Eyeing the Future: The Problems:

- Without law reform, responses to Climate Change likely will:
  - Cause Oregonians to lose their use of the dry sands portion of Oregon’s Beaches, to which they have a right from time beyond memory.
  - Result in the wrongful replacement of public infrastructure.

Considering the Past

- 1913 Os West’s Leg.: beaches as highways
- 1965 Beach use changed by Leg: highways to recreation areas
- 1966 Bill Hay’s log fences to keep out the public
- 1967 The Beach Bill -- dry sands
- 1971 OCC&DC created
- 1972 CZMA passed by Congress
- 1973 SB 100 -- OCC&DC to report out to LCDC
- 1974 Goal 7 adopted
- 1975 OCC&DC reports out
- 1976 Goals 16, 17, and 18 created
- 1995 Tsunami Inundation Zone/no new Essential Facilities

Coastal Changes

- Maximum wave heights have increased significantly from 1970s to 2005 – from 9 meters to 12 meters
- Sea level rise may be greater than 1 meter by 2100 and may outpace uplift in the central coast
- Increase in extreme precipitation and flooding
- Increase in landslides

Public Beaches & Private Property

- Public has right to use wet and dry sand in Oregon
- As landowners hold the line against rising seas, public access is compressed
- Which lines will “roll” with changing conditions?

Beach Width and Sea Level Rise

\[ R = \left( \frac{1}{\tan \beta} \right) S \]

where in Oregon beach slope [\( \tan \beta \)] = .02 to .04

Thus if the sea rises 3 ft, beach retreat shrinks 150 ft

Peterson says retreat could be ~300 ft
Private Property and Public Rights at Risk

Coastal Zones

Law of Lines in the Sand
- **Common Law**: reliction, accretion and avulsion
- **Public trust**: navigation, fisheries and recreation
- **Oregon wet sands**: Gov. Os West and the wet sands
- **Oregon Beach Bill**: Dry sands to the vegetation line
- **Takings**: *Nollan, Lucas, Palazzolo, Stop-the-Beach*
- **Oregon Goal 18**: Beaches and Dunes
- **Oregon Goal 17**: Coastal Shorelands
- **Oregon Goal 7**: Hazards
- **Oregon Tsunami Law**: Tsunami inundation zone
- **US Coastal Zone Management**
- **US Floods and FEMA**

Flood Insurance
- **Learning From Sandy**
- Costs of Insurance are increasing ($7k+ for insurance in VE zone)
  - Costs can be reduced by FEMA Community Rating System
- We will be losing beach width
- Effects of sea level rise and storm surge must be considered – by congressional mandate

Jurisdictional Lines

Limitations with Existing Regulation
- Lack of information on cumulative effect of shoreline protective structures
- Buffers are likely inadequate given rates of change
- No implicit provision for considering climate change
- No policy for managing retreat from increasing hazards
- No plan for abandoning which state and local infrastructure after next inundation
Adaptive Zoning

With knowledge of high risk areas and existing development, identify areas where adaptation strategy will be to:

- **Retreat**, allowing shoreline and wetlands to migrate inland with sea rise and shore erosion;
- **Protect**, allowing existing development to remain without shore protection structures; homes must be placed on pilings;
- **Accommodate**, allowing existing development to remain without shore protection structures; homes must be placed on pilings.

Property Rights Approach

Examples of Recorded Easements

- **Affirmative easements** that provide the public with the right to walk along the dry beach even if it migrates inland;
- **Conservation easements** that prevent landowners from erecting shore protection structures or elevating the grade of their land;
- **Restrictive covenants** in which owners are mutually bound to avoid shore protection and allow access along the shore to migrate inland.

Challenges to Rolling Lines

**Constitutional Takings**

- *Lucas*: Deprivation of value/rights through regulation – requires compensation

**Common Law Property Concepts**

- *Severance*: Avulsion vs. Accretion

Law Reform

What we need to do in Oregon

- Change approval standards for beach front protective structure (e.g. riprap) to preserve access along beach
- Require any allowed intrusion below the vegetation line to provide foot access across it
- Decide now which state and local infrastructure will not be rebuilt after occurrence of next inundation
- Implement the FEMA Community Rating System criteria
- Mesh Goal 17 and FEMA (FIRM VE Zone)
- Make sure the Lines Roll

Thank you

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for a copy of these slides

Browse the news section at my firm’s website


short technical considerations at:

http://oregonshores.org/pdfs/EducationalPacket.pdf