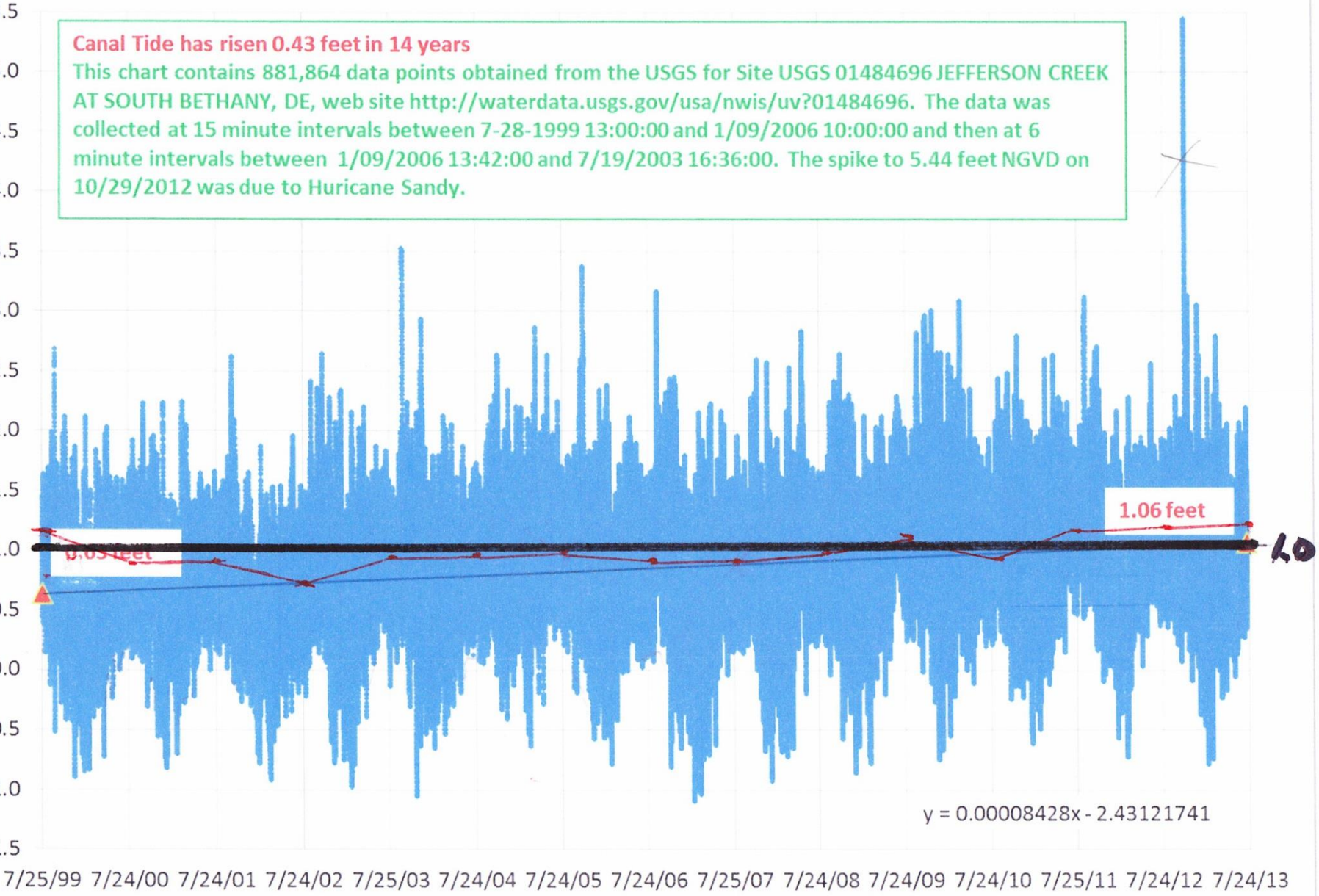
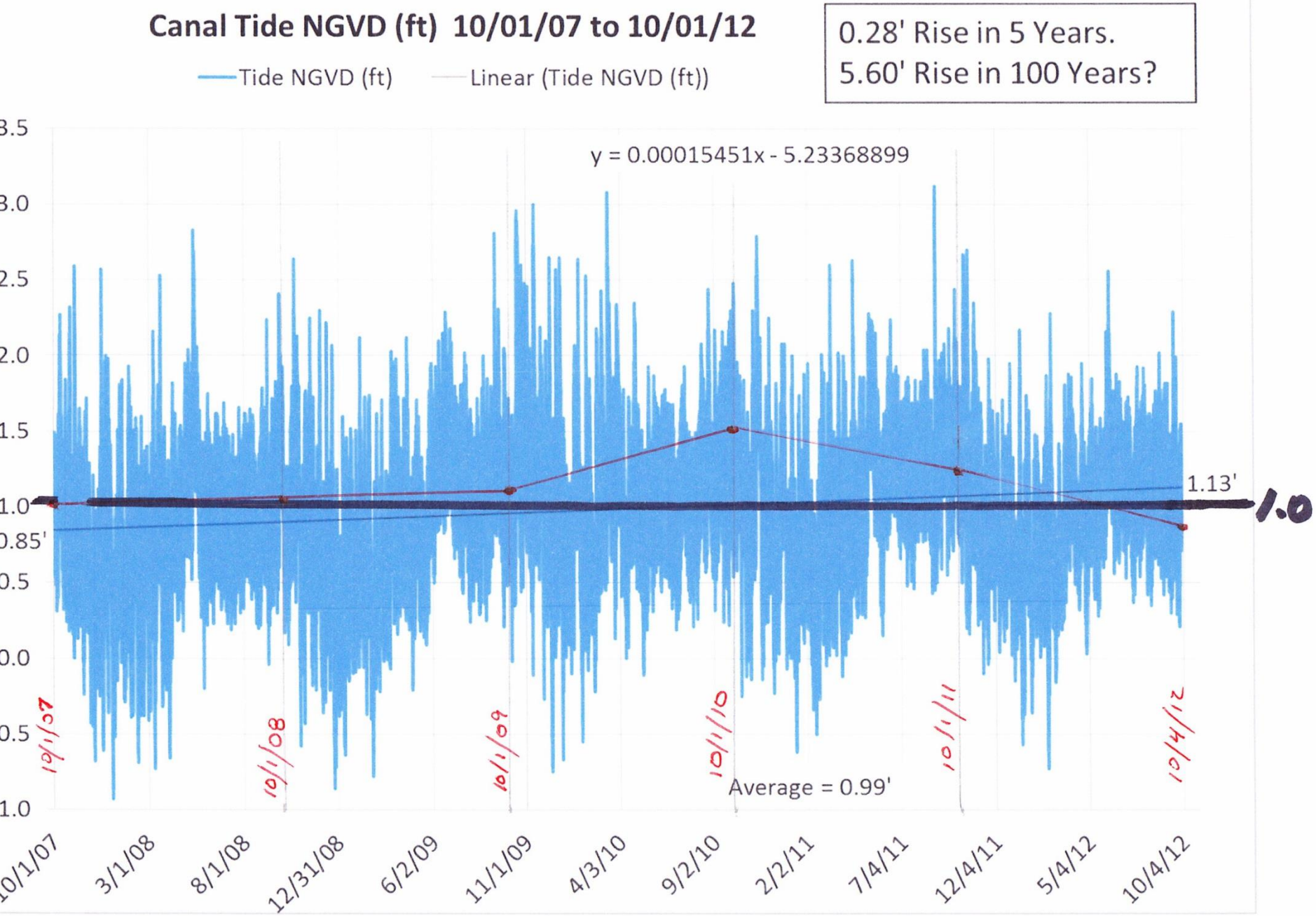
Sea Level Rise Data Analysis

Review of Tide Data Analysis

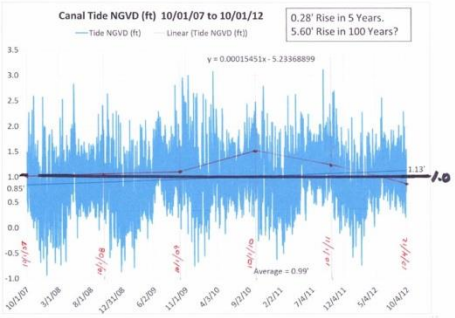
Robert Coleman, PE

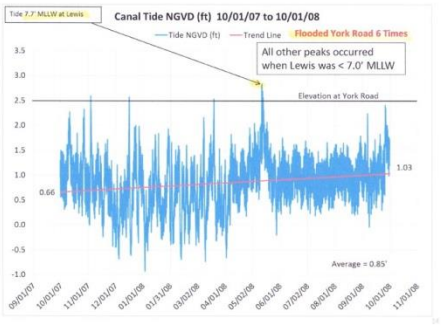
All Recorded (14 years) Canal Tide (feet NGVD 1929) Data at West 1st Street

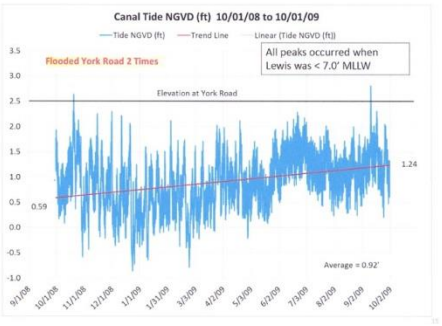


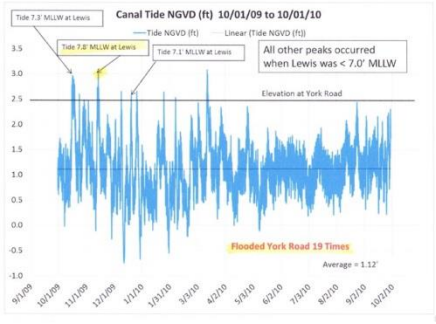

Canal Tide NGVD (ft) 10/01/07 to 10/01/12
Tide NGVD (ft)
Linear (Tide NGVD (ft))
0.28' Rise in 5 Years.
5.60' Rise in 100 Years?
y = 0.00015451x - 5.23368899
1.13'
1.0
0.85'
Average = 0.99'
10/1/07
10/1/08
10/1/09
10/1/10
10/1/11
10/4/12
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0.5
1.0
10/1/07
3/1/08
8/1/08
12/31/08
6/2/09
11/1/09
4/3/10
9/2/10
2/2/11
7/4/11
12/4/11
5/4/12
10/4/12

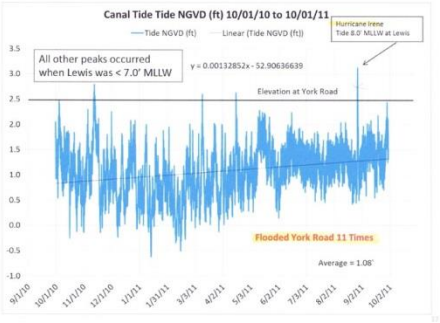
5 Year Tide Charts 2007 – 2012

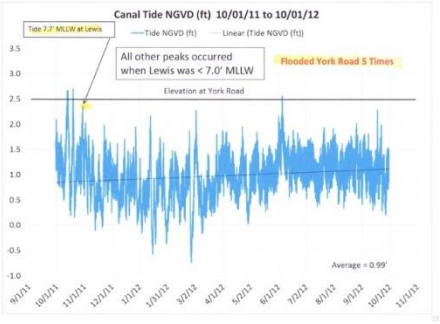


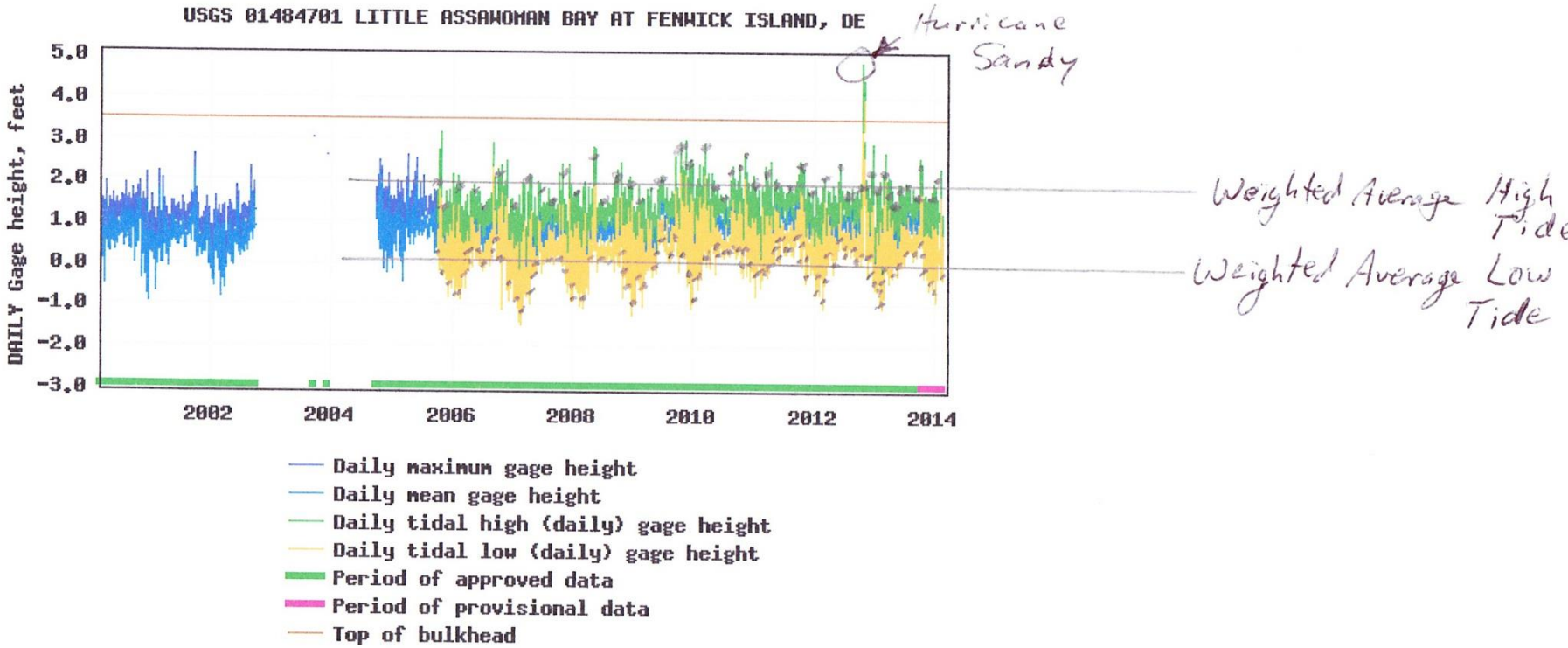


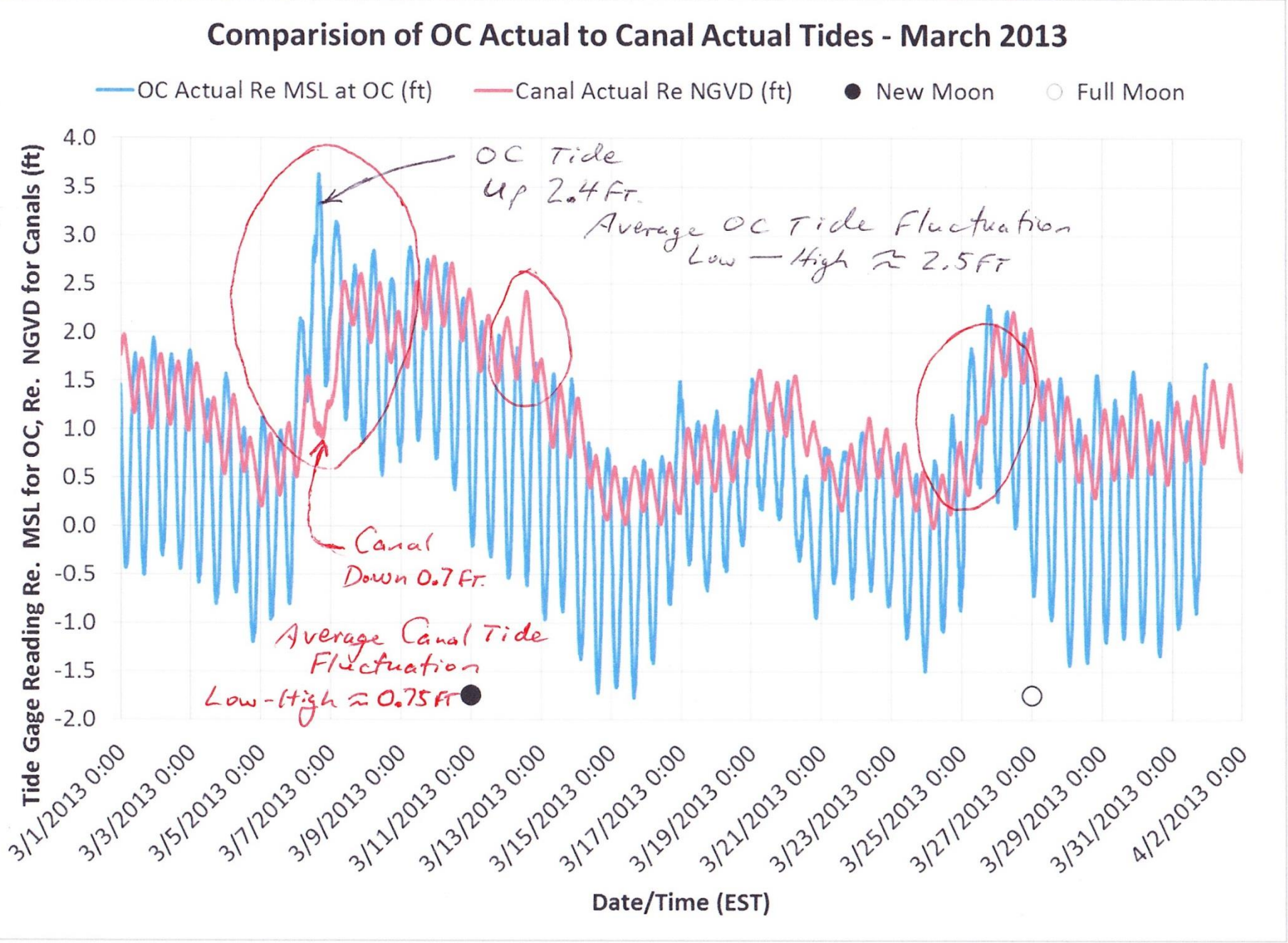









USGS 01484701 LITTLE ASSAWOMAN BAY AT FENWICK ISLAND, DE
Hurricane Sandy
DAILY Gage height, feet
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
2002
2004
2006
2008
2010
2012
2014
Weighted Average High Tide
Weighted Average Low Tide
Daily maximum gage height
Daily mean gage height
Daily tidal high (daily) gage height
Daily tidal low (daily) gage height
Period of approved data
Period of provisional data
Top of bulkhead



Total Time Period = 1 Month

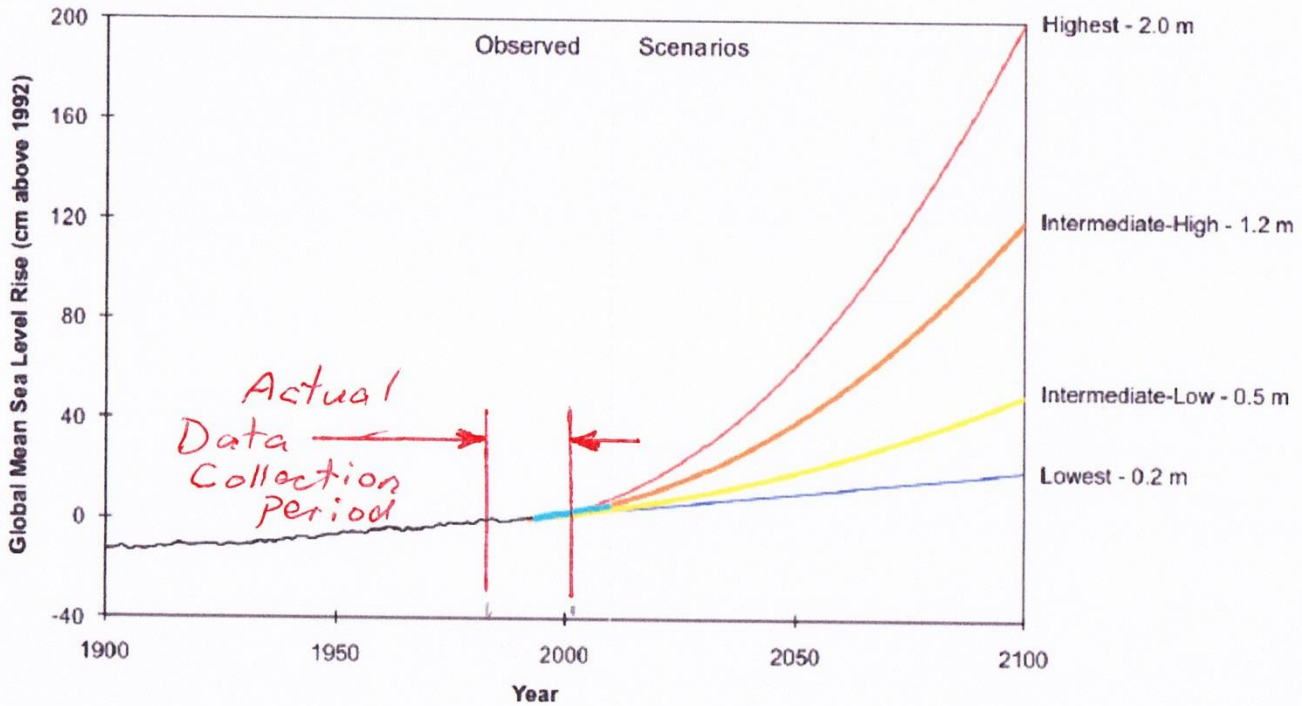
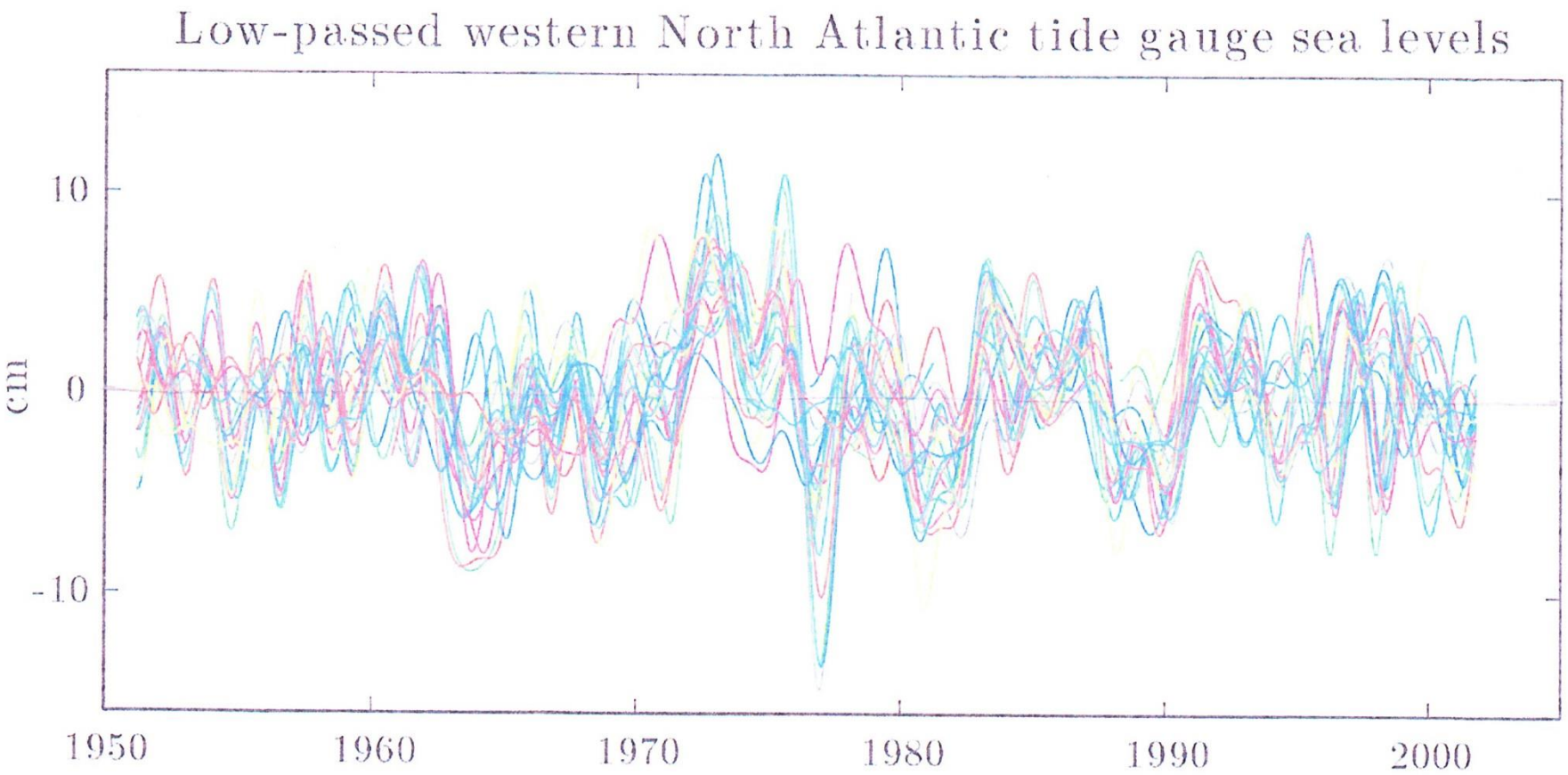


Figure ES 1. Global mean sea level rise scenarios. Present Mean Sea Level (MSL) for the US coasts is determined from the National Tidal Datum Epoch (NTDE) provided by NOAA. The NTDE is calculated using tide gauge observations from 1983 – 2001. Therefore, we use 1992, the mid-point of the NTDE, as a starting point for the projected curves. The Intermediate-High Scenario is an average of the high end of ranges of global mean SLR reported by several studies using semi-empirical approaches. The Intermediate Low Scenario is the global mean SLR projection from the IPCC AR4 at the 95% confidence interval.

NOAA Data



gure 8.

Links to Dr. Legates & Dr. Willie Soon Presentations on Global Warming And Sea Level Rise

Climate Change & Sea Level Rise – Dr. Willie Soon March 18 2013
http://www.youtube.com/watch?v=VaRXDYBYRO4

Climate Change & Sea Level Rise – Dr. Legates March 18 2013
http://www.youtube.com/watch?v=Y-rolAapS60