Shoalwater Bay, Dune Restoration Project Tokeland, WA

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USACE, Seattle District

Semi-Annual Dredging Meeting
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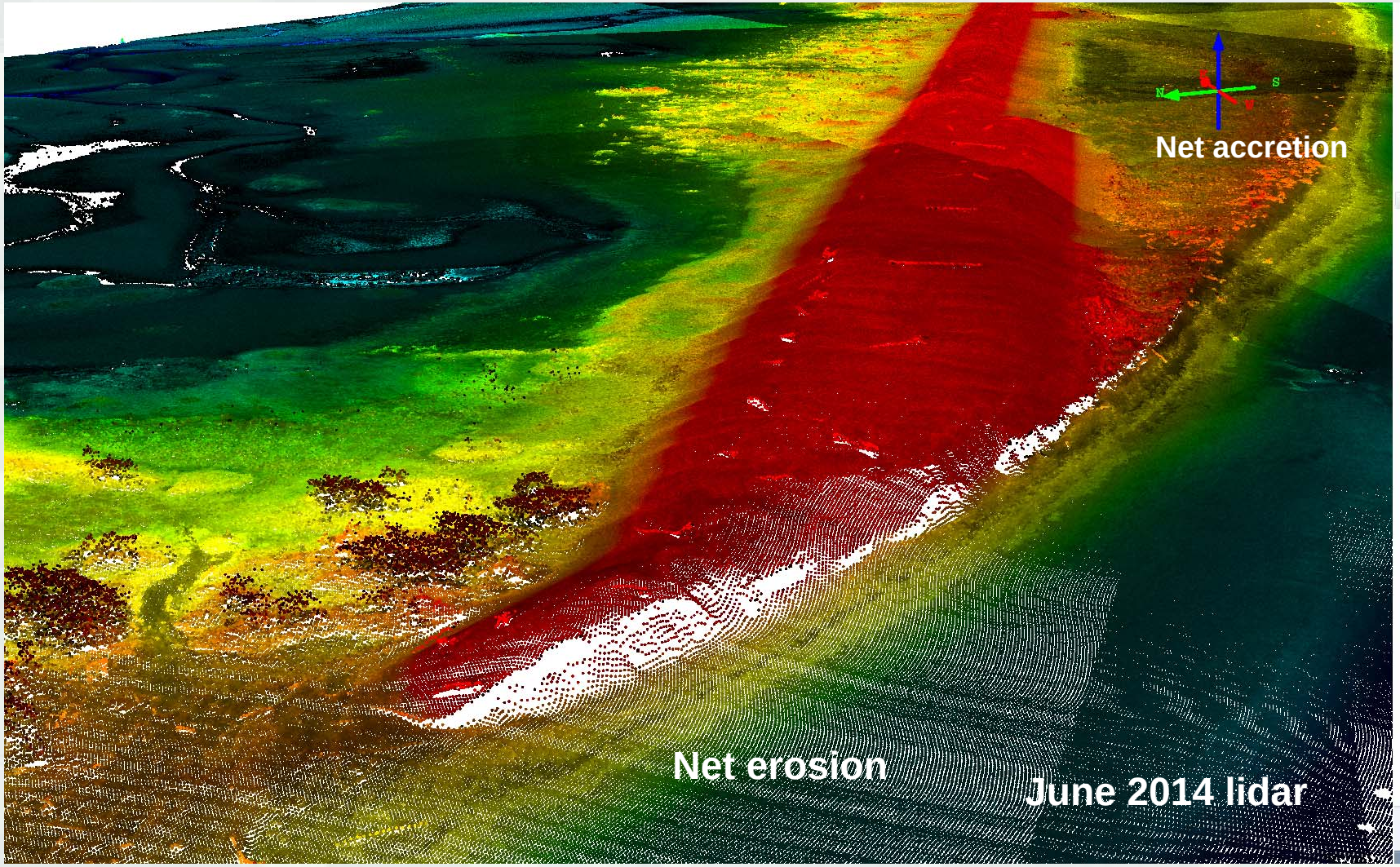
US Army Corps of Engineers
BUILDING STRONG®

Shoalwater Bay

Updates

- **Dune condition**
- **Monitoring Work**
- **Sand Fence Pilot**
- **Performance during Dec 2015 storm**
- **Future schedule**

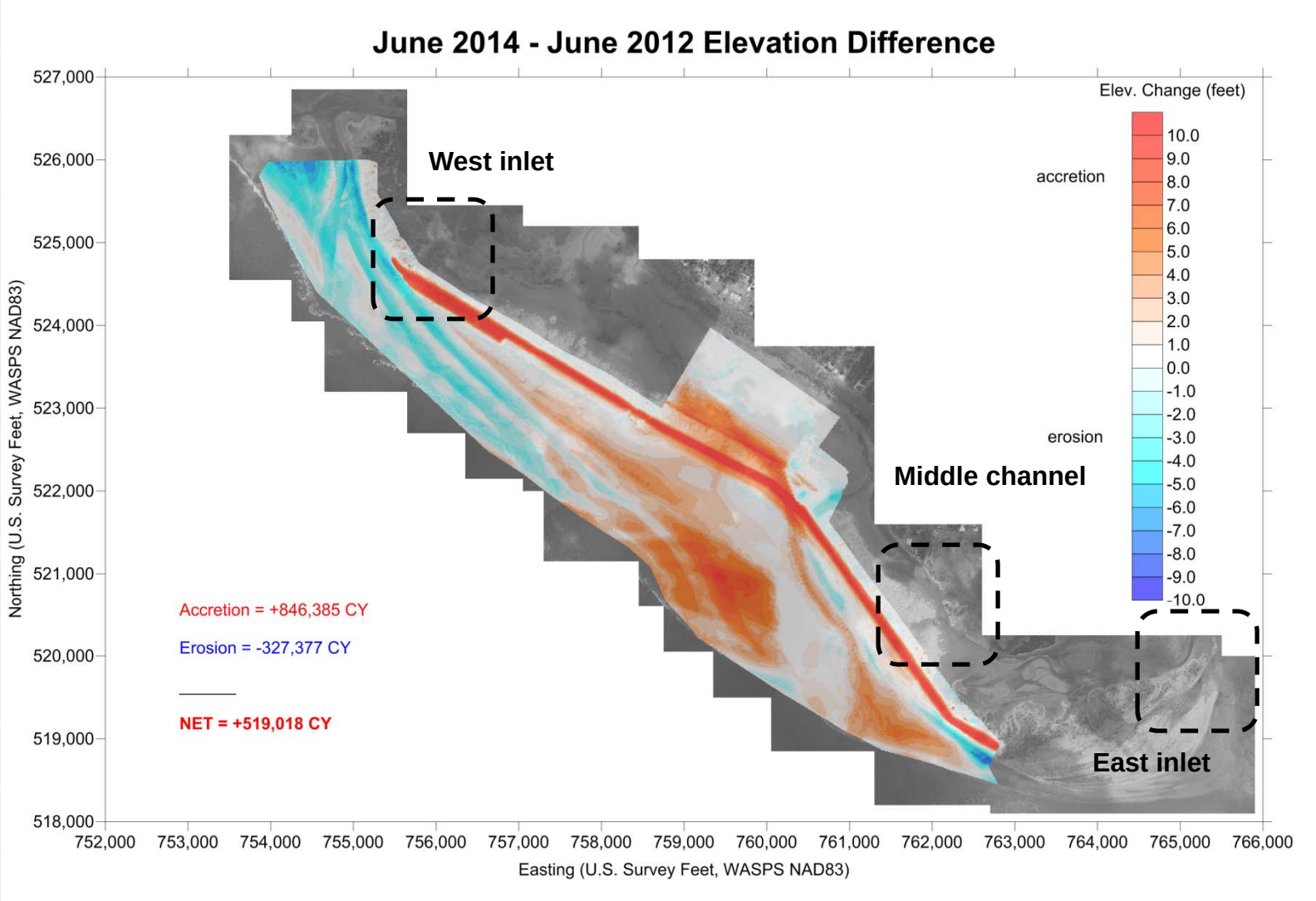
Dune condition

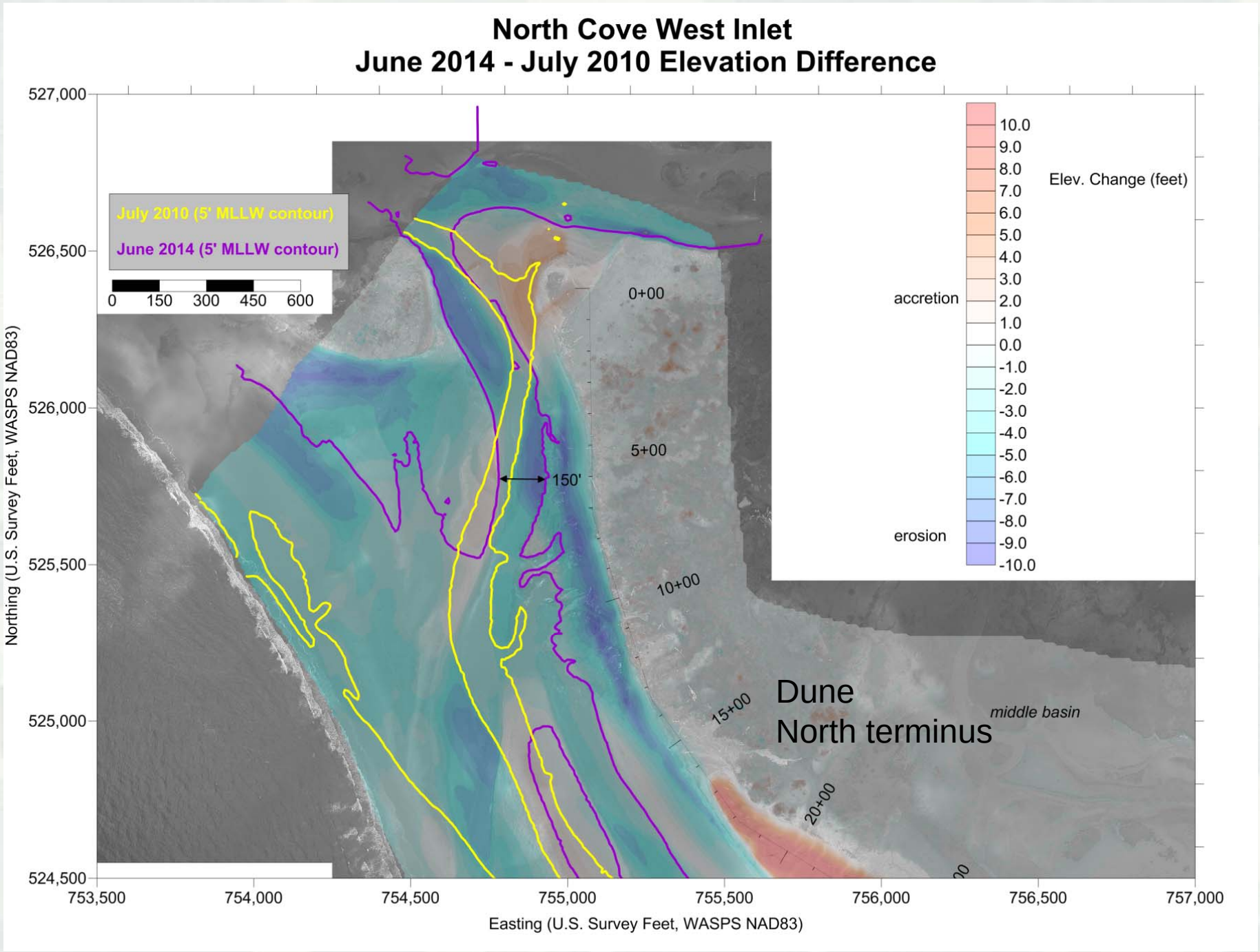


2014-2017 Monitoring

- Co-op agreement with WDoE CMAP group (G. Kaminsky)
- Surveys completed, Sep 14, Apr 15, Sep 15

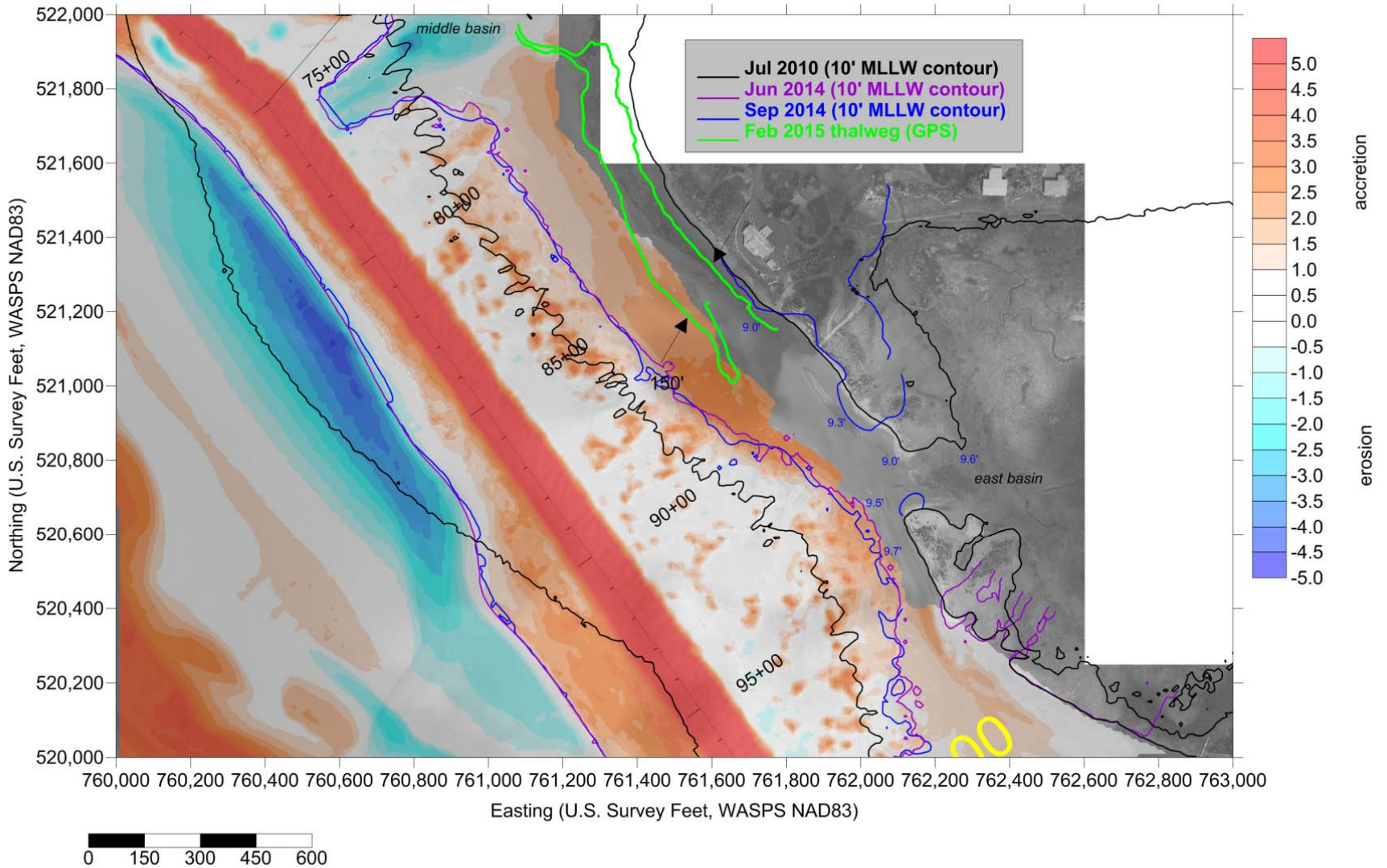
Erosion/Accretion areas




North Cove West Inlet
June 2014 - July 2010 Elevation Difference
July 2010 (5' MLLW contour)
June 2014 (5' MLLW contour)
0 150 300 450 600
Elev. Change (feet)
accretion
erosion
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0+00
5+00
10+00
15+00
20+00
150'
Dune
North terminus
middle basin
527,000
526,500
526,000
525,500
525,000
524,500
Northing (U.S. Survey Feet, WASPS NAD83)
753,500
754,000
754,500
755,000
755,500
756,000
756,500
757,000
Easting (U.S. Survey Feet, WASPS NAD83)

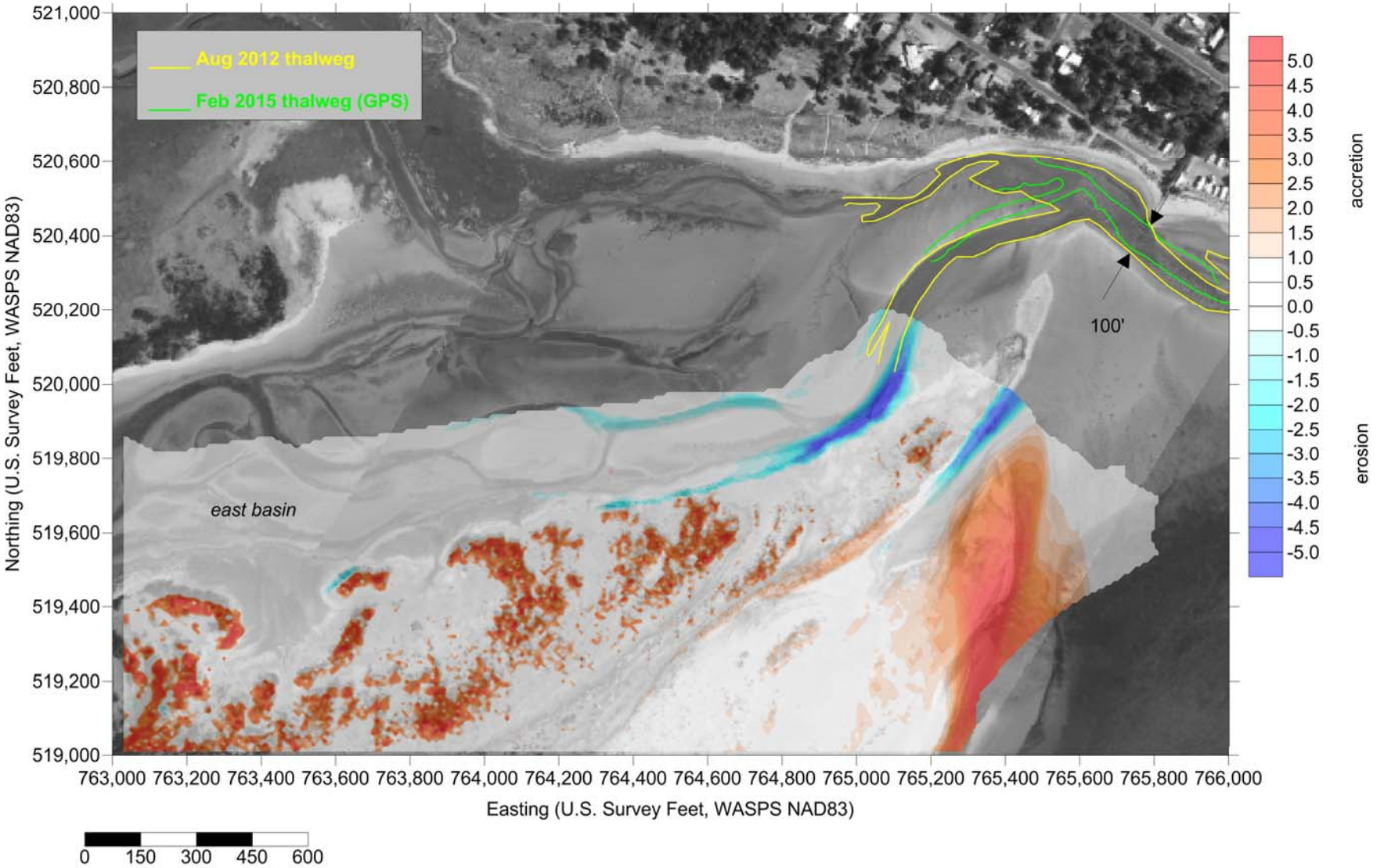
Historic tidal marsh and finger wetlands
have been filled in by overwash fans
Dune
North terminus

North Cove Middle Channel
Sep 2014 - Jul 2010 Elevation Difference

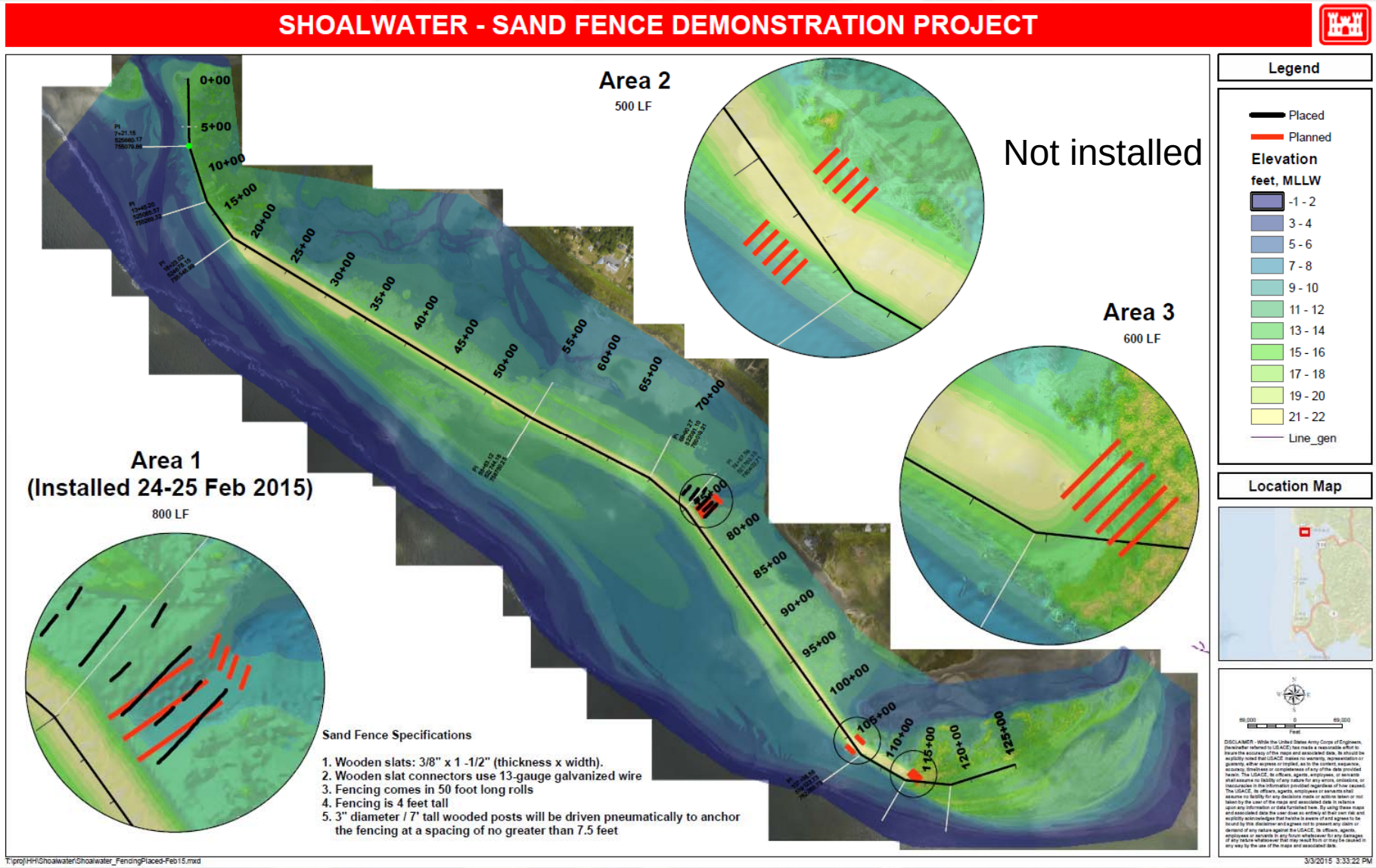


Middle Channel – Sep 2015 (+9.7 ft, MLLW)

North Cove East Inlet
Jun 2014 - Jul 2010 Elevation Difference



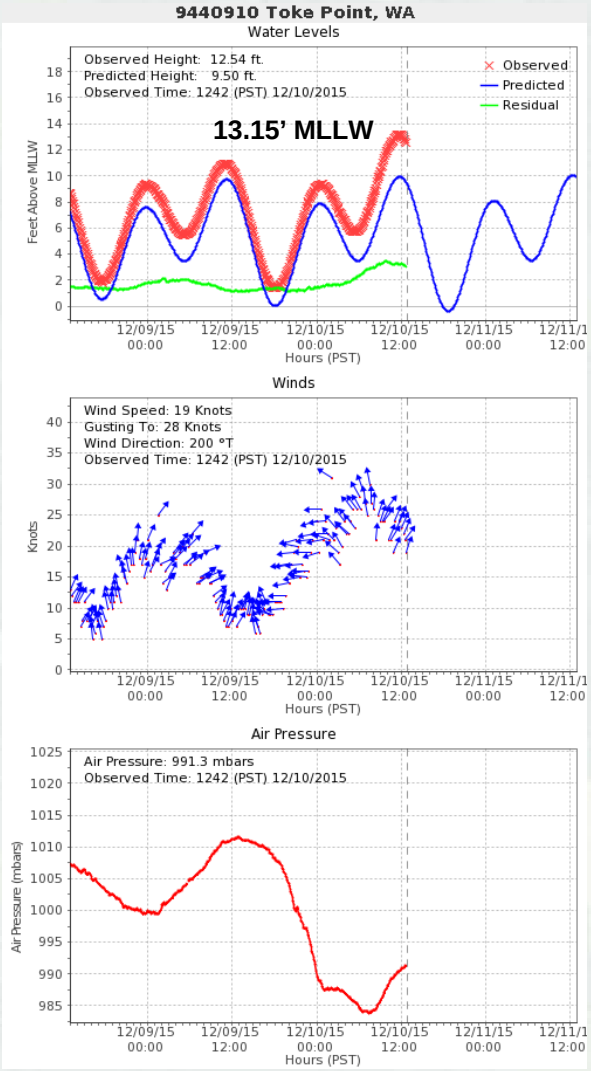
Sand Fence Pilot (2015)



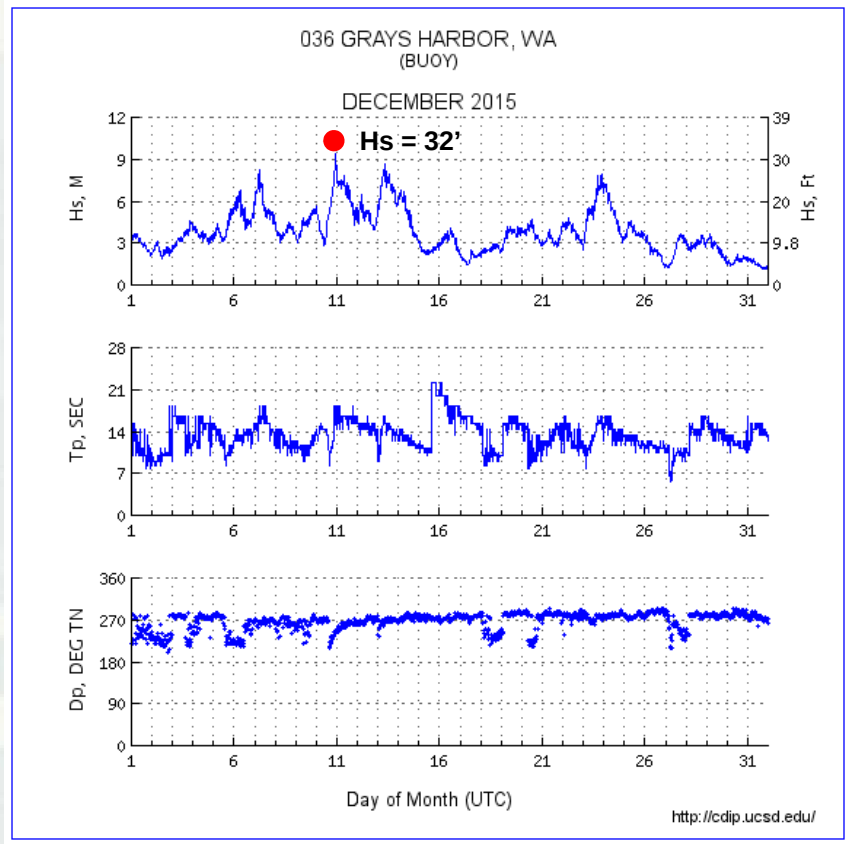
Sand Fencing

- 4 man crew placed ~1500 LF of fence in 3 days (Feb 15 & Sep 15)
- Low cost / effective method to build dune height during the Summer months.

10-11 Dec 2015 Storm



Highest water level observed since 3 Dec 2007



Coastal Storm Damage Protection in action
High water mark following 10-Dec 2015 storm
Dune

Schedule

- FY16 – Continue monitoring & anaylsis
- FY17 – Plans & Specification for re-nourishment
- FY18 – planned dune re-nourishment construction (pending funding)