



39th Annual Membership Conference
April 9-12, 2013



“Keeping Ahead of Rising Tides” with Maintenance Challenges

Presented by: Jon Keiser, P.E., P.Eng, PND Engineers, Inc.

→ Facility Condition Inspection

Frequency:

Perform detailed investigations every 5 years, with annual updates, for comprehensive preventative maintenance.

- Immediate to 1-year repair items
- 1-5 year repair items
- 5-10 year items

Estimate Costs:

- In-house work
- Permitting costs
- Engineering costs
- Bid the work



→ Two Kinds of Repairs

- Scheduled
- Unscheduled



Photo by: Jim Sherman, General Construction



→ Maintenance Plan Key Elements



- Develop inspection procedures and checklist
- Perform inspections
- Prioritize work items by importance
- Estimate costs associated for each item
- Develop repair timeline and budget
- Evaluate repair costs to see if replacement is a better option



→ Why is Condition Inspection Important?



To prevent this...



...or this from happening!

- Protect public safety
- Protect investment in your facility
- Meet demand and changing trends for modern conveniences

→ Storm Disaster Prevention Plan

❖ Pre-Event (if time allows)

- Walk facility for items of concern, vessels tied adequately, notification to problem vessels
- Needed equipment ready and available (spill prevention)
- Staff training and on-call staff if needed



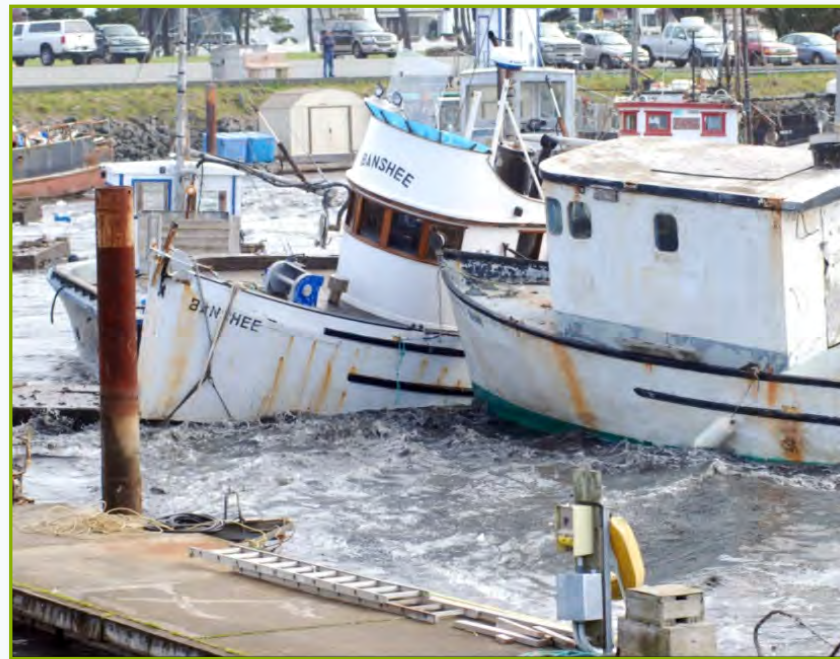
Blaine Harbor Wave Barrier with Storm Surge
Blaine, Washington



→ Storm Disaster Prevention Plan

❖ During Event

- Implementing plan
- Provide notifications to necessary agencies



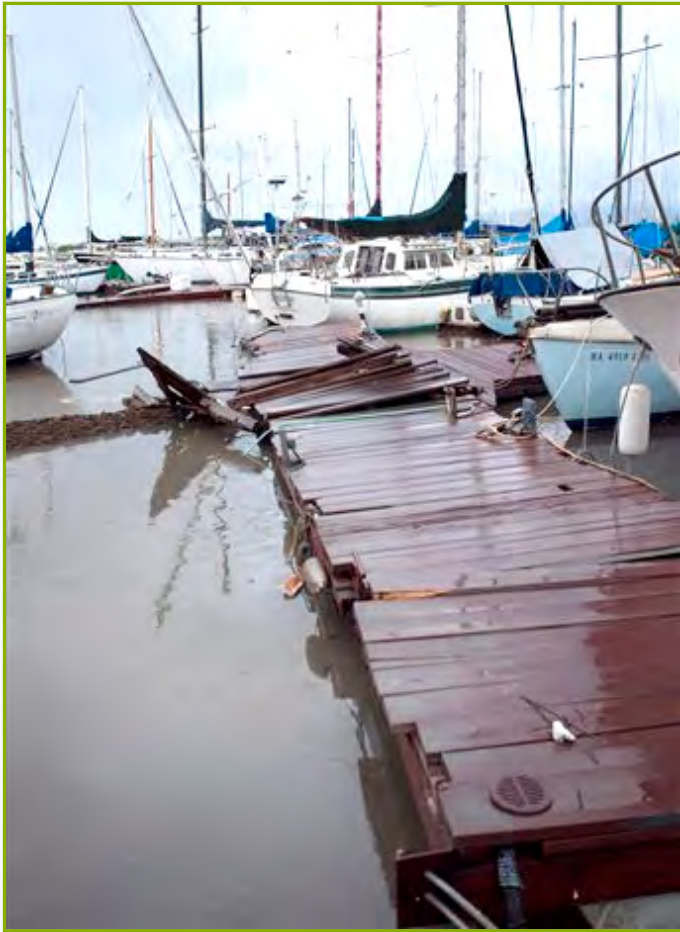
Photos: (AP Photo/Jeff Barnard), March 2011; PND



P | N | D
ENGINEERS, INC.

→ Storm Disaster Prevention Plan

❖ Post-Event



(AP Photo/Marco Garcia), 3/11/11



- PR point of contact
- Engineering safety assessment
- Contacting insurance, contractors and suppliers for repairs



→ Storm Disaster Prevention Plan

❖ Post-Event

- If all else fails, don't forget:
 - Rope to gather pieces
 - Good salvage contractor



→ Questions?

❖ Contact Information

- Jon Keiser, P.E., P.Eng.
Vice President

PND Engineers
1736 Fourth Avenue S, Suite A
Seattle, Washington 98134

Phone: 206-624-1387

Email: jkeiser@pndengineers.com

Website: www.pndengineers.com

