

## Socastee SC 544 Bridge Clearance

I'm finally underway, headed to the Socastee Swing Bridge which finally reopened after being closed for the past two weeks due to high water from the hurricane. I have a 63 ft mast which ought to be fine to get under the SR 544 fixed bridge just south of the swing bridge. After all, isn't it supposed to be 65 ft at high tide? I looked at the tide tables and I'll be at the bridge right a low tide, no sweat. I mean, the tide usually runs about 2 ft so with a 65 ft clearance at high tide, I should have an extra two feet,  $65 + 2 = 67$  ft!

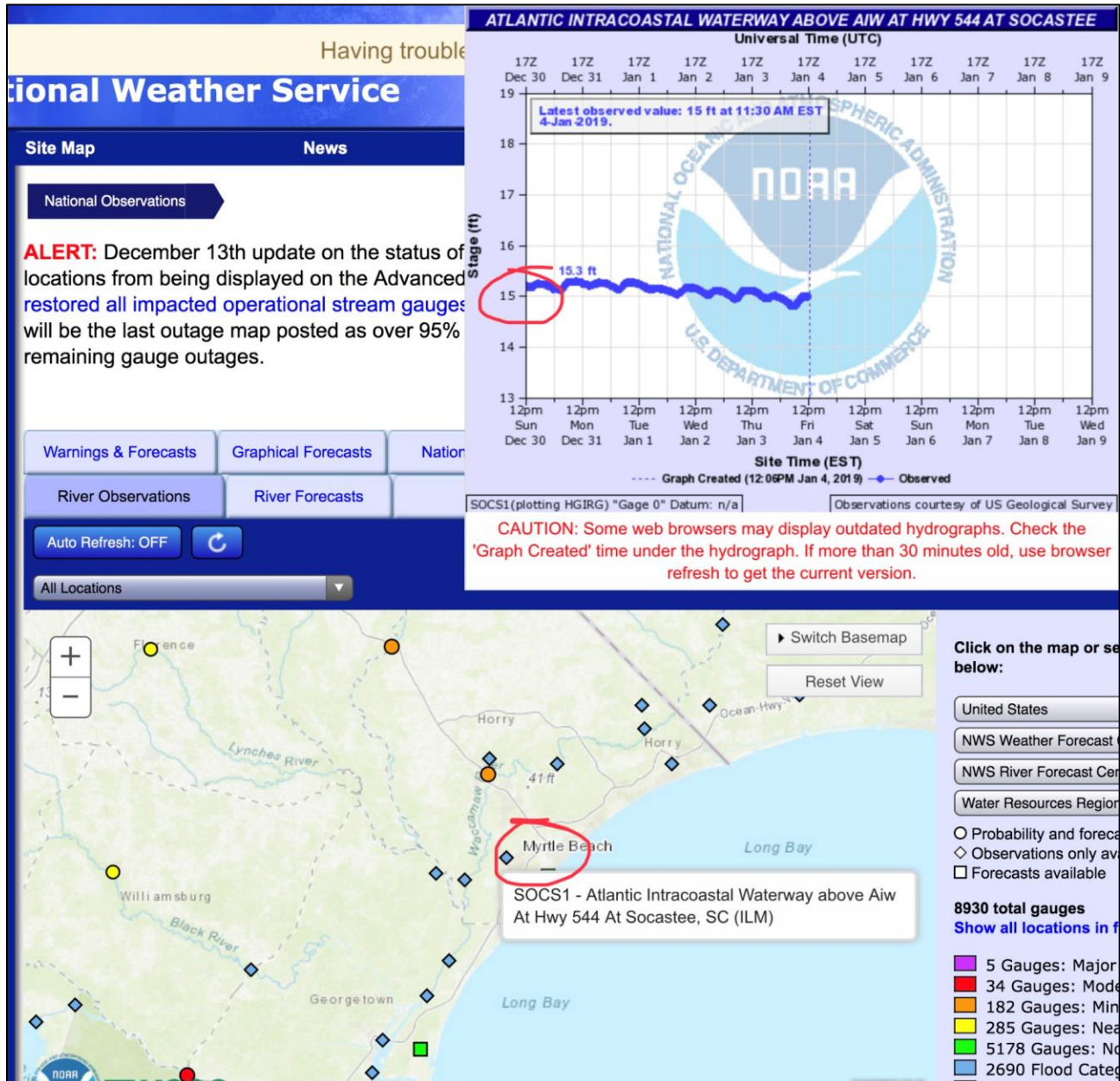


I made it through the swing bridge but wait!! Peering through the binoculars, I see only 62 ft on the bridge height boards?? How can that be? I shove the engine into reverse but it's kind of tricky with the current and I turn sideways in the channel, still headed for the bridge! I finally get turned, only a few feet before hitting and head back north. What just happened?

Of course, none of you reading this article ever had this experience... Don't you wish there were bridge height boards that automatically adjusted for water level! Better yet, why not put the readout on the internet so you could tell before you left the comfort of your marina or

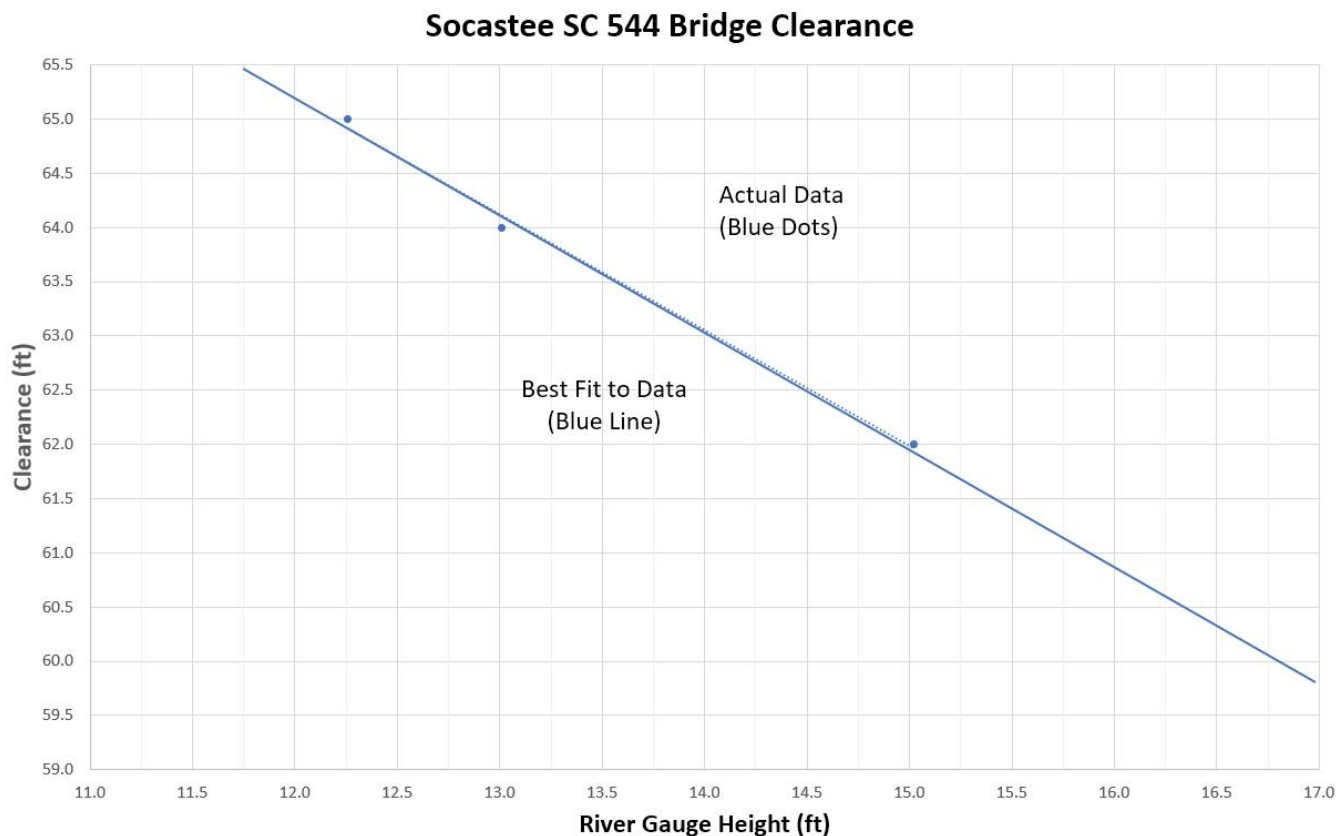
anchorage whether your mast would clear the bridge. Actually, such a thing exists for some bridges and one of those bridges is the Socastee SC 544 high bridge! The height boards don't transmit their readings of bridge clearance but there is a water depth gauge right by the bridge. Just think, if you took a photo of the height board as you passed by (on a low water day) and noted the date and time, then you could look up on the internet the water level reported by the water gauge at the bridge. There ought to be a correlation between reading on the bridge height board and the reading on the water level gauge. For example, if you find the height board to read 65 ft and the water gauge to show 12 ft of water depth, then if the water level goes up a foot to 13 ft, then the bridge clearance should decrease by the same amount to 64 ft. Sounds pretty simple. The trick is in getting enough datapoints to establish a correlation and a graph.

Before continuing, let's look at the source of the water depth gauge information. The National Oceanic and Atmospheric Administration (NOAA) maintains a database of all river water levels accessible over the internet at [River Observations](#). It's a national map where you can search graphically for any water level station in the US and then observe the latest reading via just a click with a mouse (or a tap on an iPad). Isn't the internet wonderful! However, we are just interested in the Socastee SC 544 high bridge so let's find a water gauge nearby. Magnifying and panning over to South Carolina, we find Socastee close to Myrtle Beach. It looks like the water gauge reading is 15 ft which is quite a bit above the usual 11 to 12 ft. I circled the water gauge height in red on the graph at 15 ft.



I enlisted the help of members of my [ICW Cruising Guide Facebook page](#) in taking photos of the bridge height board as they passed under the Socastee SC 544 bridge (on a normal water day!) Knowing the date and time of their passage, I then accessed the chart above to find the water gauge depth.

Having in hand the photo of the bridge height board and also the water gauge level reported, I then constructed the graph as shown below.



To find the bridge height, you first find the [River Gauge Height for Socastee SC 544 Bridge](#) (this is a direct link) on the horizontal axis, go up to the blue line and then over to the left to read the predicted bridge clearance. For example, if the river gauge height was 15 ft, then the bridge clearance would be predicted to be 62 ft. The chart and links in this article have also been posted as an [Alert in Waterway Guide](#) so all cruisers can take advantage of the information for convenience and safety.

With all this information available over the internet, you can find whether you'll clear the Socastee bridge from the comfort of your cabin in a marina or at anchor before you cast off. Don't you wish every bridge had this data available? In fact, there are several more that might and we at the [ICW Cruising Guide Facebook](#) page and [Waterway Guide](#) are working to product more graphs for other bridges that sometime don't meet the 65 ft minimum at high water, stay tuned.