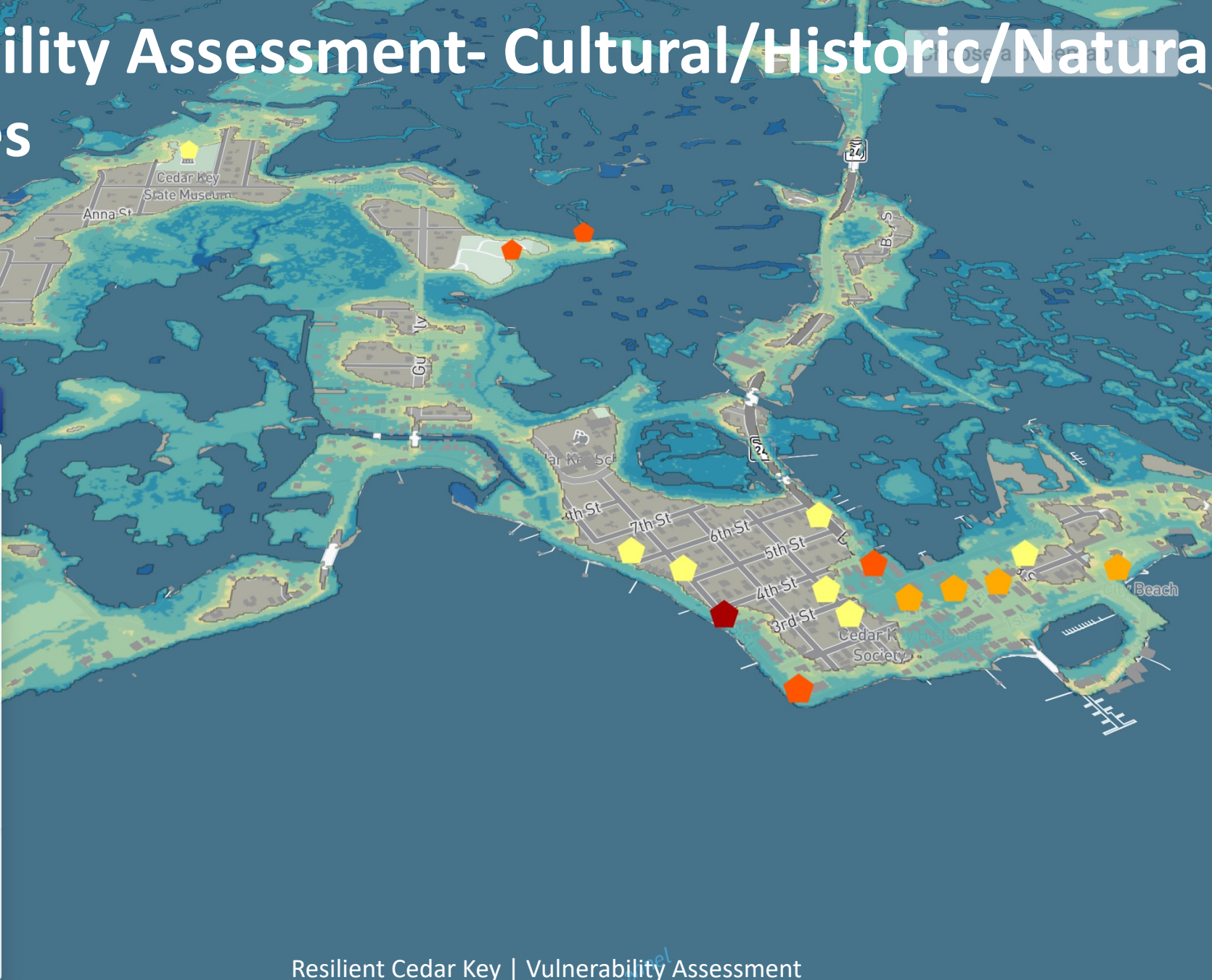
A Category 1 Storm would flood nearly **41%** of cultural, historic, or natural resource assets in the city limits.

Hide Legend

Depth of asset flooding

Based on First Floor Elevation (FFE) or relevant level to asset

0.1 - 0.5 ft
0.51 - 1 ft
1.1 - 3 ft
3.1 - 6 ft
6.1 - 9 ft
9.1 - 18 ft
18.1 - 27 ft
> 27 ft



Resilient Cedar Key | Vulnerability Assessment

<https://resilientcedarkey.web.app/>



Vulnerability Assessment- Cultural/Historic/Natural Resources (Cat 1)

