

FLOOD INSURANCE MAPS – COMMENTARY BY E. OLSEN, P.E.

When flood insurance maps are updated by FEMA – and are adopted by a community – such as the COJ – they are already “out of date”.

This has never been truer for the St. Johns River since the FEMA maps adopted in 2018 *do not* address any level of background change in river elevation due to SLR.

Moreover, the most recent FEMA maps assume that storm surge originates in the Atlantic Ocean and propagates up the river to the downtown core.

The FEMA modeling protocols DO NOT address storm track impacts like that experienced in H. Irma (in 2017) where a storm (less than a Cat. 1 Hurricane) caused riverine flooding equal to, or greater than that experienced in 1964 during H. Dora – which until Irma had been described as the worst storm-of-record for N.E. Florida.

In the vicinity of St. Vincent’s hospital in Riverside, the measured maximum still water elevation (in a parking garage) was 3 ft. greater than the FEMA predicted 100-year storm elevation. This proves that even today, the FEMA maps are in gross error for this part of the SJR and should *not be used as a design standard* by the COJ. Simplistically, the present day COJ building guidelines require new development to be at the FEMA 100-year elevation for a site, plus 2 ft. The 2 ft. is simply a “safety factor” and is *not* analytically derived.