

What a Difference a Few Miles Make

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The National Hurricane Center (NHC) in its 11:00 pm, September 9, Hurricane Irma discussion said

“The hurricane's angle of approach to the west coast of Florida makes it very difficult to pinpoint exactly where Irma will cross the Florida Gulf coast.”

That discussion indicated that Irma would skirt the west coast offshore and make landfall in St. Petersburg with category 3 (120 mph) winds. The headline of an online article from the New York Times said Irma “Now Targets St Pete.” By early Monday morning, September 11, Irma passed about 30 miles east of St. Petersburg with winds of 100 mph. But winds in St. Petersburg were, at worst, gusts of 70 to 80 mph.

So what happened? First, Irma's track shifted to the east a bit and made landfall near Naples/Fort Myers and traveled inland up the peninsula losing strength, instead of maintaining strength offshore in the Gulf. Also passing east of St. Petersburg put us on the weaker side of the storm.

But what happened to all the water in the Bay? About 5:00 am on Sunday (09/10) the water started to drain out of the Bay. By 10:00 pm the water level had dropped 5 feet at Bayboro Harbor, just north of our island. Then by 10:00 am Monday the water level had risen 7 feet with a “surge” of 2 feet above the normal tide. (tidesandcurrents.noaa.gov or search “noaa tides St. Petersburg”)

With Irma east of St. Petersburg and on a northward track, the counter clockwise winds around the hurricane caused the winds in the Bay Area to blow from the east, then from the north, and finally from the west. The northerly winds blew the water out of the Bay. On Sunday the maximum winds measured at the Skyway Bridge were 42.5 mph from the NNE which is right down the centerline of the Bay. A quick (and possibly wrong) calculation suggests that more than 300 billion gallons of water were drained from the Bay.

As Irma approached Florida, the early track predictions put Irma heading north offshore in the Atlantic Ocean. Then the predicted track shifted westward to the east coast, then farther west to the west coast and into the Gulf. Finally, the actual track was just inland from the west coast. The predictions were not very precise but mostly all within the “cone of uncertainty.” So as our disaster recovery managers say, we should “Plan for the worst and hope for the best.”