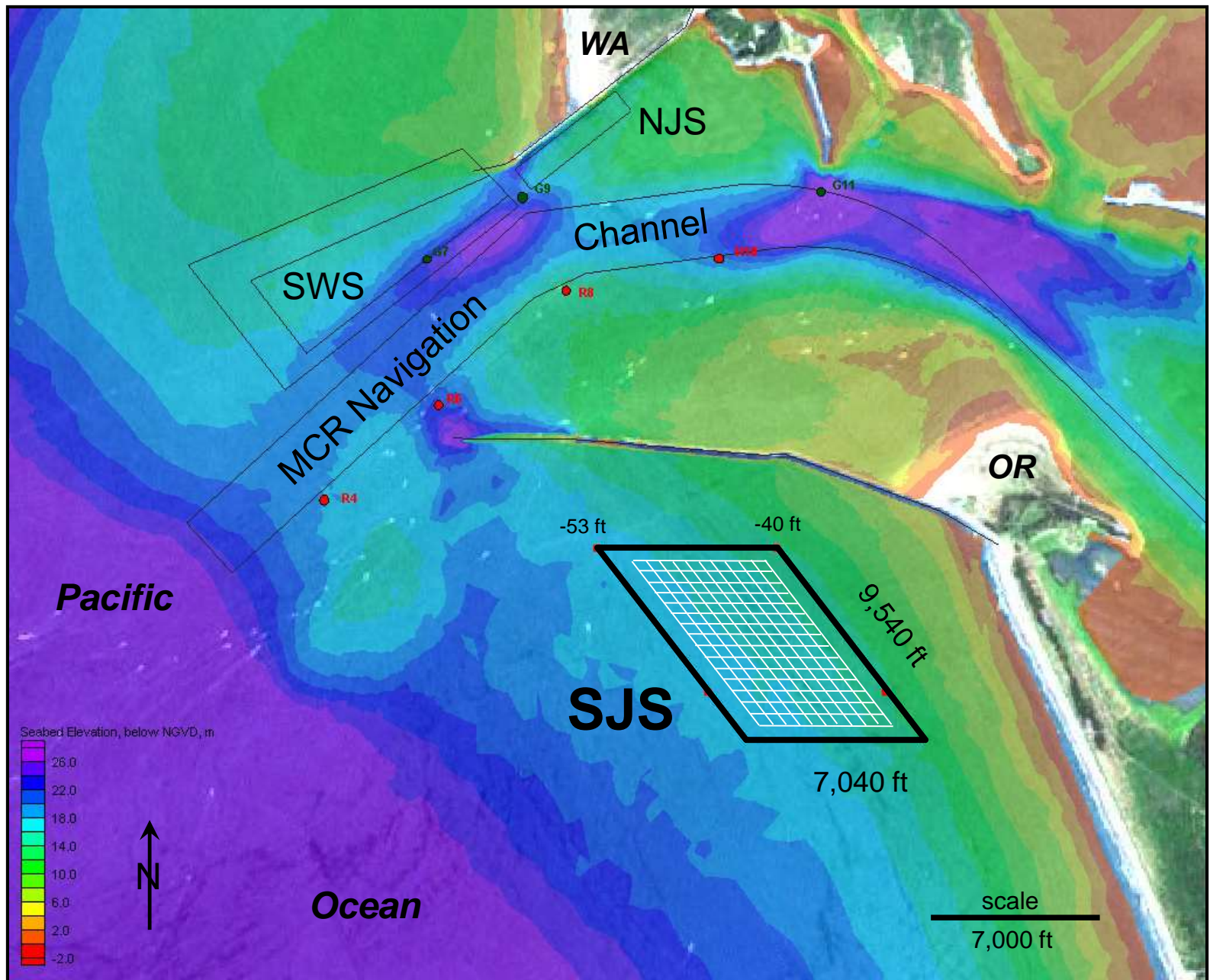


Example of “trackable” Feature

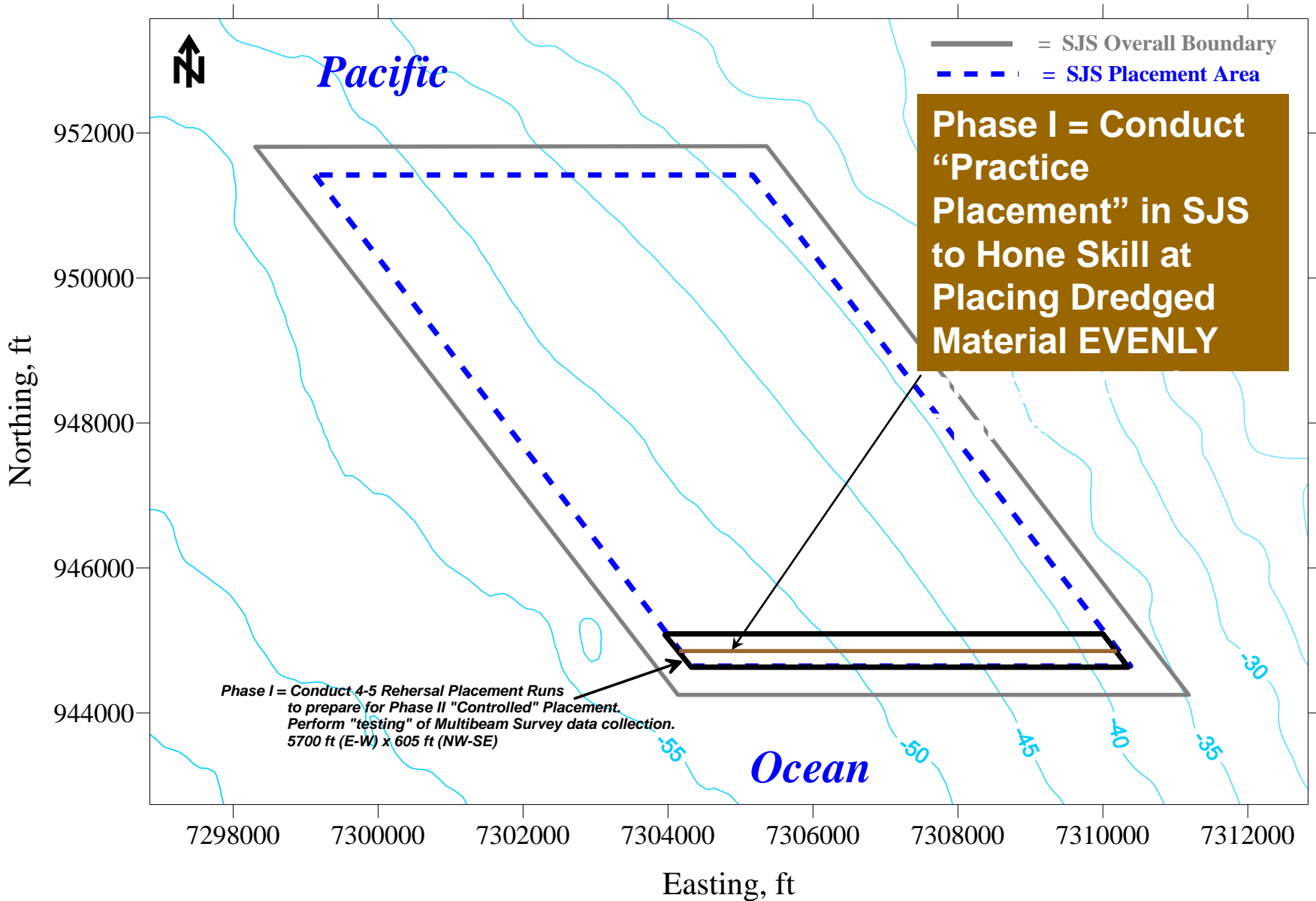
Realized at SJS in 2012



Proposed Location & Extent for MCR South Jetty Dredged Material Placement Site (SJS) 2012

MCR South Jetty Site - SJS (CWA 404)

Layout For Phased Implementation of Initial Site Utilization & Monitoring Plan

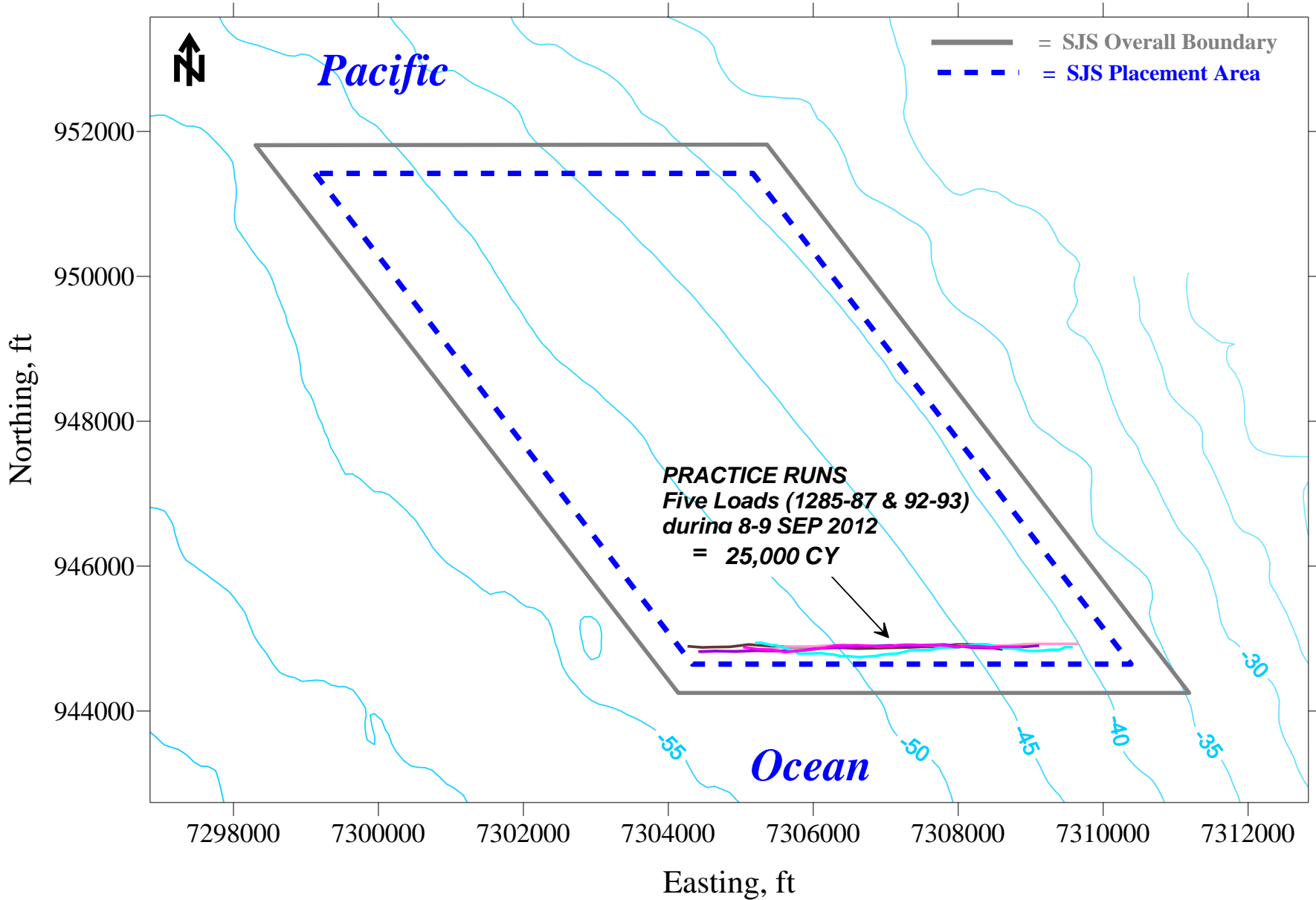


coordinates are SPCS Oregon, north, ft NAD83
elevations are in ft, below MLLW, data = Aug 2012, contour interval = 5 ft

US Army Corps of Engineers
Portland District

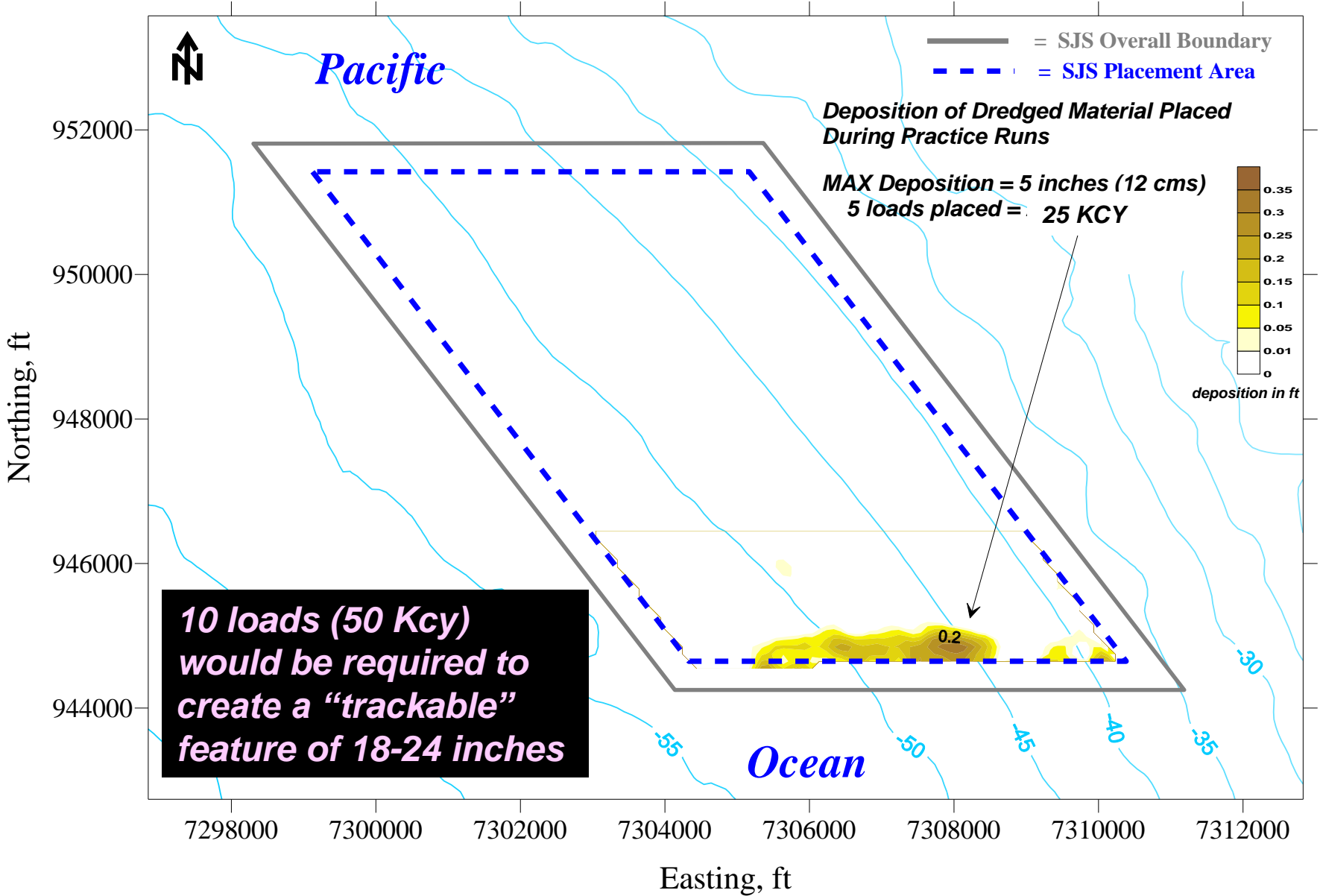
MCR South Jetty Site - SJS (CWA 404)

Layout For Phased Implementation of Initial Site Utilization & Monitoring Plan



MCR South Jetty Site - SJS (CWA 404)

Layout For Phased Implementation of Initial Site Utilization & Monitoring Plan

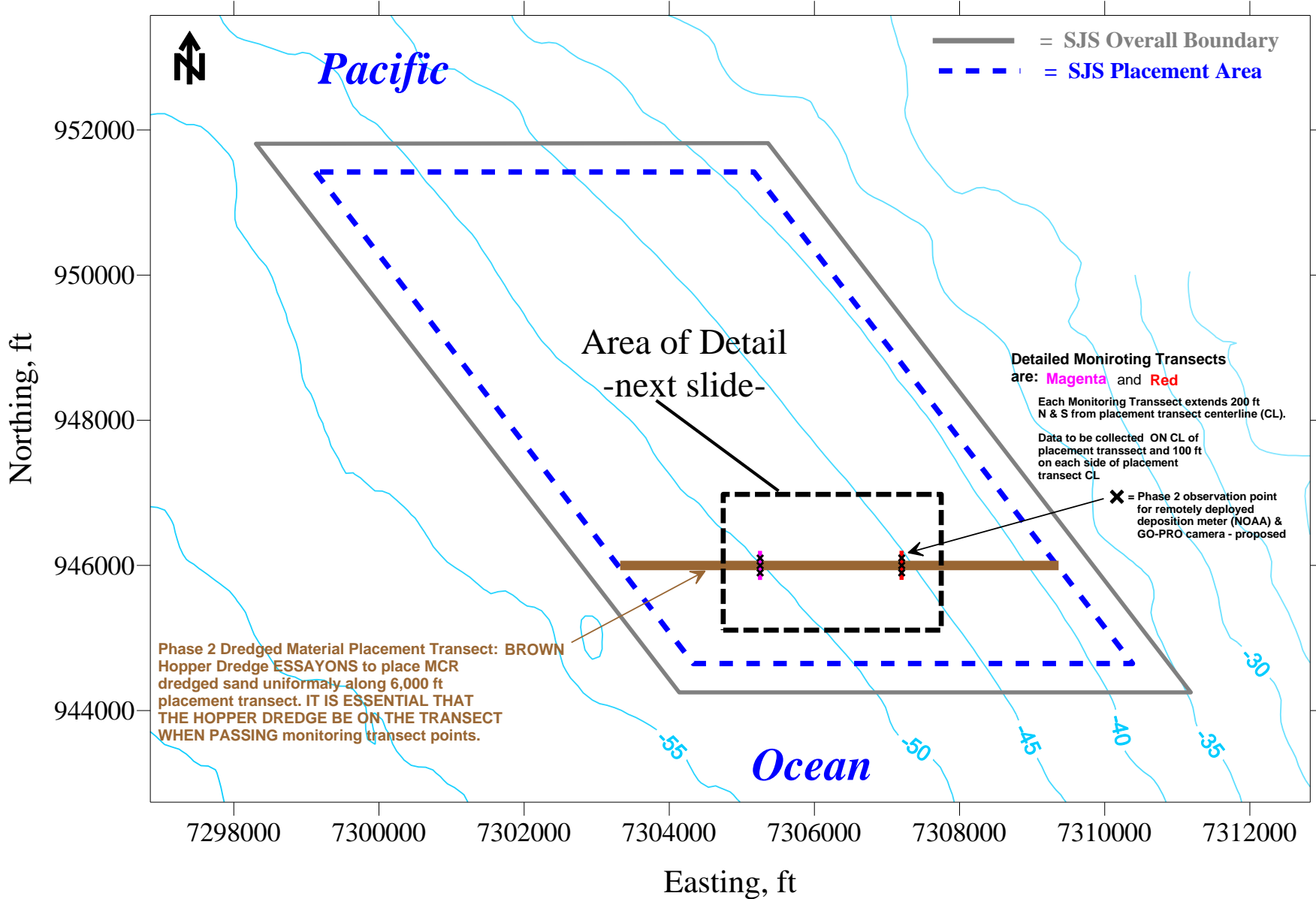


Observations of Thin-Layer Placement

Realized at SJS in 2012

MCR South Jetty Site - SJS (CWA 404)

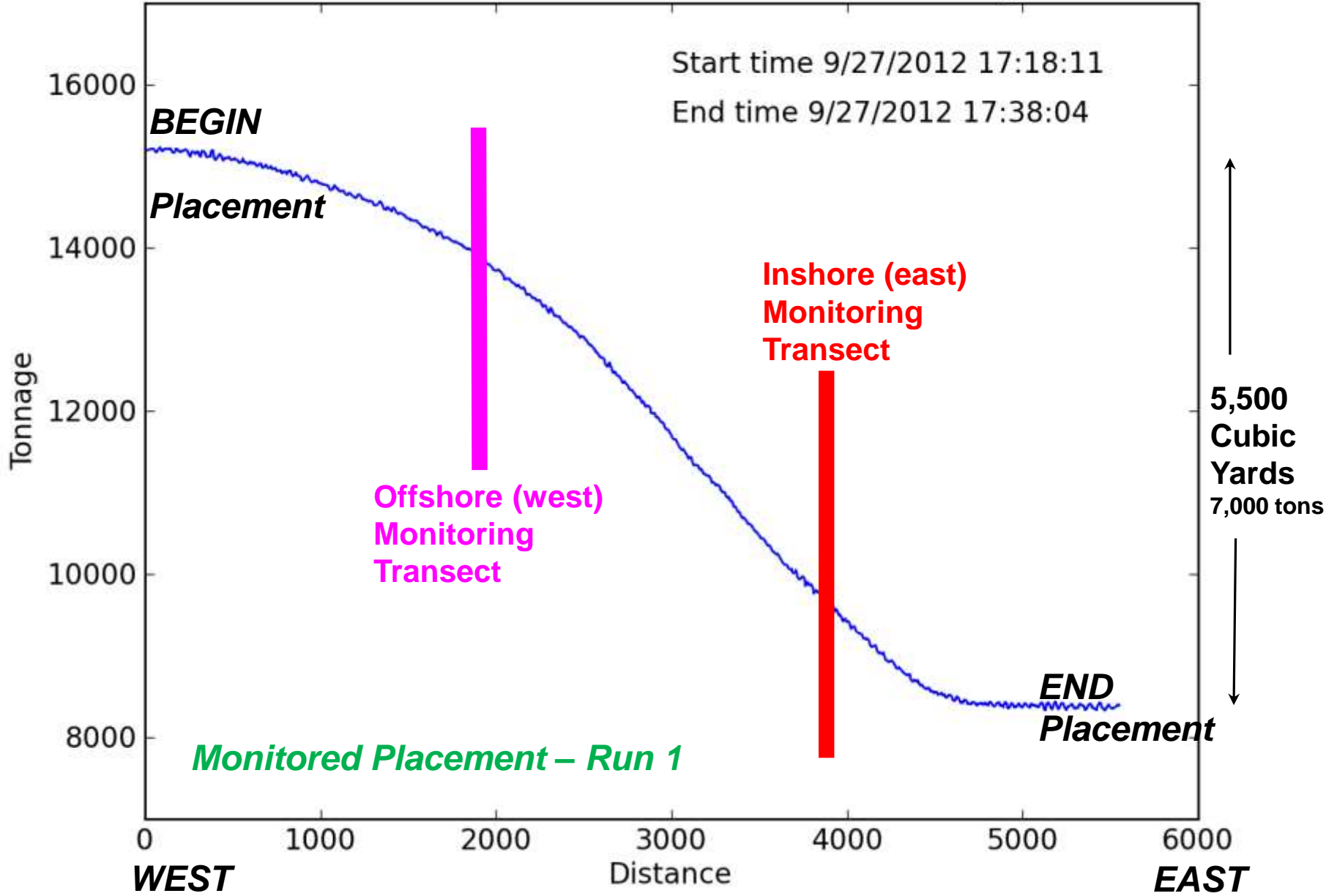
Layout For Phased Implementation of Initial Site Utilization & Monitoring Plan



Displacement vs Distance Load 1390 Essayons

Start time 9/27/2012 17:18:11

End time 9/27/2012 17:38:04



Frame 5 of 5
After passage of
Hopper dredge

Post Placement
1.5 minutes after frame 1

Crab
bait

2 inches (5 cm)

28 SEP 2012: load 1397

Deposited dredged material (sand) = ~ 1 inch (2.54 cm)

Results: Knowledge Accumulation from 2003 to 2012

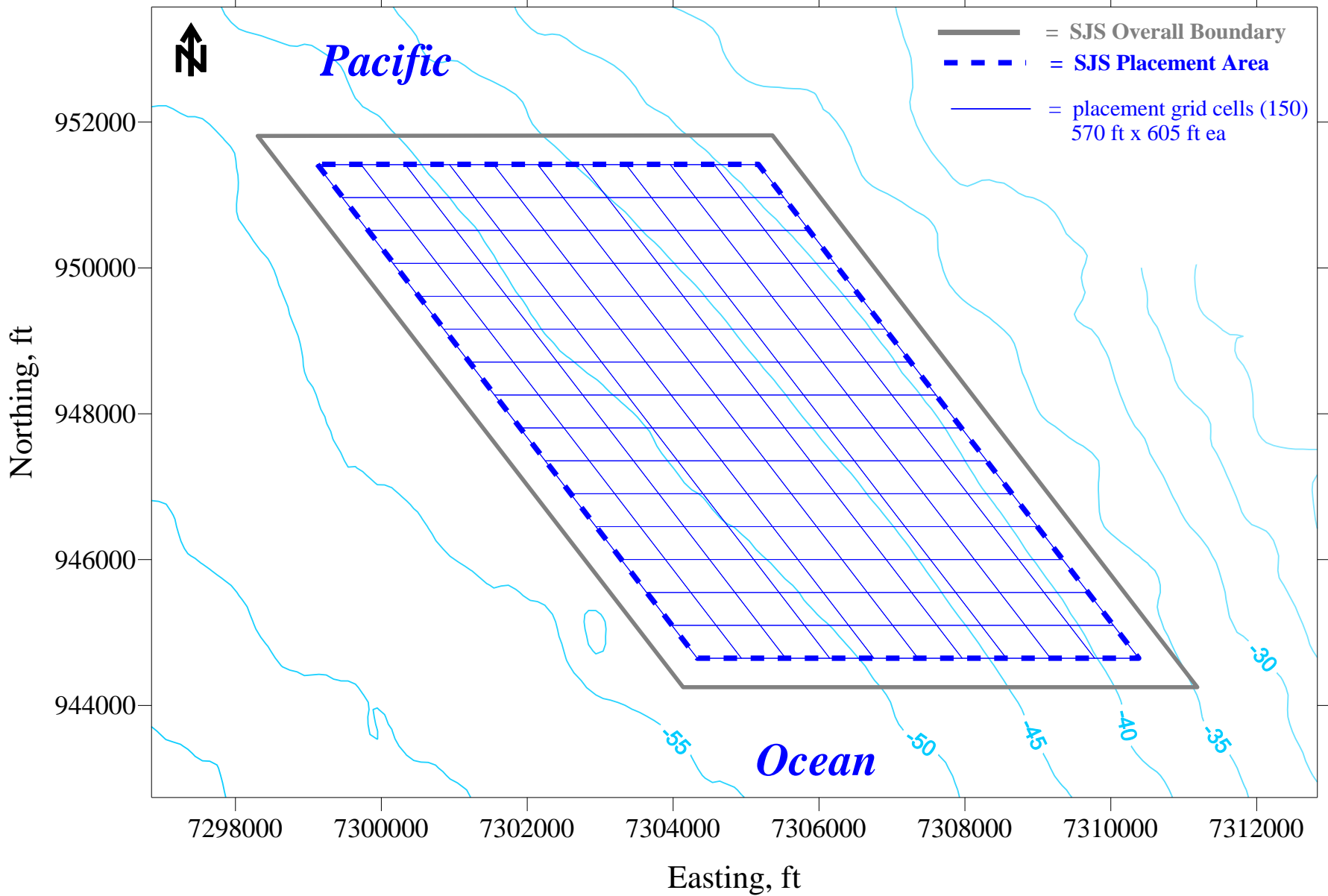
- Demonstrated that we can place material with less than 4 inches of deposition using a conventional 6,000 CY hopper dredge.
- Demonstrated that with multiple dumps we can have less than 1 foot of accumulation.
- Now – Using SJS as an operational site by distributing material evenly over a dredging season -----OPERATIONAL PLAN-----



Present Operational Use of SJS

MCR South Jetty Site - SJS (CWA 404)

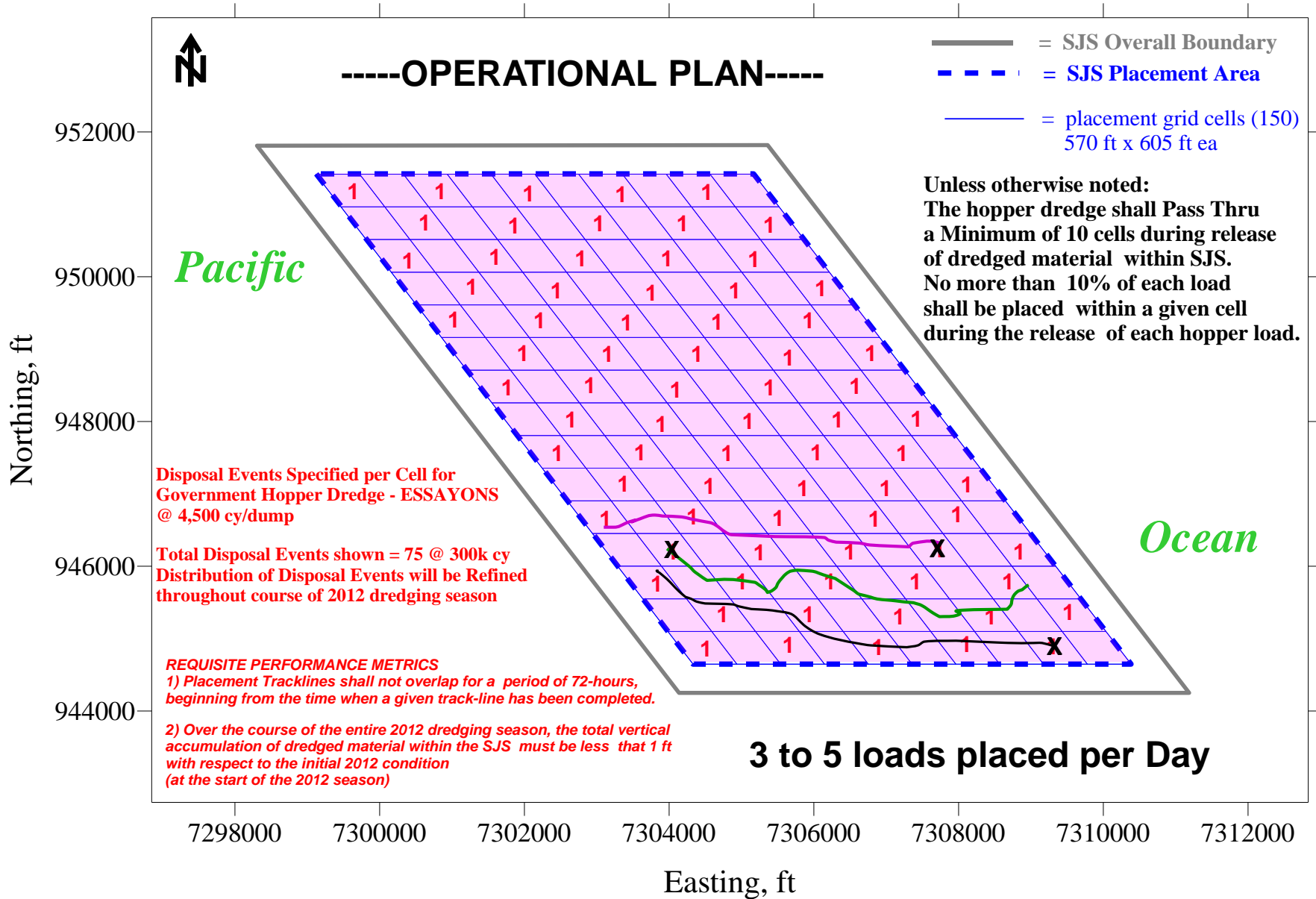
-----OPERATIONAL PLAN-----



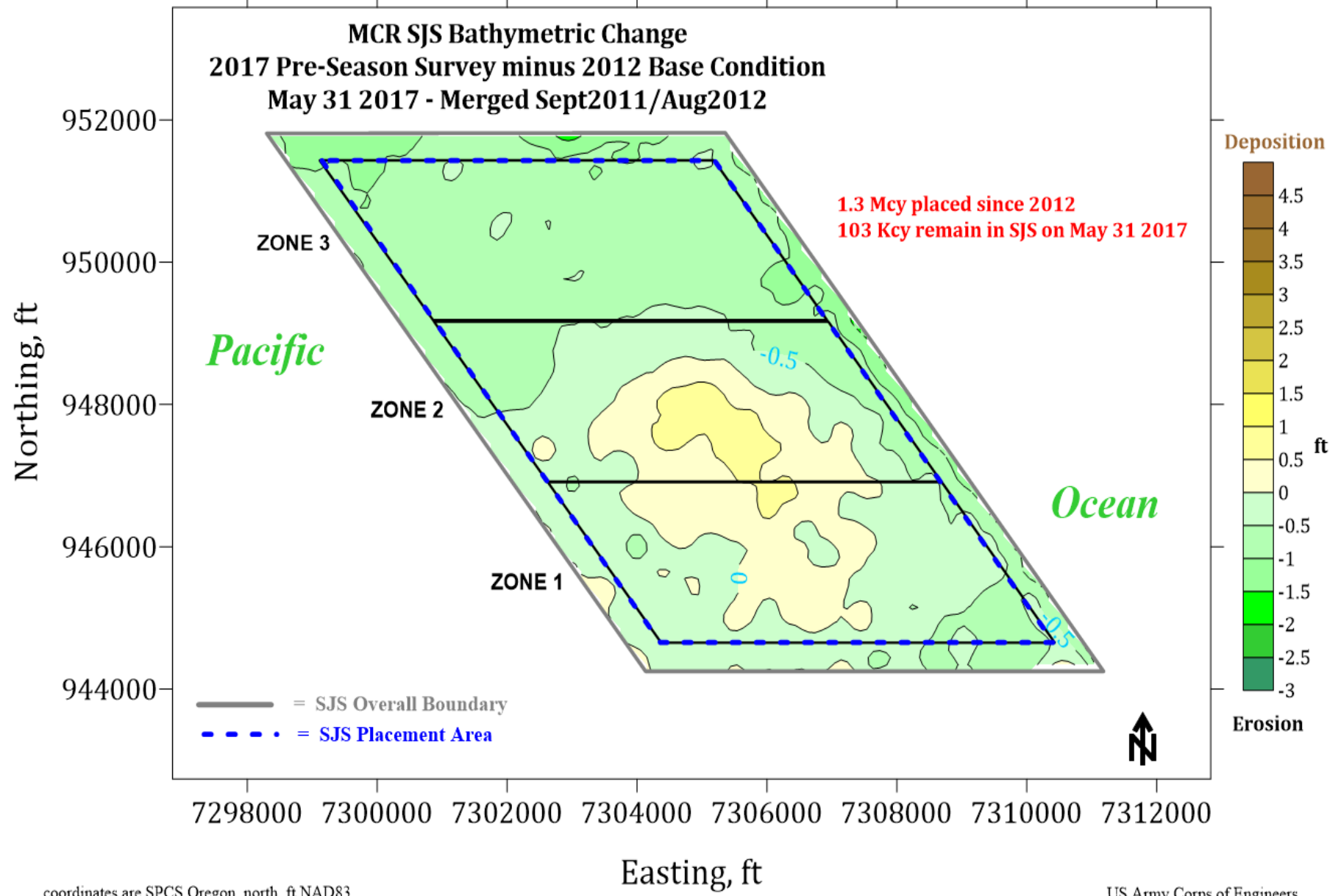
coordinates are SPCS Oregon, north, ft NAD83
elevations are in ft, below MLLW, data = Aug 2012, contour interval = 5 ft

US Army Corps of Engineers
Portland District

MCR South Jetty Site - SJS (CWA 401)

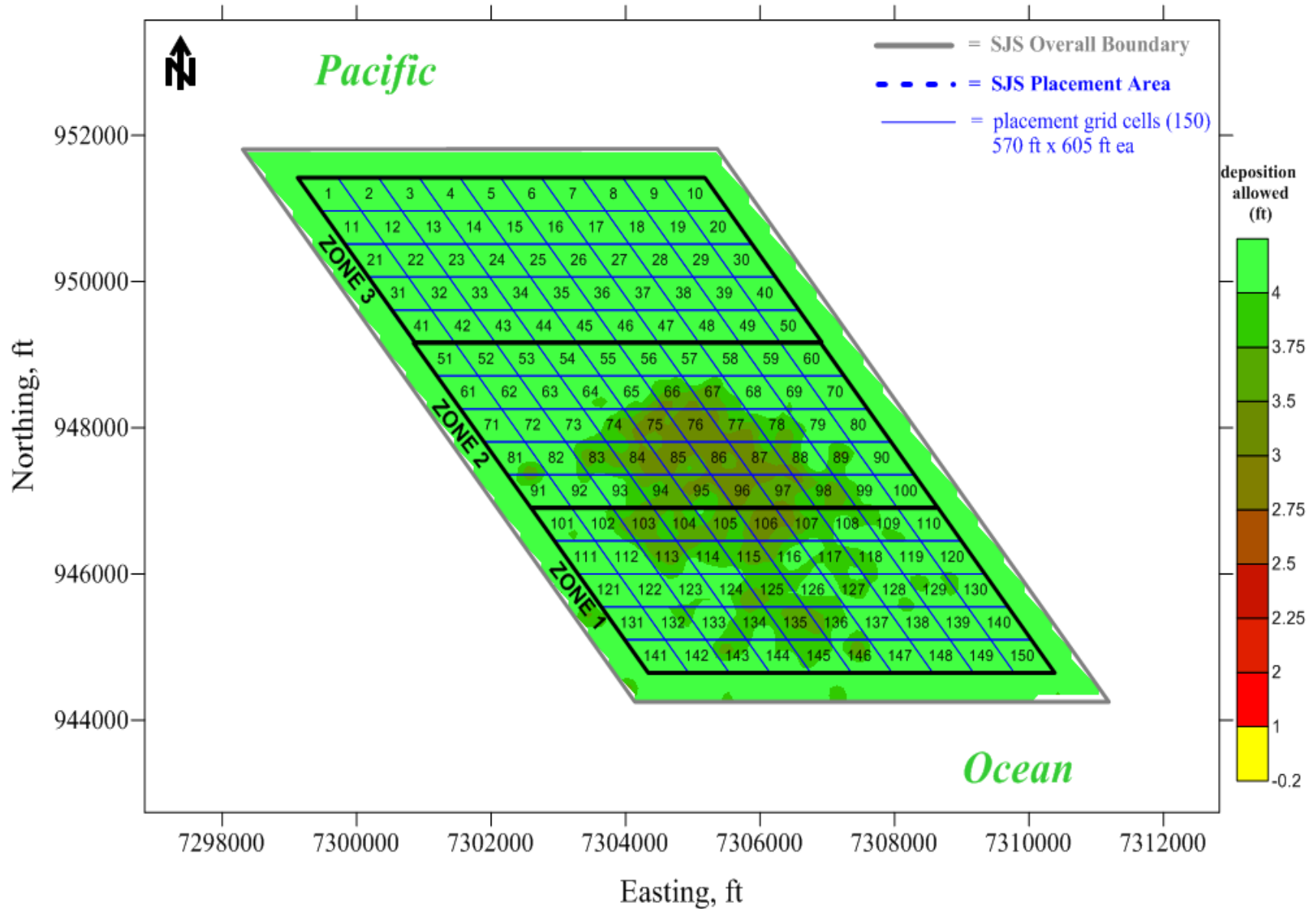


coordinates are SPCS Oregon, north, ft NAD83
 elevations are in ft, below MLLW, data = 2005-2007



coordinates are SPCS Oregon, north, ft NAD83
 elevations are in ft, below MLLW

MCR South Jetty Site - SJS (CWA 404)



coordinates are SPCS Oregon, north, ft NAD83
 elevations are in ft, below MLLW, data = May 2017

US Army Corps of Engineers
 Portland District

DRAFT 2018 Initial Utilization Plan - Total Placement = 400 Kcy

MCR South Jetty Site - SJS (CWA 404)

