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Citizen Scientists To Document King Tides In Sarasota, Manatee Counties

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City Of Sarasota /

The City of Sarasota installed a tidal marker in the water near Siesta Drive to show tidal variations and how factors can influence water levels. King tides preview how sea level rise could affect coastal communities.

The king tide is the highest predicted high tide of the year. It is above the highest water level reached at high tide on an average day.

This week, many coastal areas around the U.S. will experience extreme high and low tides. King tides happen once or twice a year when the moon, earth, and sun are aligned and the moon is closest to the earth.

A citizen-science initiative aims to document these tides with photos.

The images from the King Tides Project help scientists better understand how sea level rise can impact coastal communities.

Christine Quigley of the Sarasota Bay Estuary Program, says the organization is part of the initiative and is hosting its own king tides photo contest.

The goal is to create a record of how shorelines look today and to track future changes.

Organizers encourage people to post photos to social media and include the hashtag #kingtides. Those who do are contributing to a larger database of imagery that helps people understand how sea level rise will impact their lives.

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Sarasota Bay Estuary Program

Localized flooding on the northern end of Longboat Key during a 2018 king tide.

"Our seas are rising in this area and king tides give us a glimpse into where that might be happening," she said. "I kind of think about king tides as normal tides on steroids, so they're very extreme on both ends. You have higher high tides than normal and lower

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Quigley says to participate, people should take photos of both the high and low tides Thursday and Friday. The data will be shared with the King Tides Project, an international initiative.

King tides don't cause sea level rise but they do offer a glimpse into life with higher seas. Many low-lying areas already experience localized flooding with higher tides. Average daily water levels are rising along with the oceans. As a result, high tides are reaching higher and extending further inland than in the past.



Rene Janneman

Scientists say king tides provide a glimpse of future everyday water levels, and they are a way to communicate local sea level rise impacts over long time periods.

According to The National Ocean Service, high tide flooding has increased in the U.S. on average by about 50% since 20 years ago and 100 percent since 30 years ago. The

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Quigley says she's heard reports of elevated water levels from residents in Sarasota and Manatee counties.

"And that actually coincides with data that we've been seeing," she said. "There is a tidal gauge in St. Petersburg that's been measuring tides since about the 1940's and that has seen an eight-inch increase in the sea level since that time."

And Quigley says understanding how tidal events impact rising seas isn't just valuable to scientists — but to policy makers charged with investing in solutions.



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Cathy Carter

Cathy Carter is a reporter and host for WUSF 89.7 and other Florida public radio stations.

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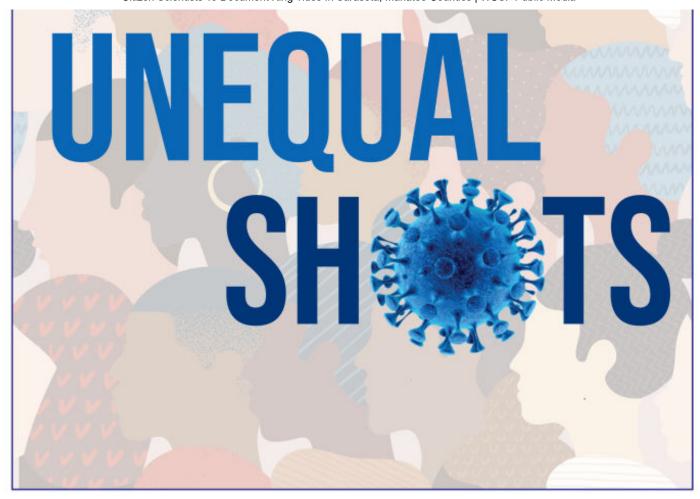
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