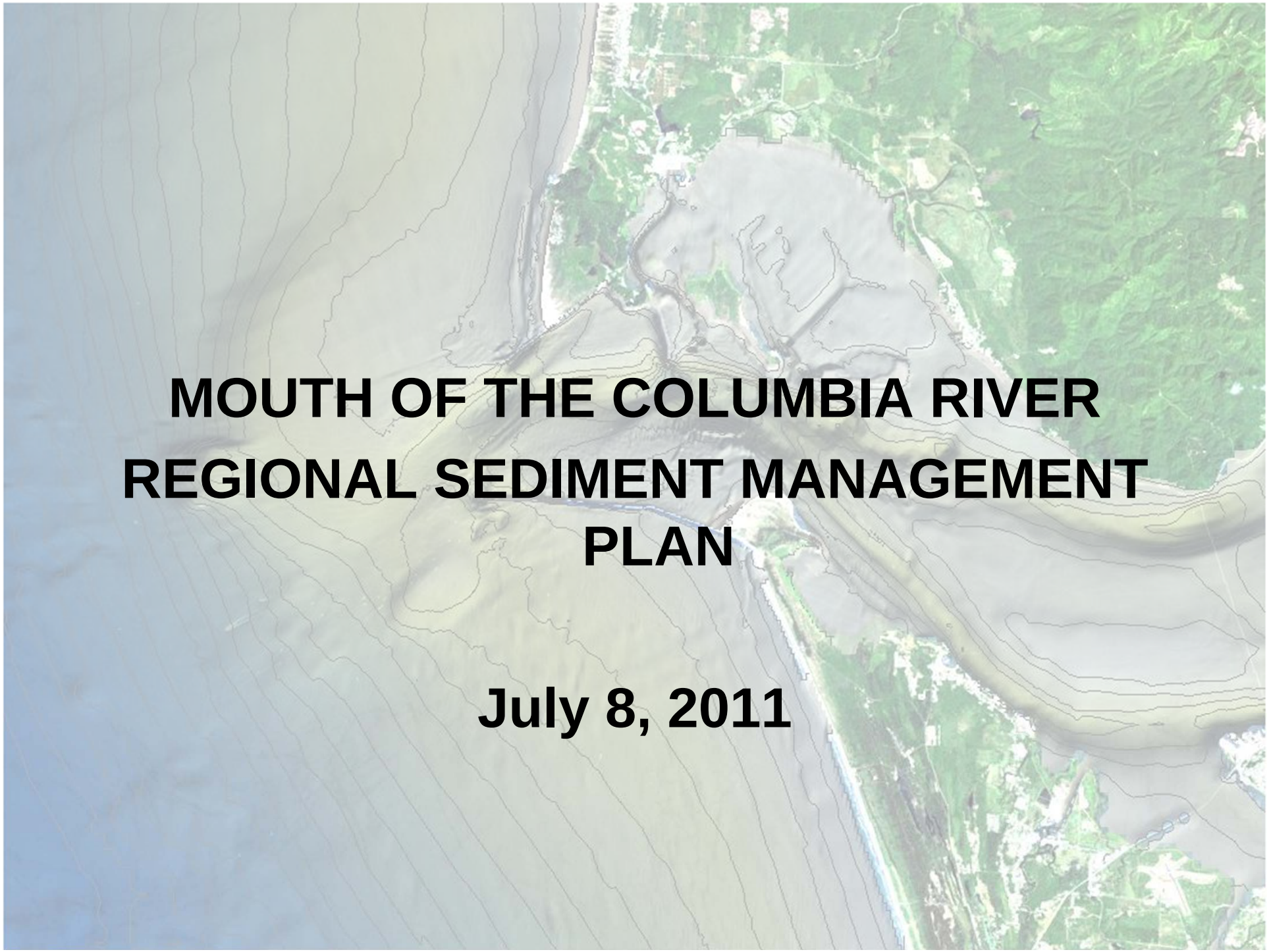


MOUTH OF THE COLUMBIA RIVER REGIONAL SEDIMENT MANAGEMENT PLAN

July 8, 2011

SUMMARY OF PROCESS

- Science-Policy workshops convened by LCSG in 2005, 2007, 2009 and 2010
- Since 2002, more than dozen different research projects, including sand tracer studies
- Columbia Nearshore Beneficial Use Project initiated in 2004
- Southwest Washington Littoral Drift Restoration Project initiated in 2007
- Demonstration projects within the OR nearshore and on-shore at Benson Beach
- Collaborative projects, e.g. navigational aid projects (enhancements to ARGUS beach monitoring; CDIP wave-ride buoy)

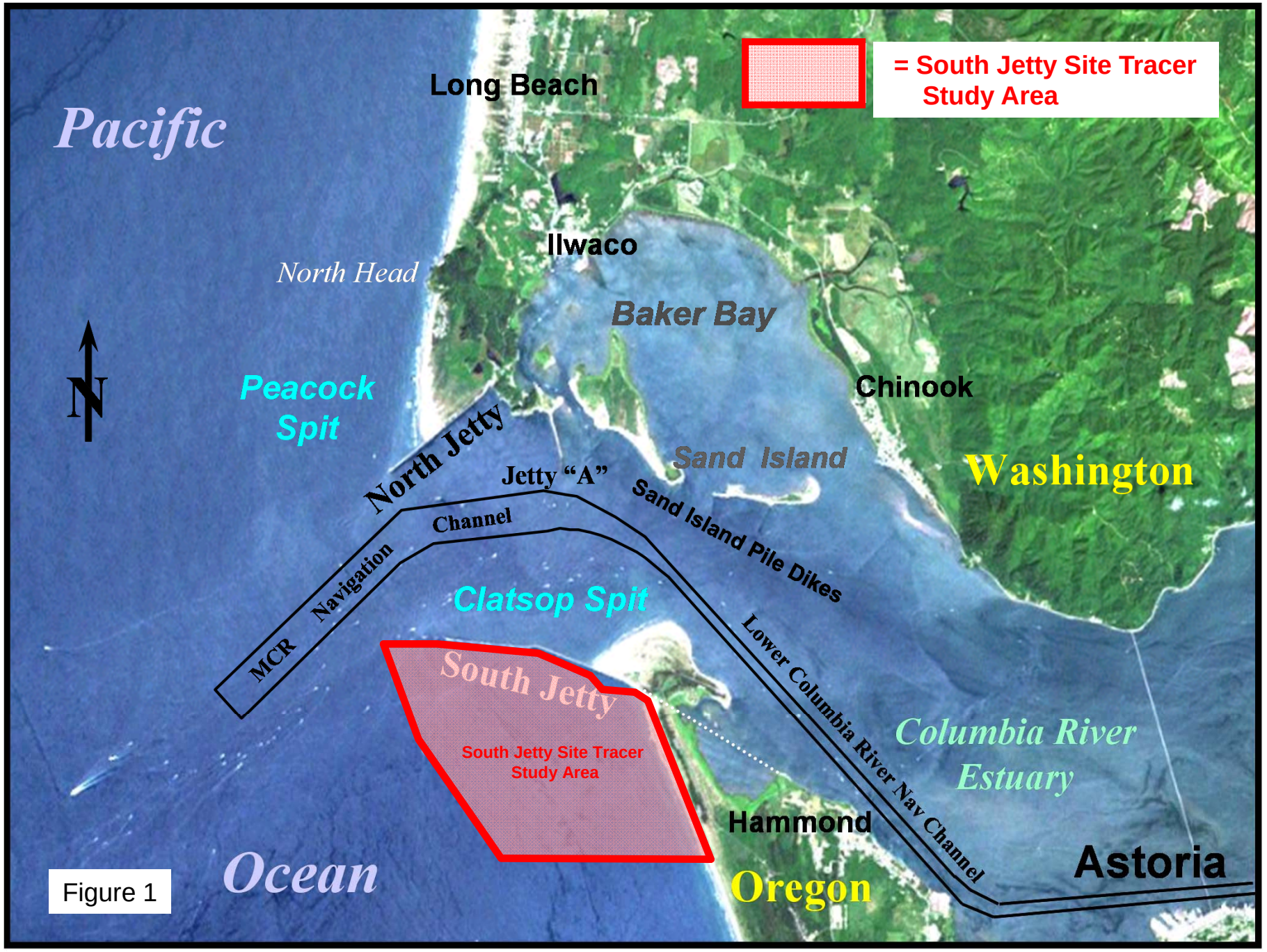
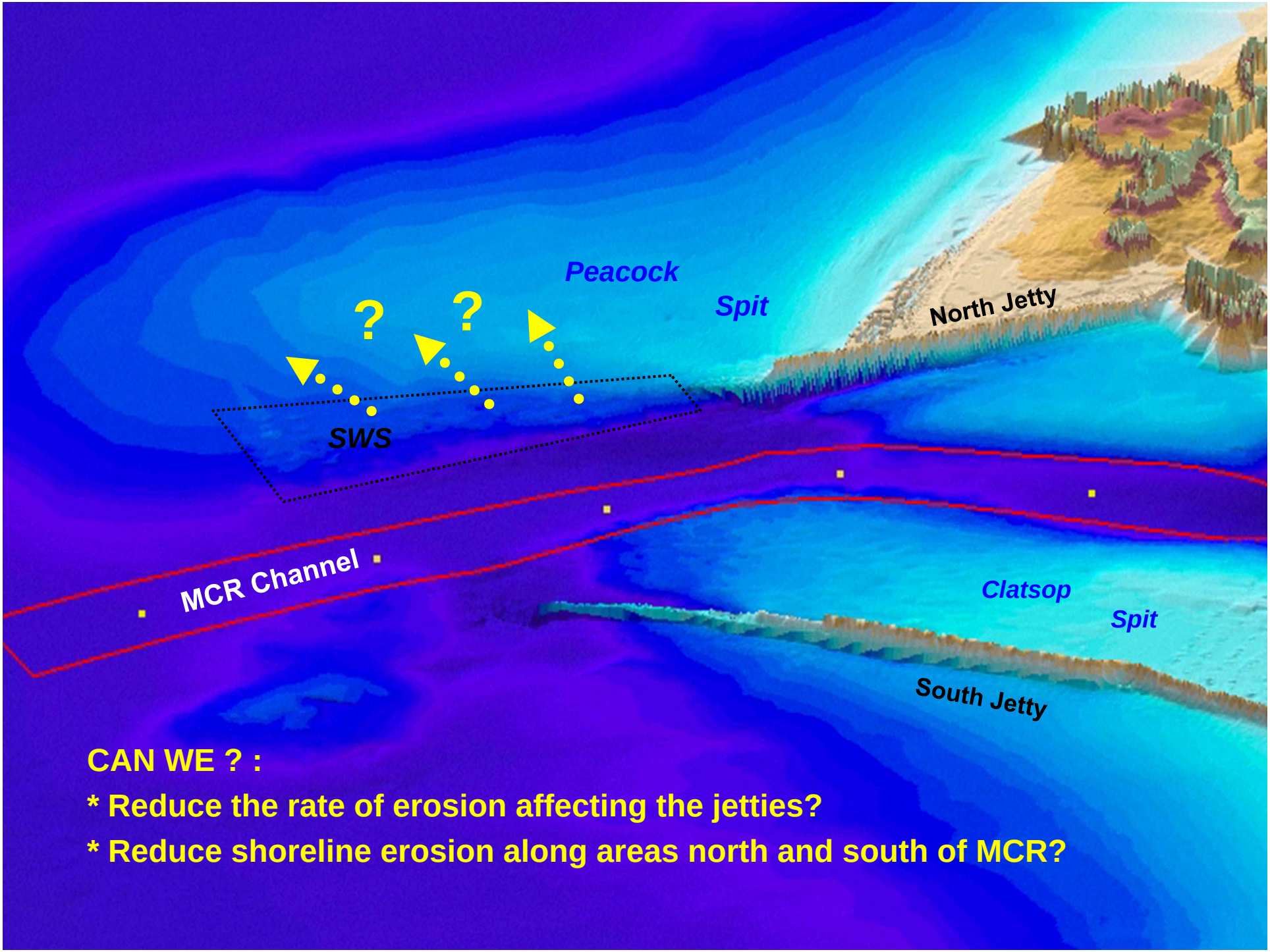

= South Jetty Site Tracer Study Area
Pacific
Long Beach
Ilwaco
North Head
Baker Bay
Peacock Spit
Chinook
North Jetty
Jetty "A"
Sand Island
Washington
Channel
Navigation
MCR
Sand Island Pile Dikes
Clatsop Spit
South Jetty
Lower Columbia River Nav Channel
South Jetty Site Tracer Study Area
Columbia River Estuary
Hammond
Astoria
Ocean
Oregon

Figure 1

SUMMARY OF PROCESS, cont.

RSMP process initiated by LCSG in 2010

- Steering Group and SAT established
- August 2010 Policy workshop
- November 2010 Science/Policy workshop
- Interviews with key stakeholders
- February 2011 Preliminary Review Draft Plan
- March 2011 Targeted Outreach session
- June 2011 Public Review Draft Plan


Peacock
Spit
North Jetty
?
?
SWS
MCR Channel
Clatsop
Spit
South Jetty
CAN WE ? :
* Reduce the rate of erosion affecting the jetties?
* Reduce shoreline erosion along areas north and south of MCR?

RSMP

Provide long-term strategy to guide sediment management at MCR, serve as basis for permitting a network of beneficial use sites, and facilitate securing of appropriations to finance ongoing R & M

- Material placed at DWS is lost to littoral system
- Status quo is unacceptable -- ongoing erosion, potential breaching of jetties, increasing deterioration of nearshore environment
- Need for a regional approach

PLAN ELEMENTS

- Assumptions and Conditions
- Network of Sites
- Adaptive Management Program
- Management and Implementation

Assumptions and Conditions

- “Clean” resource of fine sediments.
- The network of existing disposal sites needs to be expanded to include beneficial use sites that can be sustainably and adaptively managed to add clean sediment to the littoral system.
- Thin-layer disposal at new beneficial use sites would be expected to have less impact on navigational safety and biological resources than continuing disposal at the currently authorized sites.
- Nothing precludes the identification of additional sites as potential disposal locations.
- Disposal is limited to MCR sediment and to disposal by the Corps.
- Current disposal practices and erosion patterns have their own sets of effects on environmental resources and navigation safety.

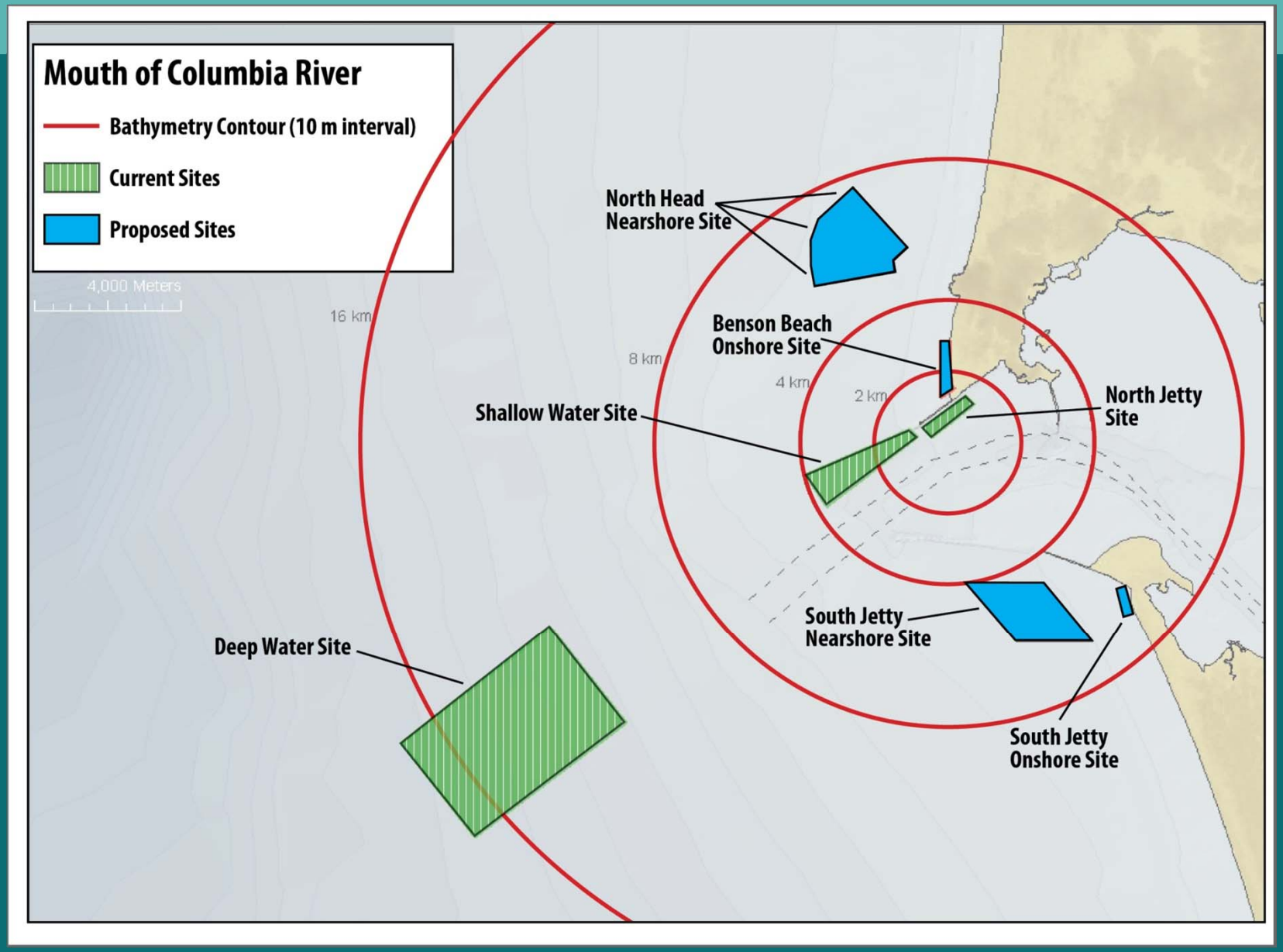
Assumptions and Conditions

- Planning for new disposal sites is recognized as an exercise in risk management; thus, an adaptive approach is needed.
- While data gaps continue to be filled, there is a considerable amount known about the area and a valid basis for expectations about the levels of potential risks to the physical and biological environments.
- A minimum amount of sand needs to be provided annually in order to demonstrably help sustain jetties, beaches, and marine habitat.

Network of Sites

System of 7 sites

- Existing Authorized Sites – SWS, NJS, DWS
- New Beneficial Use Sites
  - -- 2 nearshore = South Jetty, North Head
  - -- 2 on-shore = Clatsop spit, Benson Beach
- Guidelines for prioritization; function of AMT
- DWS should only be employed when weather or other factors eliminate nearshore or on-shore options.


Mouth of Columbia River
Bathymetry Contour (10 m interval)
Current Sites
Proposed Sites
4,000 Meters
16 km
8 km
4 km
2 km
North Head
Nearshore Site
Benson Beach
Onshore Site
Shallow Water Site
North Jetty
Site
Deep Water Site
South Jetty
Nearshore Site
South Jetty
Onshore Site

Adaptive Management Program

Adaptive Management Team

Annual Use Plan

Research and Monitoring

Management and Implementation

Adaptive Management Team

- Appointed/convened by LCSG
- Representatives from federal, state and local regulatory agencies; CRCFA; academic community
- Management and technical teams
- Functions
  - -- Develop recommended program of baseline studies and R & M
  - -- Monitor the disposal program and recommends adjustments as needed

Adaptive Management Team

- Functions, cont.
  - -- Develop protocols for determining if beneficial or adverse effects have been realized, and design and evaluate options for how to proceed if adverse effects occur.
  - -- Identify minimum thresholds for the amounts of sand disposed of at each site needed to provide for the efficacy of monitoring.
  - -- Recommend priority locations for disposal
  - -- Identify funds and/or other commitments to help implement the proposed R&M priorities.

Annual Use Plan

- Describes the timing, methods of disposal and monitoring for each site, including priorities for site use and disposal methods
- Developed by Corps, approved by EPA

Research & Monitoring Program

Navigational Safety

- Continuation of bathymetric monitoring
- Wave height threshold of 10% increase
- Predictive & real-time information on waves and wind

Research & Monitoring Program

Biological Sciences

- Focused on species of concern
  - -- Dungeness crab
  - -- Razor clams
  - -- Other fish species
- Baseline surveys and pre- and post-disposal monitoring
- South Jetty area as a priority

Management and Implementation

- Regional initiative led by LCSG
- Element of 2005 SMMP that governs Lower Columbia River dredging and disposal
- Disposal at new beneficial use sites conducted under Corps authority
- Initial steps
  - -- Establishing and convening of AMT
  - -- Securing funding for baseline studies and R & M program

Management and Implementation

• Summer 2011	Develop cooperative agreements for Plan implementation and funding.
• Summer/Fall 2011	Establish and convene AMT to design baseline studies and initial R&M
• Summer 2012	Conduct baseline studies.
• August 2012	Initiate disposal within network of beneficial use sites.
• September 2012-Summer 2013	Conduct post-disposal monitoring.
• Winter 2013	AMT reviews data from 2012 and develops any recommended modifications to disposal or monitoring program for incorporation into 2013 Annual Use Plan.