



REGIONAL PLANNING AGENCY OF DUKES COUNTY
SERVING AQUINNAH, CHILMARK, EDGARTOWN, GOSNOLD, OAK BLUFFS, TISBURY, & WEST TISBURY

Date: March 4, 2021
To: MVC
From: Dan Doyle (staff)
Re: DRI 674M: Stone Bank Condos: Flood Risk using MA Coast Flood Risk Model

Background

Using the [MA Coast Flood Risk Model](#) (MA FRM), the map series below show the mounting risk over 3 different time horizons when compared to present day conditions.* This model, developed by MassDOT, Woods Hole Group, and UMASS Boston takes into account the dynamic forces of storm surge, coupled with Sea Level Rise (SLR). Such forces include but are not limited to wave run-up, winds, overtopping, currents and tides.

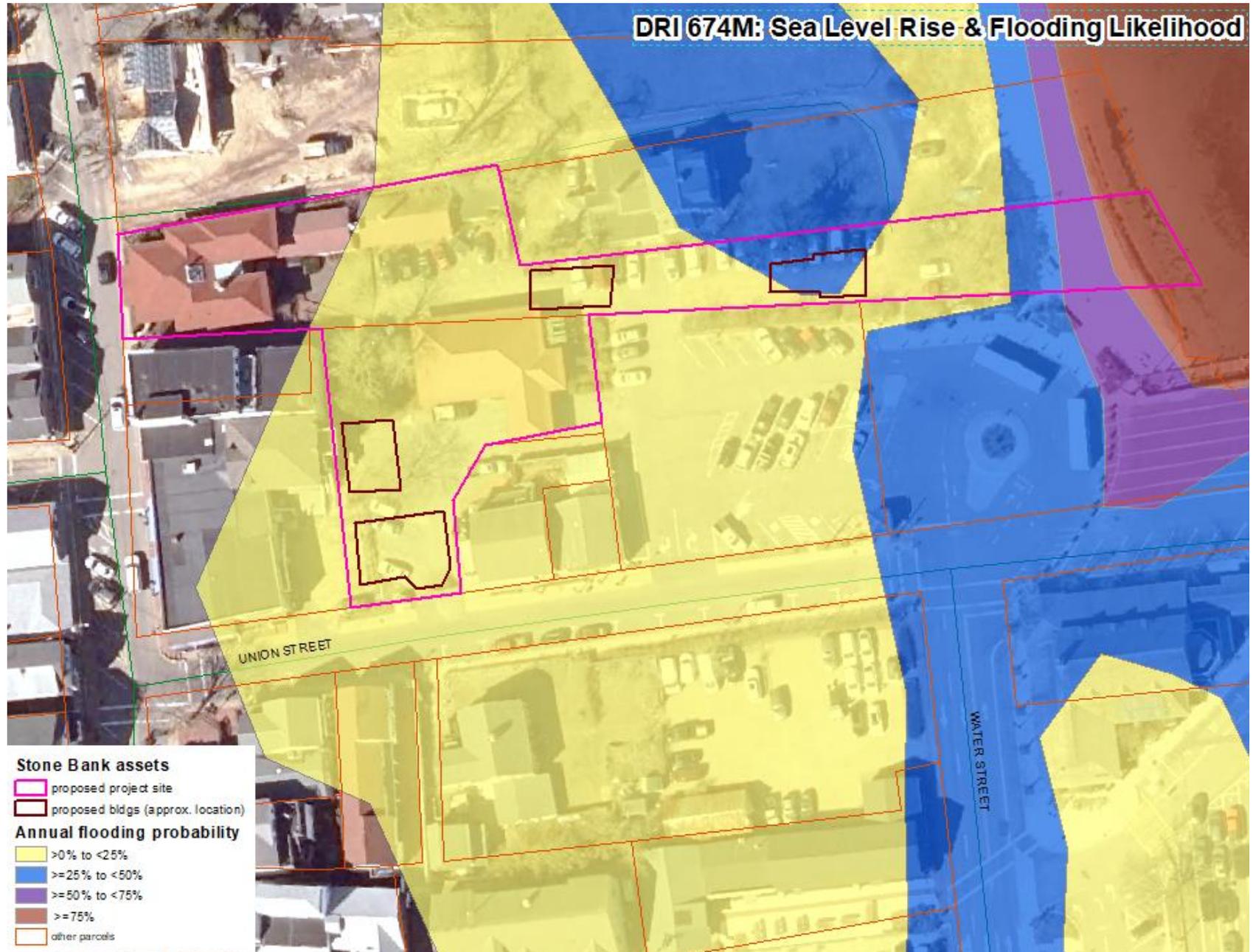
The model uses a High SLR scenario produced by Coastal Zone Management (CZM). The High scenario was chosen by the entities developing the model from four trajectories: Intermediate, Intermediate-High, High, and Extreme.

The MA FRM is also used in our 2020 Hazard Mitigation Plan Update.

The maps are not intended to discount the other Smart Growth Planning principles this project promotes, but rather to show how flooding risk is expected to ratchet up over time, and extend further upland, into the site. The tradeoffs of developing here should be clear. With that, are there design elements that ground level commercial uses should consider if opening up shop in this area? Given the greater frequency of expected flooding in decades to come, are there measures that can be taken to make new and existing infrastructure more resilient? Are there portions of this site that might be better suited - or even needed - for a redesigned ferry terminal in 2-3 decades?

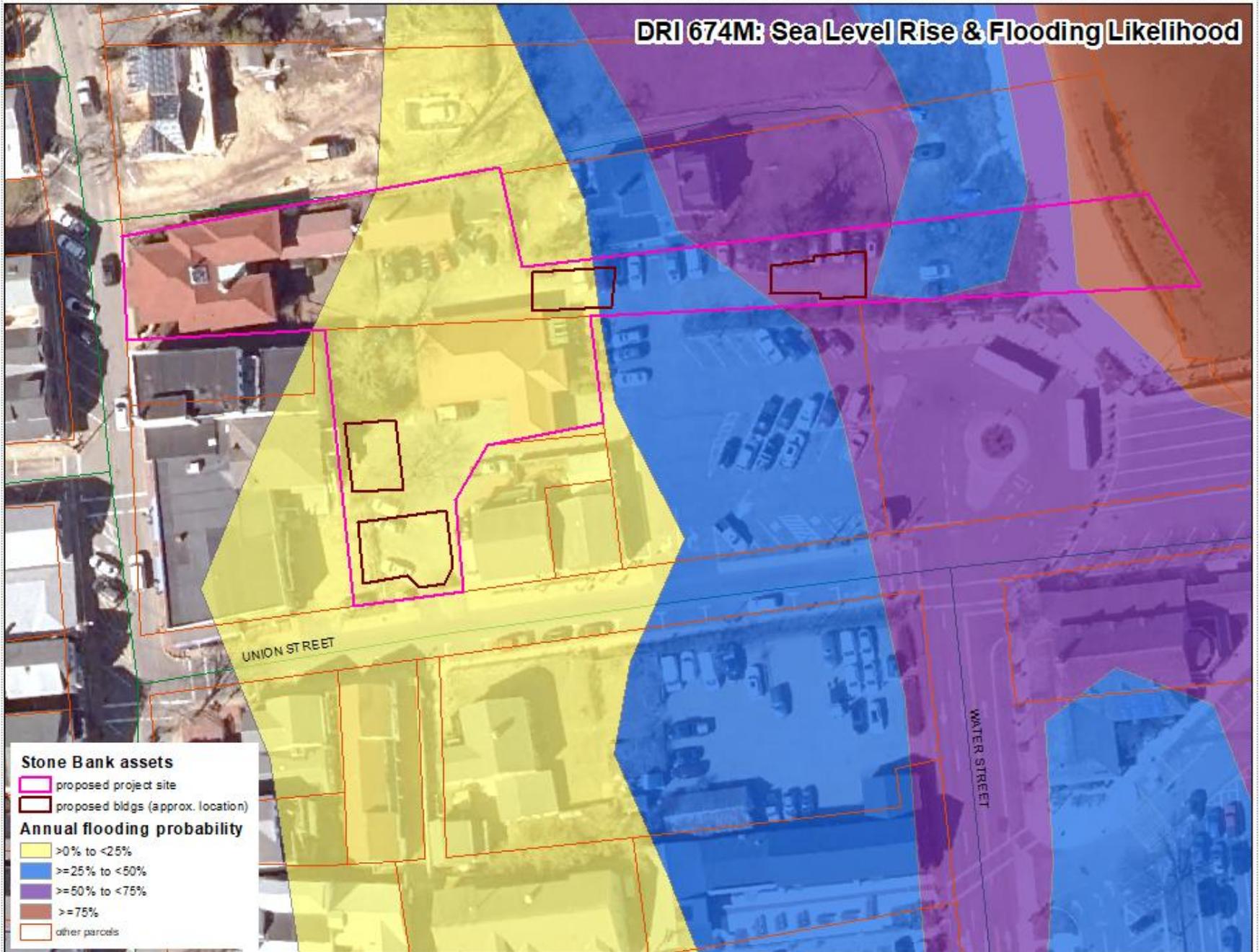
***Note:** the sea level baseline year was 2008. The MA FRM also allows for an estimated flood depth range for a “100 year flood” over the same time horizons. That analysis can be produced upon request.

Present Risk

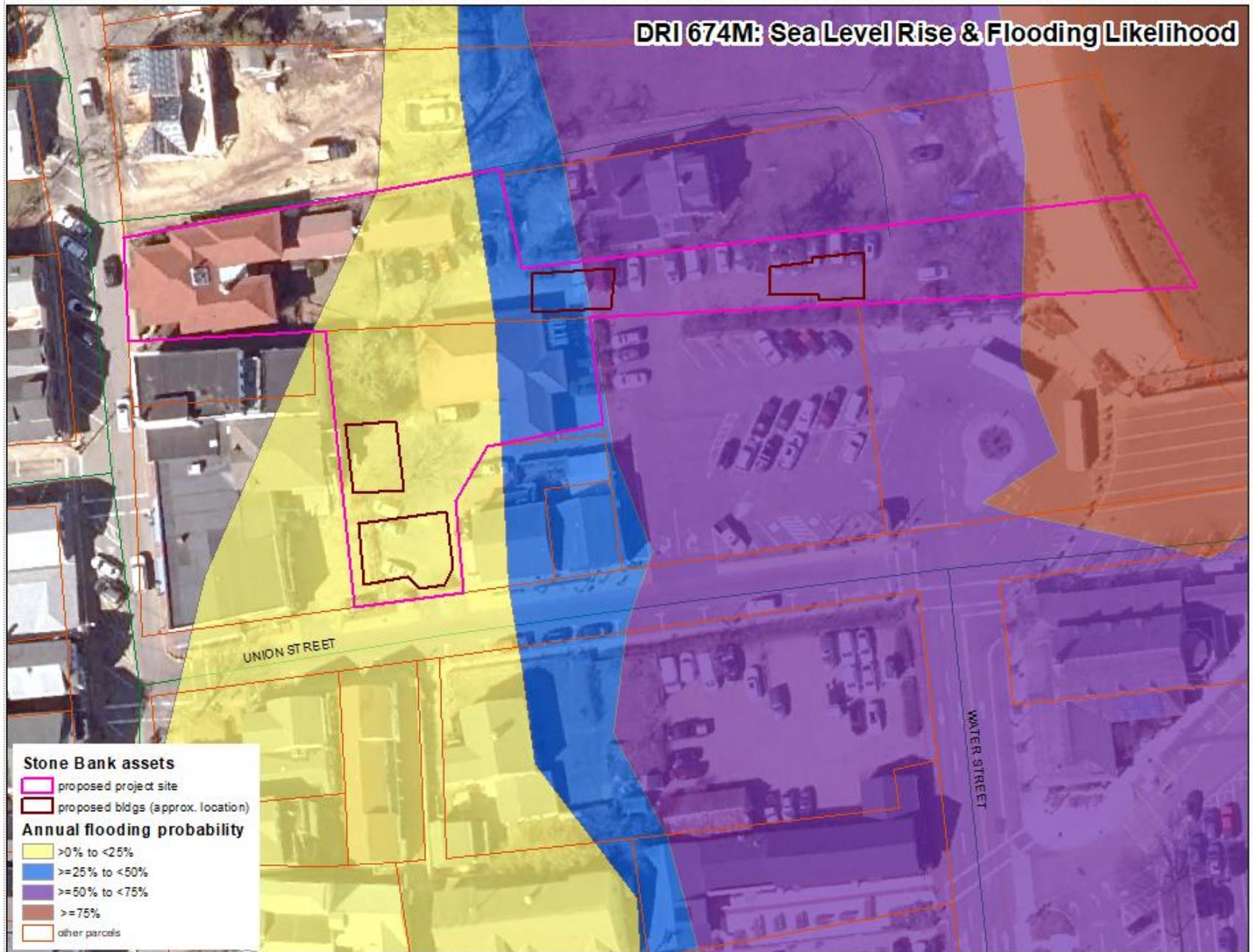


Risk in 2030

DRI 674M: Sea Level Rise & Flooding Likelihood



Risk in 2050



Risk in 2070

