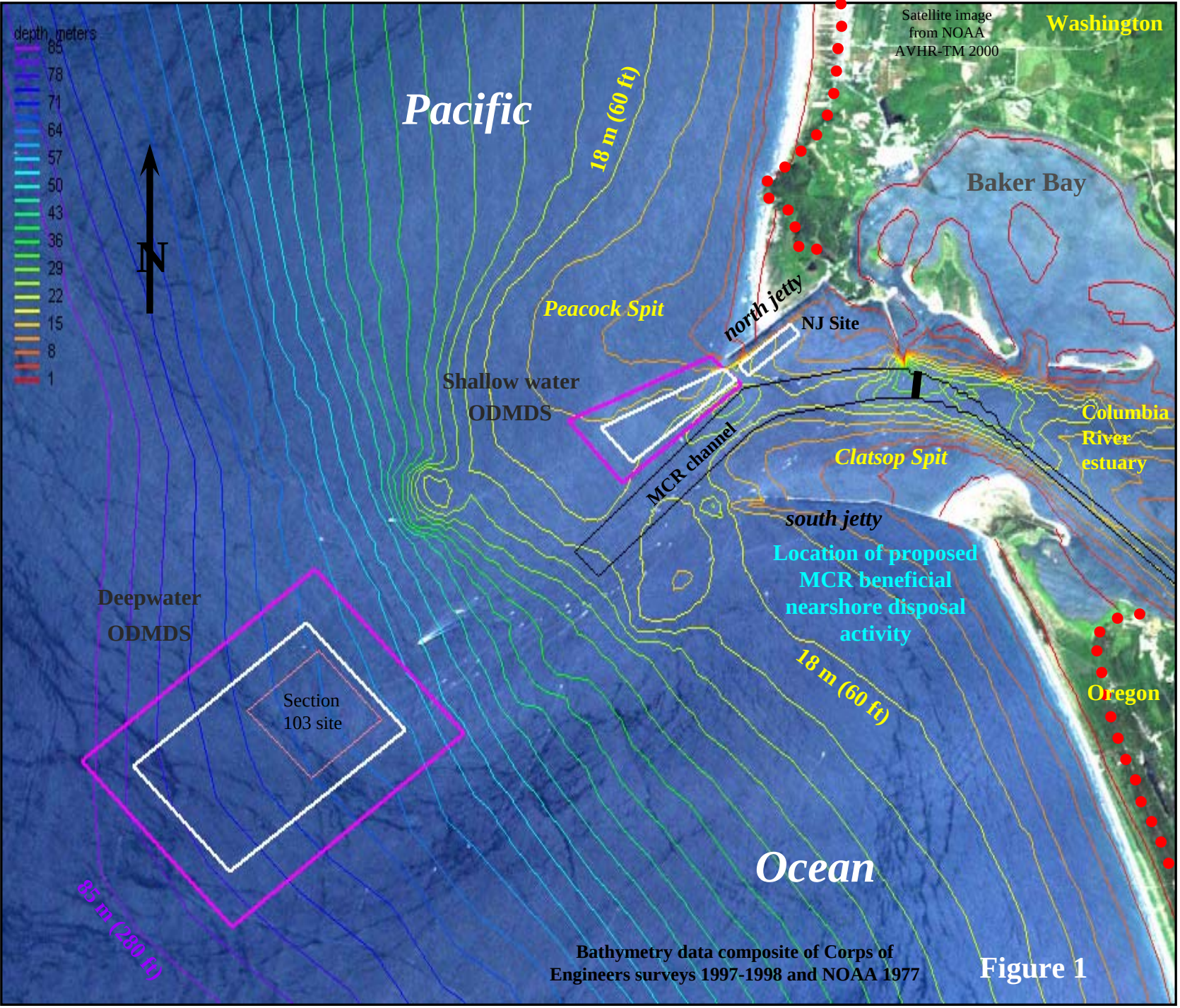


Mouth of Columbia River and Vicinity

highlighting location of proposed beneficial dredged material disposal activity

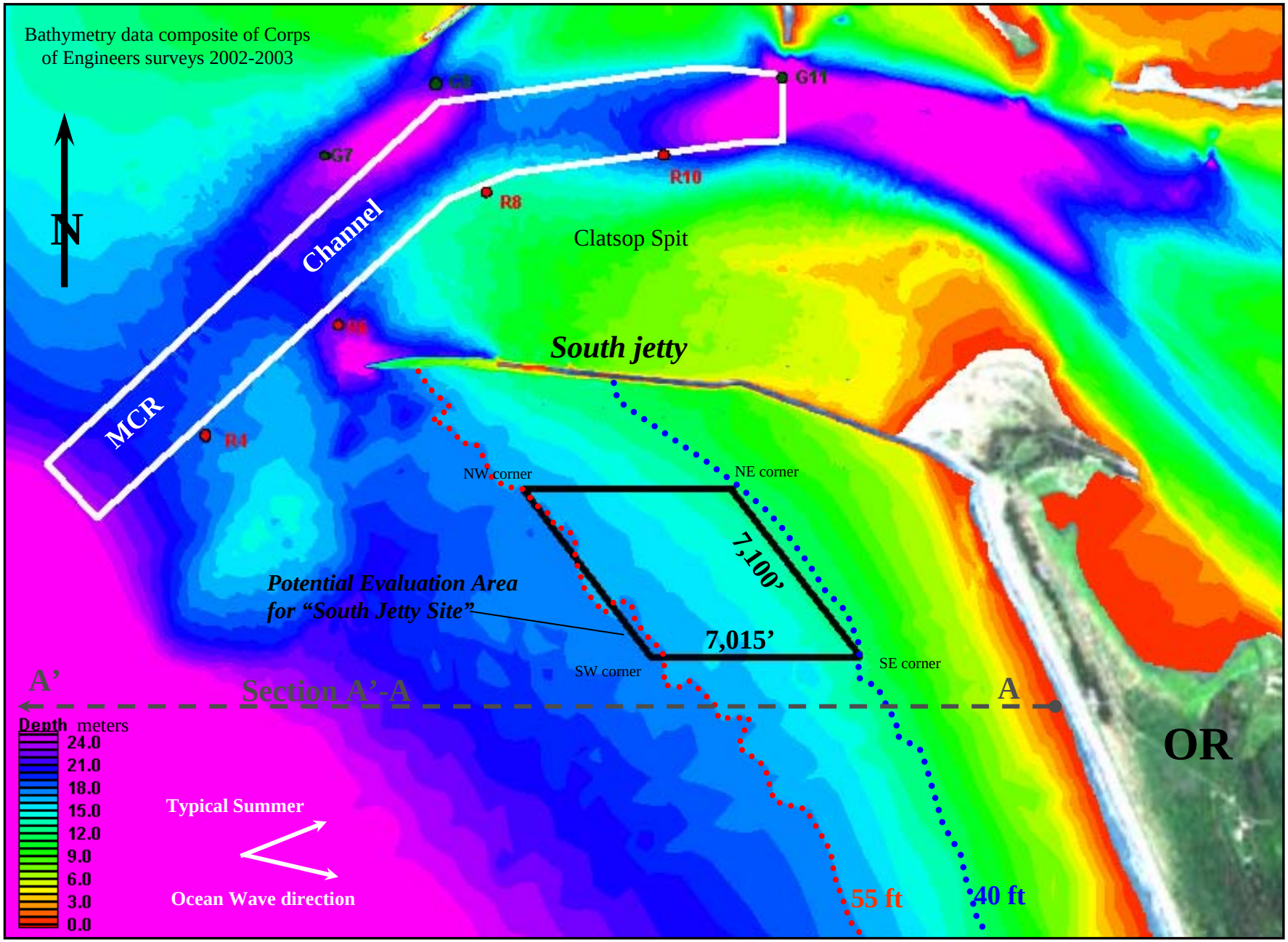
MCR = mouth of Columbia River

= Shoreline in 1885, pre jetty

ODMDS = ocean dredged material disposal site

2 miles

Figure 1



Potential Evaluation Area for "South Jetty Site"

Figure 2

Cross-Shore Profile – Section A-A': **2 Miles South of MCR**

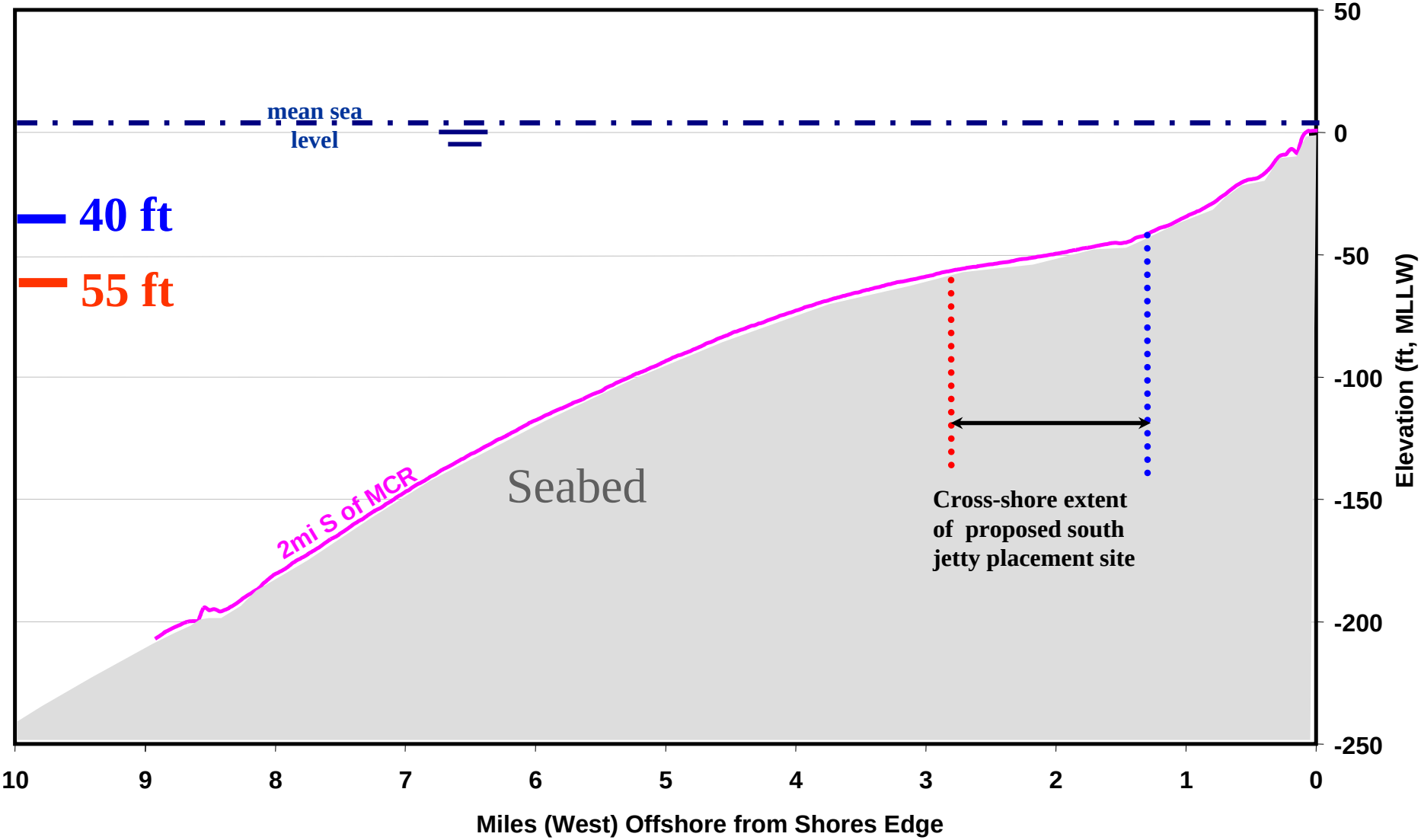


Figure 3

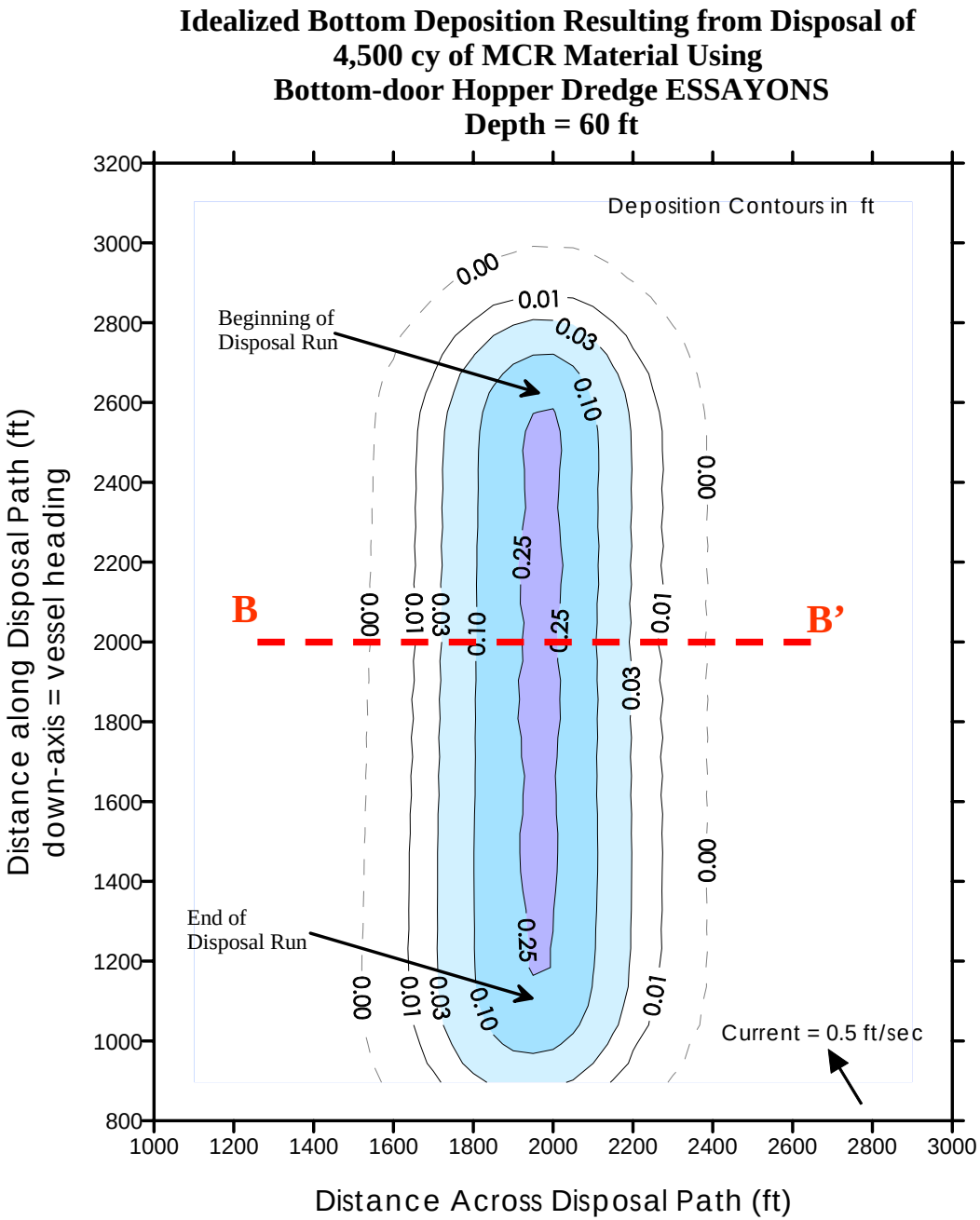


Figure 4

Simulated deposition pattern of dredged material resulting from one load of fine sand placed in 60 ft of water by the hopper dredge *Essayons*. Results are for the "normal" (non-enhanced) method of disposal at Mouth of Columbia River. Average length x width of the deposition footprint shown is 1,500 ft x 500 ft, respectively. Maximum thickness of simulated deposition is 0.25 - 0.3 ft. The 12 bottom doors of the hopper dredge were modeled as opening in pairs (2 at a time, abreast), sequentially during a 7.5 minute dump run. The dredged was modeled as moving at 2 knots.

Enhanced Dispersal could be accomplished by increasing the duration and/or speed of the hopper dredged during disposal. The deposition pattern would be similar to that shown here, but length would be increased and thickness may be decreased.

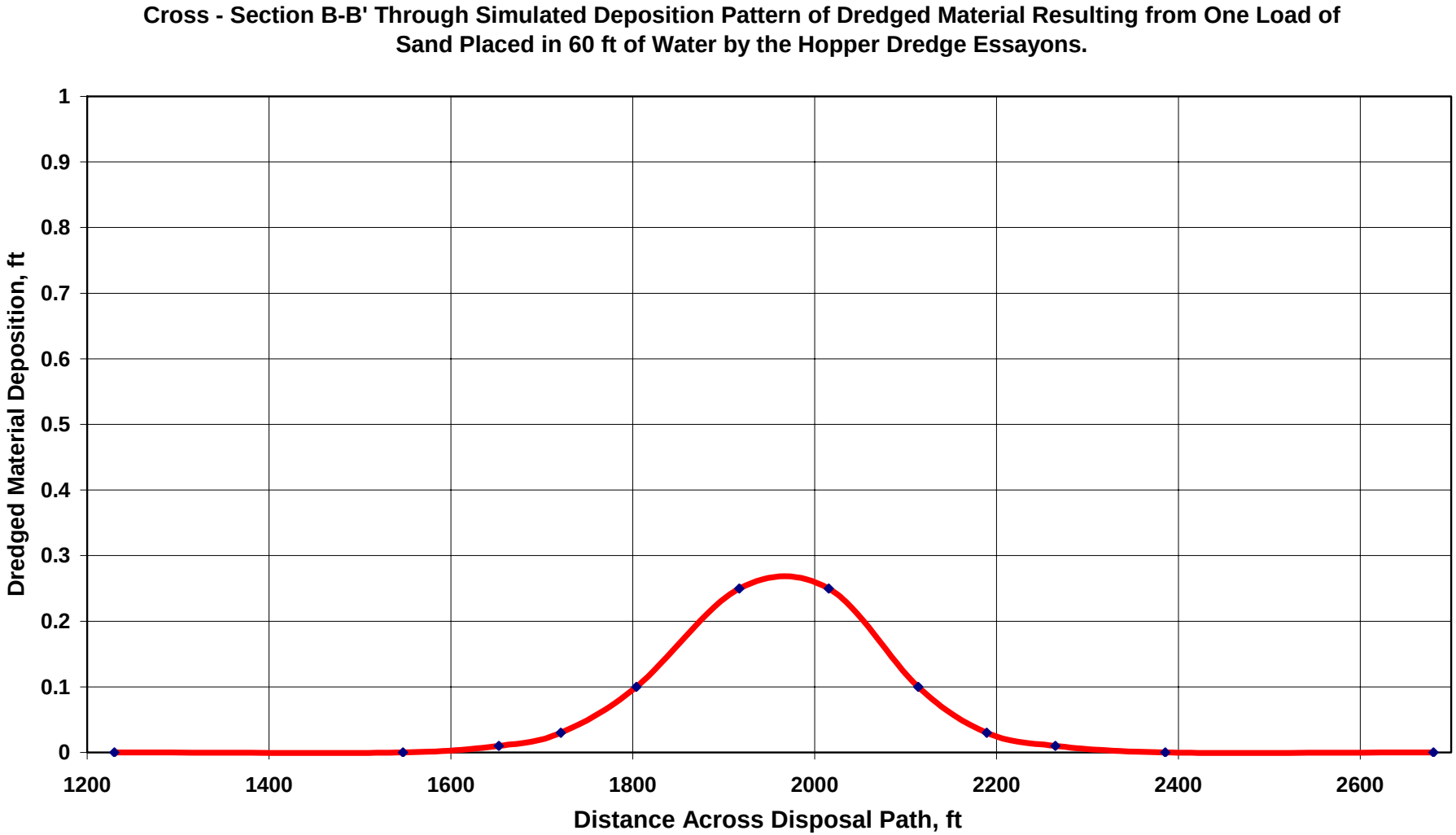


Figure 5

Vertical Axis is Plotted as compared to 1 ft

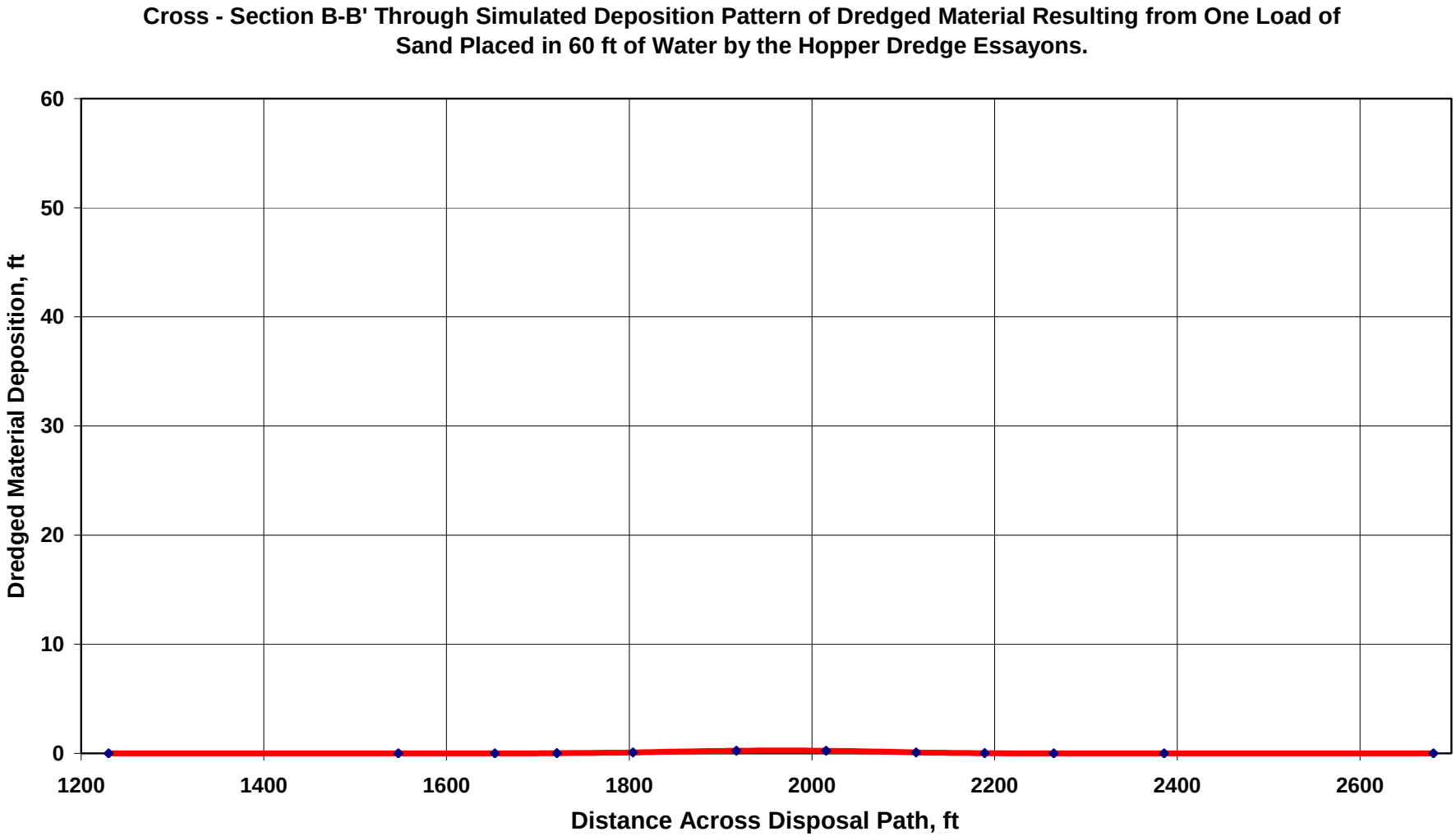
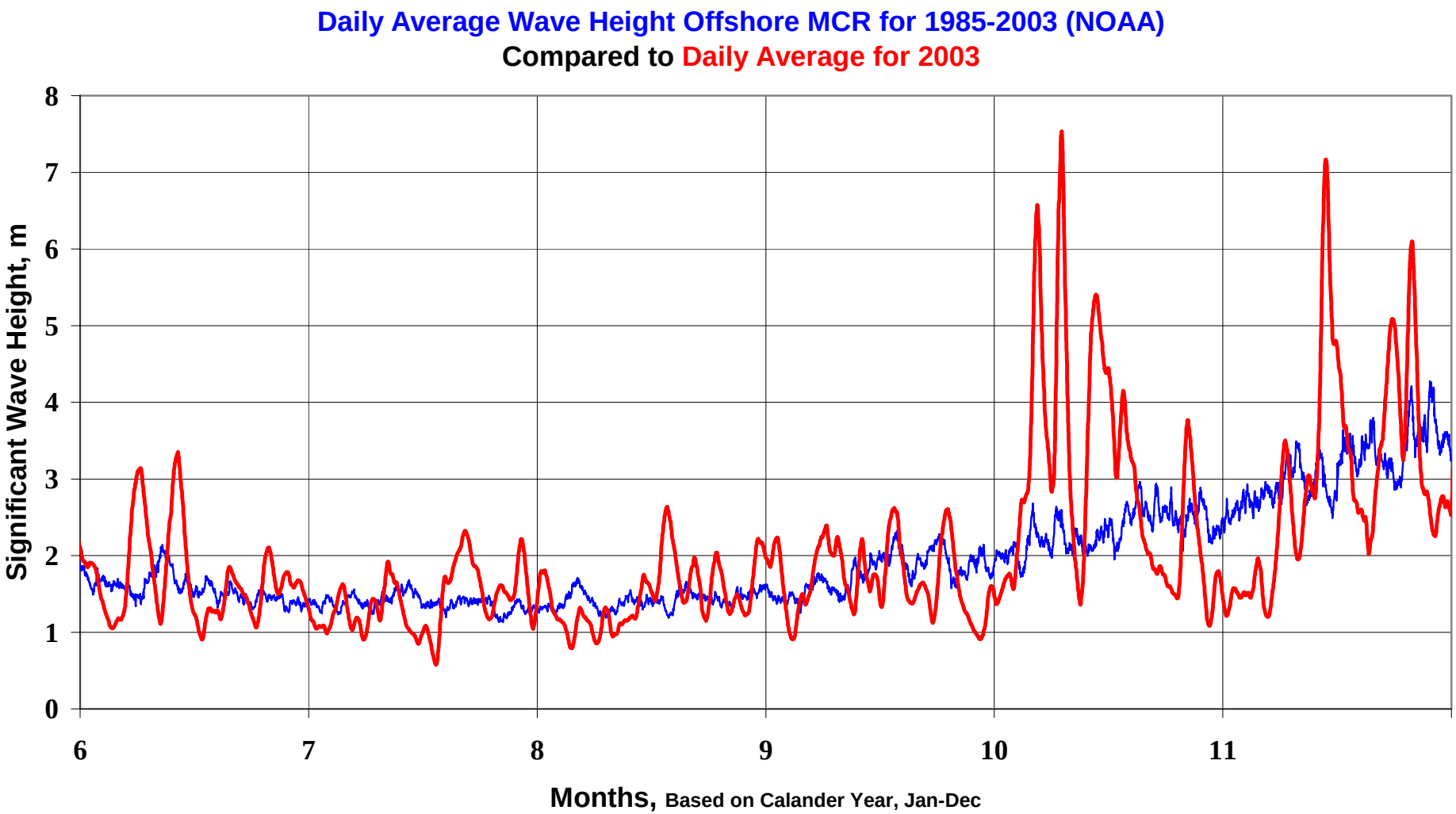
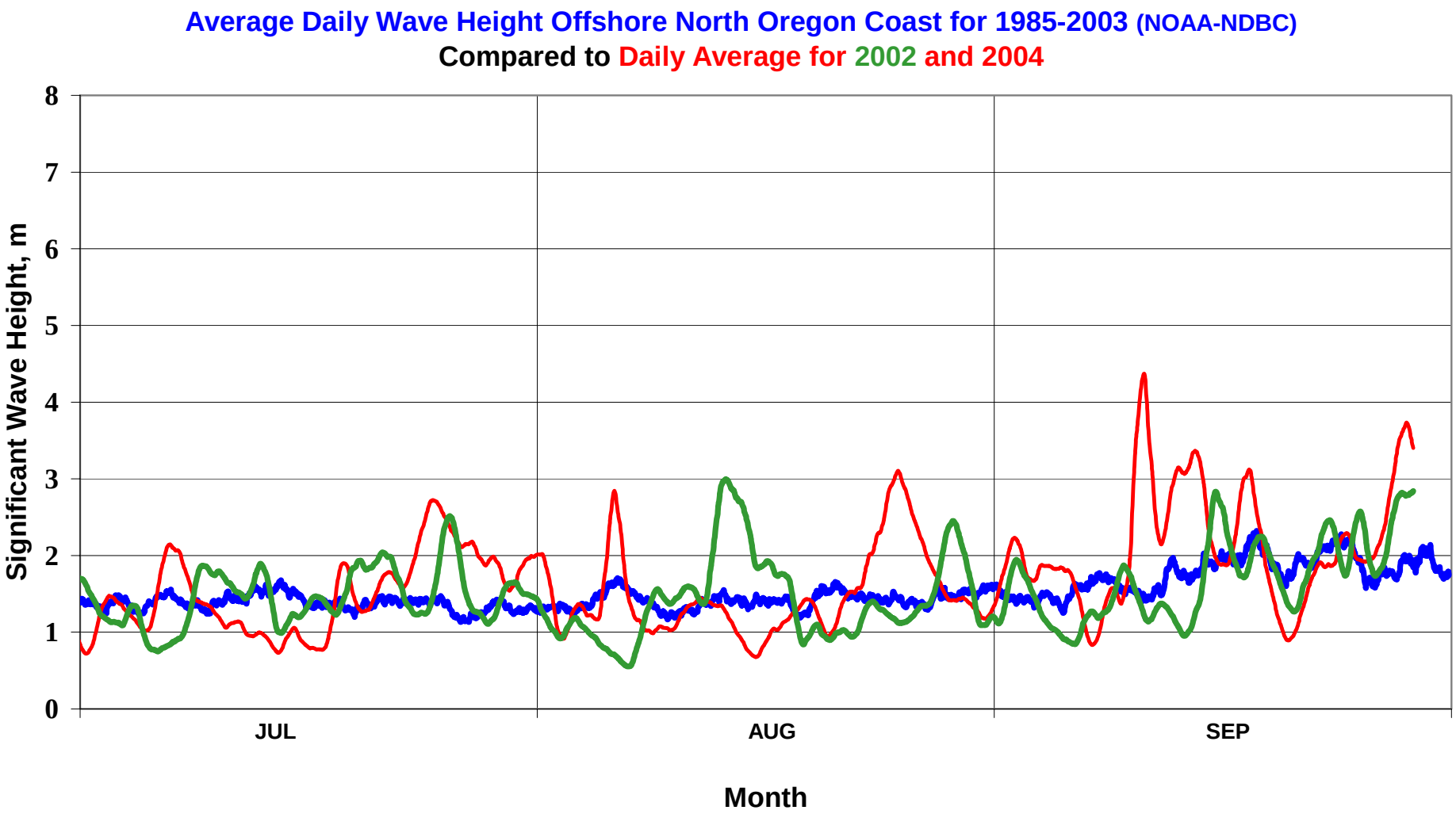


Figure 5a

Vertical Axis is Plotted as compared to 60 ft


Daily Average Wave Height Offshore MCR for 1985-2003 (NOAA)
Compared to Daily Average for 2003
Significant Wave Height, m
0
1
2
3
4
5
6
7
8
6
7
8
9
10
11
Months, Based on Calander Year, Jan-Dec


Average Daily Wave Height Offshore North Oregon Coast for 1985-2003 (NOAA-NDBC)
Compared to Daily Average for 2002 and 2004
Significant Wave Height, m
0
1
2
3
4
5
6
7
8
JUL
AUG
SEP
Month