## Public Meeting & Information Exchange <u>for</u> Repair/Rehab Columbia River N. & S. Jetties

#### <u>Agenda</u>

- Introductions & Opening Remarks
- Background & Reasons for Proposed Work
- Q/A's

# **Columbia River Jetty System**



### Jetty Repair Considerations During Construction

- Impact on sport fishing & crabbing
- Impact on Public Access to nearby beaches
- Potential conflict w/Confluence Group and Nat'l Park Service proposed actions
- Construction Schedule
- Potential impact on North Jetty Disposal Site
- Funding Picture
- Environmental Assessment

#### MCR Structures

**Peacock Spit** 

North Jetty

**Potential Breach Site** 

**South Jetty** 

**Clatsop Spit** 

Jetty "A

Ilwaco

**Pile Dikes** 

OR

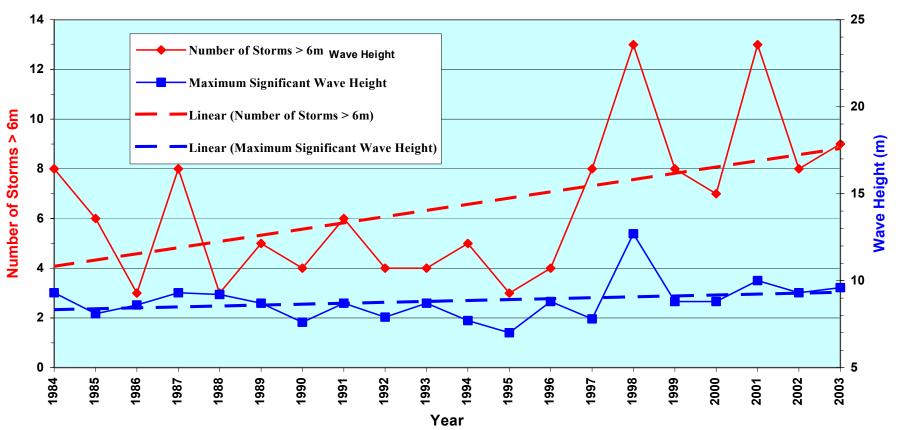
**Eroded Areas** 

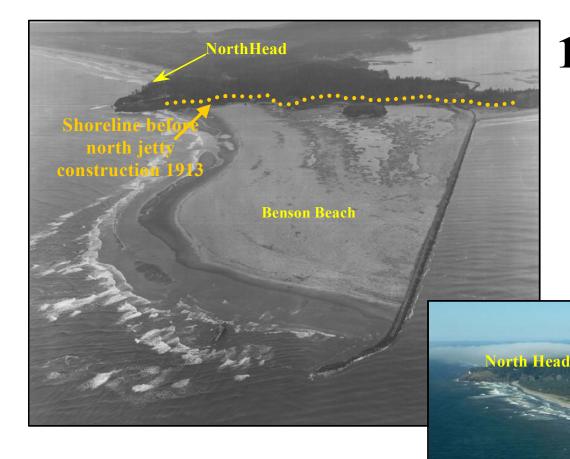
**Potential Breach Sites** 

Pacific Ocean

2 miles

Storm Conditions at Columbia River Buoy 1984 - 2003





## 1939

What was a "spending beach" for wave action along the ocean side of the north jetty no longer exists. Now waves and currents act directly on much of the north jetty. The north jetty is now compromised along much of its length. 2002

Beach has receded 2,000 ft since 1939

> North Jetty Head -1700 ft loss in length







Damaged Areas along Trunk

**STA 73** 

#### Damaged Areas along Root

Transition to Unrepaired Landward Half of North Jetty

**STA 62** 

North Jetty at Mouth of Columbia River

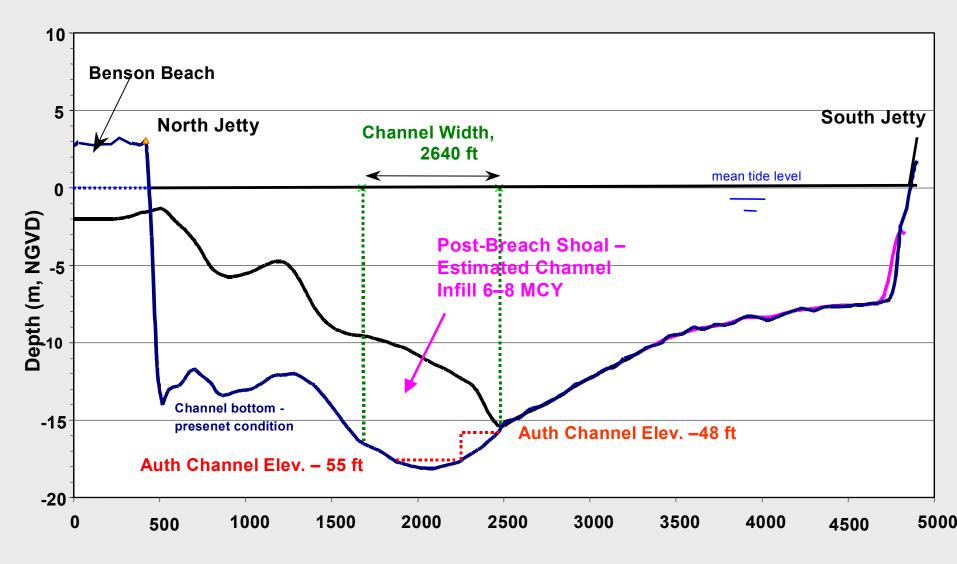
Potential Shoaling Scenario due to Jetty Breach 2 months after jetty breach

55 ft

A

**A** '

#### North Jetty Breach – Shoaling Scenario



**Cross-Channel Distance along Section A-A', meters** 

Pacific Ocean

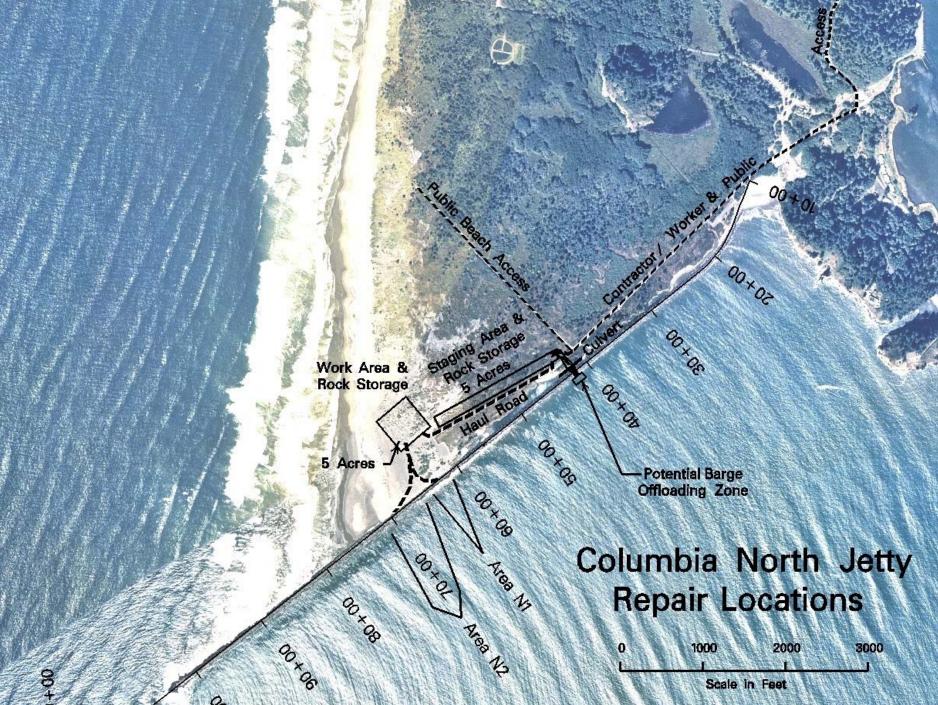
A

Benson -Beach

est oits

MCR Channel

wind Rout Jown And Start



Pt. Adams / Ft.

Trestle used to constr<del>uet</del> 6-mile long jetty

Clatsop Spit

Original Construction 1886-96, 4 miles offshore from Ft Stevens: 946,000 tons of stone

Repair and extension 1903-14, 2 more miles offshore: 4.8 million tons of stone

. Beach line before south jetty ...

construction

8 Subsequent Repairs 1931-82: 2.9 million tons of stone

> Total stone placed 1886-1982: 8.7 million tons

#### **SOUTH JETTY**



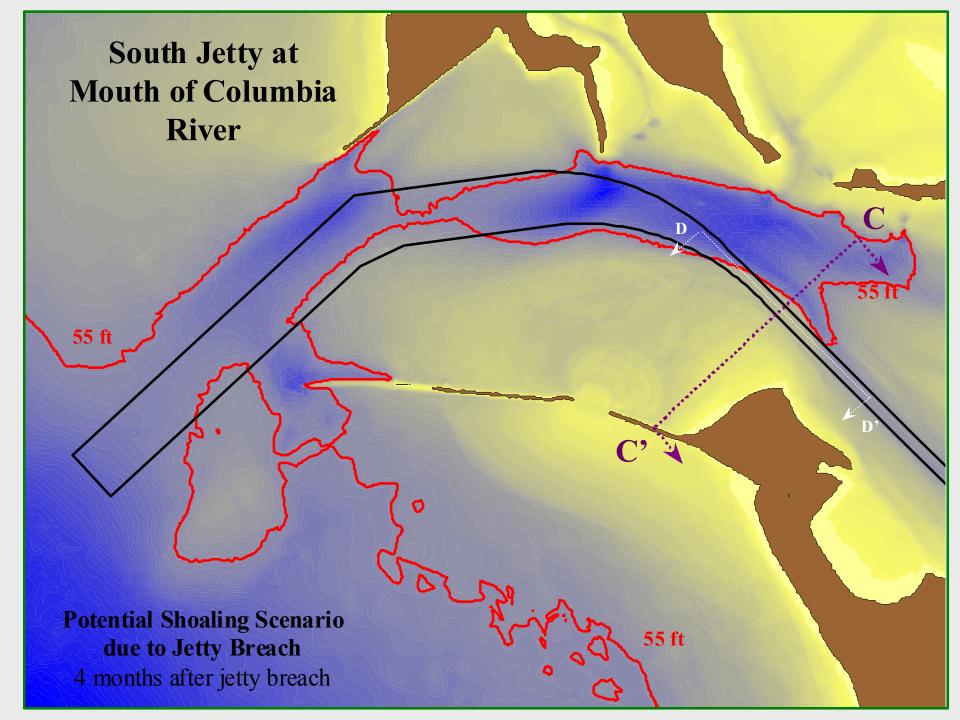
#### South Jetty

#### 4000 ft loss in length

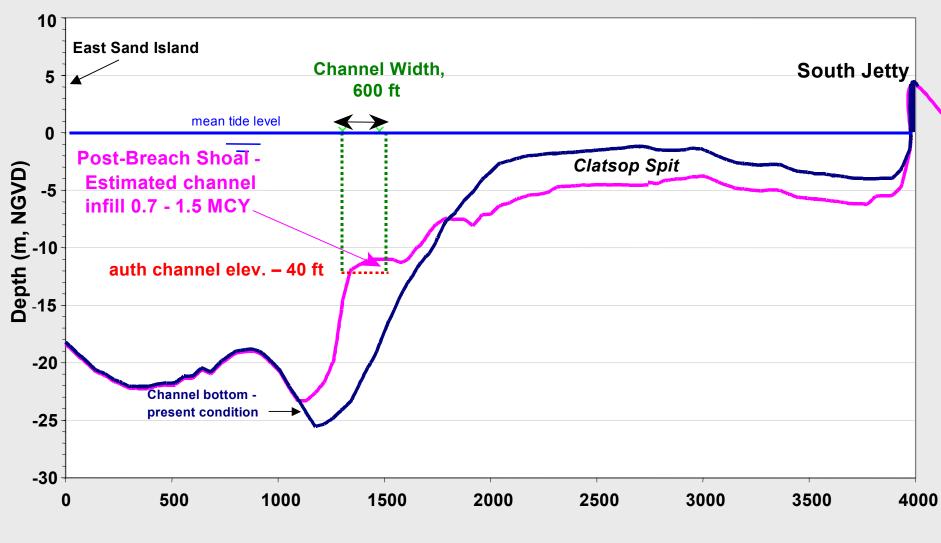




# South Jetty



#### South Jetty Breach – Shoaling Scenario



Cross-Channel Distance along Section C-C', meters

## **South Jetty**

MCR Channel

#1 Priority

#2 Priority

Phase I Rehab Limits along south jetty 8,000 ft

Pacific Ocean

Potential Barge Offloading Zone

Work Area & Rock Storage 5 Acres

155×00

190+00

180 × 00

Hau

Staging Area & Rock Storage 5 Acres

### Columbia South Jetty Repair Locations

0 1000 2000 3000 Scale in Feet

#### **MCR Jetties - Summary**

- Both N & S Jetties at MCR are in danger of breaching.
- Impact of breach of N. Jetty would have a more immediate impact on navigation than a S. Jetty breach.
- Emergency cost to repair a breach is estimated at 3 to 5 times more than preventative repairs.
- Pre-breach repair of most critical areas is estimated at about \$4 million for N. Jetty and \$10 million for S. Jetty.
- Pre-breach repair of the most deteriorated portions is estimated to postpone breaching by approximately 15 years.

#### **General Plan – N & S Jetties at MCR**

- Repair potential breach areas FY05 FY06
- Complete Jetty Rehab Report FY06
- Initial Rehab Funding FY08
- Initiate Rehab Construction FY09
- Complete Rehab Construction FY 11-12

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