Climate Change & Sea Level Rise in the FL Keys:
Monroe County Prepares

Presented by Roman Gastesi
County Administrator
Monroe County, FL

2018 SE FL Climate Compact Summit
October 24-25, 2018
Miami Beach
Monroe County, Florida Among Most Vulnerable Counties in Nation

<table>
<thead>
<tr>
<th>Rank</th>
<th>County</th>
<th>Population Displaced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tyrell, NC</td>
<td>45%</td>
</tr>
<tr>
<td>2.</td>
<td>Hyde, NC</td>
<td>42%</td>
</tr>
<tr>
<td>3.</td>
<td>Monroe, FL</td>
<td>36%</td>
</tr>
<tr>
<td>4.</td>
<td>Dare, NC</td>
<td>21%</td>
</tr>
<tr>
<td>5.</td>
<td>Currituck, NC</td>
<td>20%</td>
</tr>
<tr>
<td>*</td>
<td>Miami-Dade, FL</td>
<td>3%</td>
</tr>
<tr>
<td>*</td>
<td>Broward, FL</td>
<td>1%</td>
</tr>
</tbody>
</table>

Land that’s dry now that will go under water by 2060 in relation to the number of people living there

*National-scale analysis of over 300 coastal counties
Matthew Hauer, Applied Demography Program, University of Georgia
Seeing Sea-Level Rise Today

From the Key West tide gauge. 9” increase in sea-level in the past 100 years.

Non-storm-related flooding

Photo by The New York Times
Unified Sea Level Rise Projection
(Southeast Florida Regional Climate Change Compact, 2015)

<table>
<thead>
<tr>
<th>Year</th>
<th>IPCC AR5 Median (inches)</th>
<th>USACE High (inches)</th>
<th>NOAA High (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2030</td>
<td>6</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>2060</td>
<td>14</td>
<td>26</td>
<td>34</td>
</tr>
<tr>
<td>2100</td>
<td>31</td>
<td>61</td>
<td>81</td>
</tr>
</tbody>
</table>

Observed Monthly Mean Sea Level at Key West

USACE Intermediate / NOAA Intermediate Low
Fall King Tides
Completed Road Elevation Projects
Preparing for Sea Level Rise

Sexton Cove Estate Road Elevation
Key Largo

Key Largo I Road Elevation
Key Largo
Stock Island Fire Station
(Key West)

Station Floor
Located Here

Elevated 1.5 feet
above Code
Bernstein Park, Stock Island

Elevated 24 inches to prepare for sea level rise
Tavernier Courthouse

- $32 Million Courthouse

- When built, to be elevated 1 foot higher than code to account for sea level rise
Thank You!