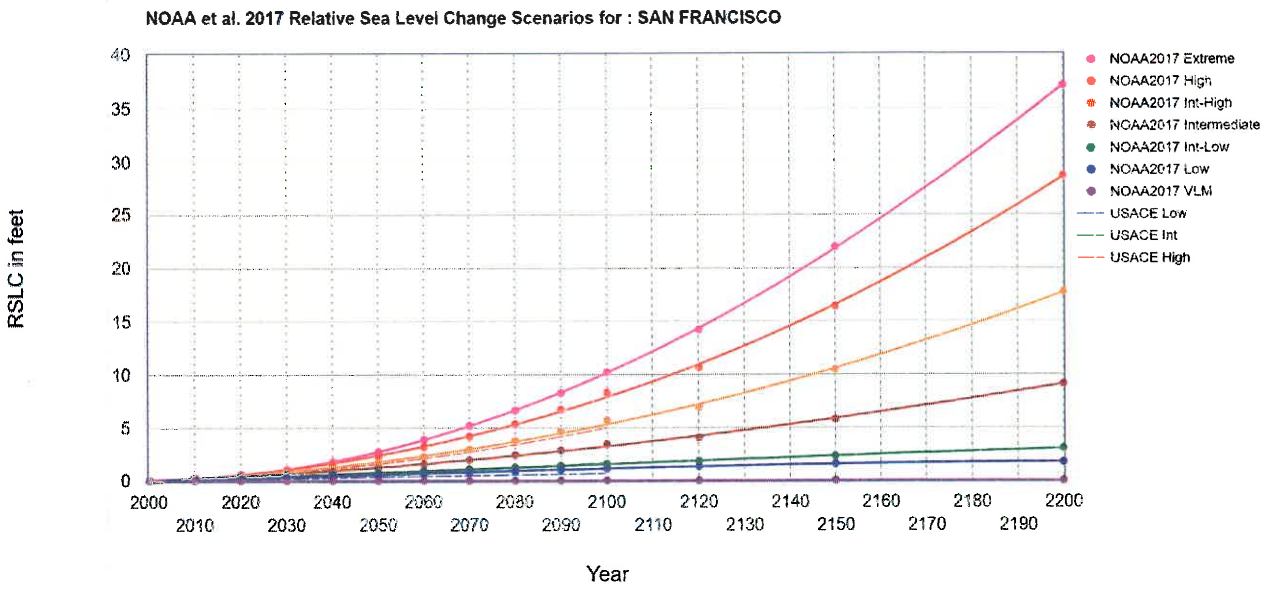
OBSOLETE

WaterFix Sea Level Rise Assumptions

High sea level rise projections at San Francisco (feet)[1]

Agency	2060 high	2060 max	2100 high	2100 max	2130 high	2130 max
CA Climate Action Team 2009	1.48[2]			4.6		
NOAA 2012	1.77	2.81	4.05	6.67	6.35	10.64
USACE 2013	2.16		5.04		7.97	
NOAA 2017	3.18	3.87	8.3	10.2	10.63	14.21
Ocean Protection Council 2018	2.6	3.9	4.4	6.9	6.0	10.0



[1] Assuming high emissions scenarios

[2] Used for 2013 BDCP Draft EIR operations simulation (more recent WaterFix simulations use 6 inches of sea level rise at 2030)

Flooding

WaterFix facilities are designed for 1.5 feet (18 inch) increase in maximum water surface elevation in the Delta with High Sea Level Rise. "Initial and tentative" estimate never checked with hydrodynamic modeling. Clifton Court Forebay doesn't even meet the current 200 year flood protection standards. Overtopping could cause failure of the embankments.

Delta Stewardship Council Draft Staff Determination on WaterFix Consistency Appeal, 2018

... the Department stated its assumptions still reflect the use of best available science because they are consistent with the recommended estimates for the sea-level rise under the "likely range" reported for years 2030 and 2060 in the latest guidance from the California Ocean Protection Council for sea-level rise planning. The California Ocean Protection Council, however, recommends the "likely range" for use in low risk aversion decisions, such as a coastal unpaved trail. (Ocean Protection Council, 2018 Update, p. 25.) Whereas, it recommends use of the H++ scenario, which is extreme risk aversion, for projects with a lifespan beyond 2050. (Ibid.)

Delta Independent Science Board, 2013

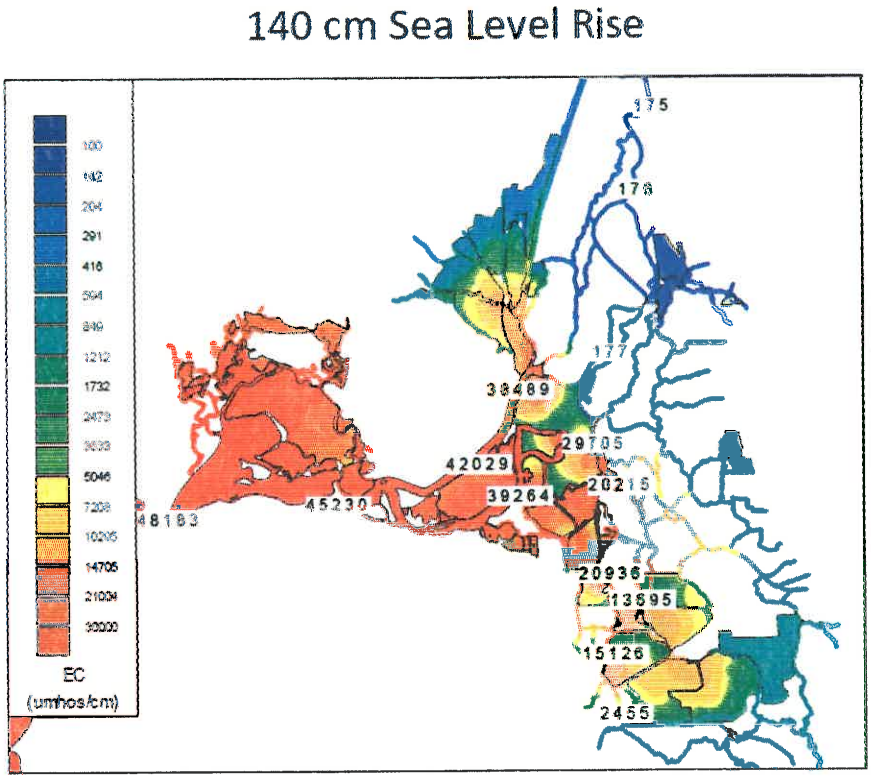
The potential direct effects of climate change and sea-level rise on the effectiveness of actions, including operations involving new water conveyance facilities, are not adequately considered. [...] Similar comments could be made about the treatments of other disrupting factors, such as floods, levee failures, earthquakes, or invasive species, any of which could profoundly alter the desired outcomes of BDCP actions.

In their response to our preliminary draft review, the Department of Water Resources noted that "the scope of an EIR/EIS is to consider the effects of the project on the environment, and not the environment on the project". If the effects of major environmental disruptions such as climate change, sea-level rise, levee breaches, floods, and the like are not considered, however, one must assume that the actions will have the stated outcomes. We believe this is dangerously unrealistic.

DANGEROUSLY INADEQUATE

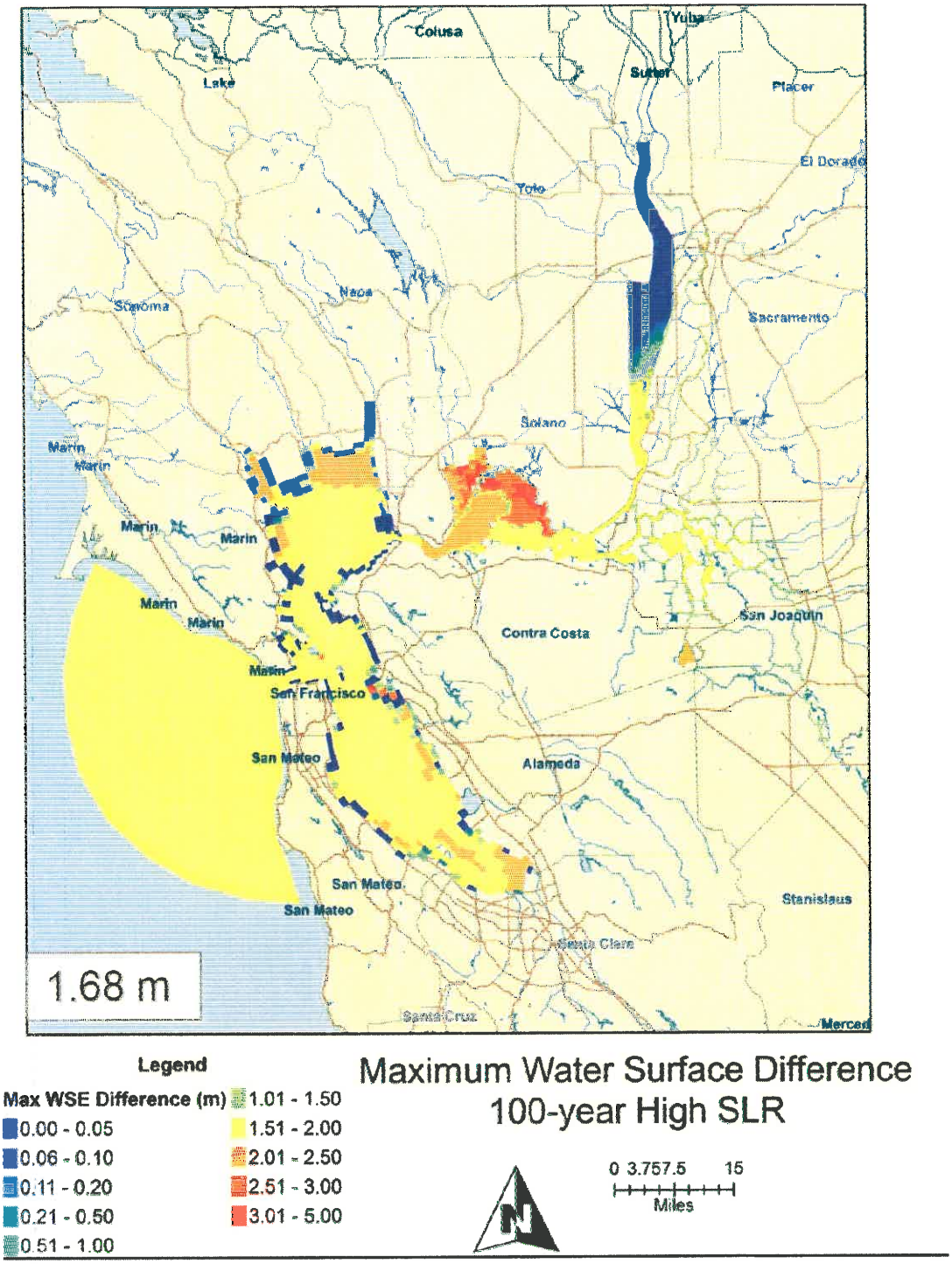
Modeling of WaterFix Operations with High Sea Level Rise

The BDCP steering committee did a single study in 2010 of operations of the North Delta intakes with 55 inches of sea level rise. RMA Associates ran a 3D hydrodynamic simulation of the North Delta intakes with sea level rise, and with multiple levee breaches and Island flooding in the southeast and southwest Delta from the Hayward scenario earthquake.



The simulation was just a variation of RMA's study of the Hayward earthquake scenario for the Delta Risk management strategy. The breaches of levees mostly in the southeast and southwest Delta was based on assumed impacts from a large earthquake on the Hayward fault.

There was no consideration that sea level rise and levee failures in the Central and Western Delta would cause levee failures in the Northern Delta. There is NO OTHER modeling showing that the water at the intakes at Hood will stay fresh with high sea level rise.



US Army Corps of Engineers high sea level rise – 1.68 m (5.5 feet)

Maximum difference in water surface elevation