Envision Tillamook County Coastal Futures Project:

Policy Choices and Consequences Workshop

Thursday 4 December 2014 (1:00 pm – 4:30 pm)
Tillamook Bay Community College Room 213

Meeting Objectives:

1. **Review scenarios and updated results from Coastal Tillamook County Envision Model**
2. **Set a framework for how to begin working towards a preferred scenario**
3. **Convene and engage Tillamook Coastal Hazards KTAN**

Agenda

… – 1:00	Coffee and snacks, poster preview
1:00 – 1:05	Welcome and Introductions
1:05 – 1:15	Meeting Objectives/Setting Expectations
1:15 – 1:30	Neskowin update
1:30 – 1:45	Redefine scenarios and explain where we are at in the process
1:45 – 3:00	Overview of results and summary of key policies within each scenario - rating and ranking policy scenario narratives with clickers
3:00 – 4:00	Breakout poster session - to rate/rank individual policies and metrics
4:00 – 4:30	Meeting Synthesis/Discussion of timeline and next steps/Wrap up/KTAN data collection exercise
4:30 – …	Additional time to view posters

Envision Tillamook County Coastal Futures Project

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Policy Scenario Narratives

Scenario 1: Status Quo

Continuation of present day policies.

Policies Applied
• Determine urban growth boundaries (UGB) in accordance with present-day UGB policy. (1) • Maintain current backshore protection structures (BPS) and allow more BPS to be built on Oregon Goal 18 eligible lots. (2)

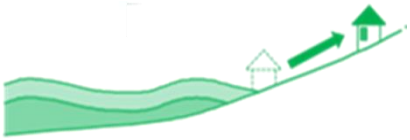
Scenario 2: Hold the Line

Policies or decisions are implemented that involve *resisting* environmental change (e.g. building or raising flood defenses, building or strengthening shoreline armor, nourishing beaches) in order to preserve existing infrastructure and human activities (e.g. beach access).

Policies Applied
• Maintain current BPS and allow more BPS to be built on Oregon Goal 18 eligible lots. (2) • Add beach nourishment for locations where beach access in front of BPS has been lost (e.g., due to beach width reduction or frequent flooding). (5) • Construct new homes or developments only on lots with Oregon Goal 18 BPS eligibility. (4) • Construct homes above a predetermined threshold elevation and in the safest site of each respective lot. (9) • Require property laws to disclose information about coastal hazards at the point of sale (not modeled).

Scenario 3: ReAlign

Policies or decisions are implemented that involve *changing* human activities to suit the changing environment (e.g. relocation of infrastructure and/or people, changing land use or livelihoods).



Policies Applied
• Determine UGB in accordance with the present-day UGB policy but with development restrictions within hazard zones. (1) • Implement coastal hazard zones and restrict further development within the zones. (6) • Prohibit construction of BPS on additional properties, regardless of Goal 18 eligibility. • Construct homes above a predetermined threshold elevation and in the safest site of each respective lot. (9) • Prohibit repetitive repairs of severely impacted buildings and remove structures from the shoreline after they reach a predetermined repair limit. (8) • Inventory lots located outside of the coastal hazard areas and re-zone to permit future development. (7) • Establish conservation, open space, or recreation uses within the coastal hazard zones, via buyouts and rolling easements. • Require property laws to disclose information about coastal hazards at the point of sale (not modeled).

Scenario 4: Laissez-Faire

Current policies (state and county) are *relaxed* such that existing homes, infrastructure and new development all trump the protection of coastal resources, public rights, recreational use, beach access, scenic views.

Policies Applied
• Permit development outside the UGB. • Eliminate provisions of both the Oregon Goal 18 that limits BPS eligibility, and Oregon Parks and Recreation Department permit BPS construction requirements. (3)

Scenario 5: Neskowin

Policies or decisions are implemented in accordance with the Neskowin Coastal Hazards Adaptation Plan that involves both resisting environmental change (e.g. building or maintaining flood defenses) and changing human activities (e.g. adapting coastal hazard overlay zones).

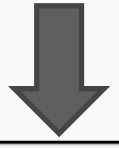
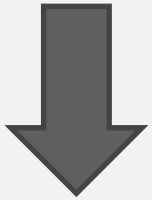
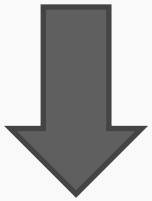
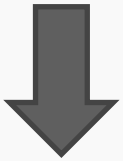
Policies Applied
• Determine UGB in accordance with the present-day UGB policy but with development restrictions within coastal hazard zones. (1) • Implement DOGAMI coastal hazard zones and restrict density of future development within the moderate or "Neskowin Coastal Hazards Overlay" zone. (11) • Construct homes 3-ft above the FEMA base flood elevation and in the safest site of each respective lot. (9) • Land divisions will be subject to several standards, including the creation of parcels with building sites outside of the Overlay zone. • When performing significant repairs due to coastal hazard impacts, require conformance to new hazard zone development requirements, including safest site *(caveat: within the model, the property must experience a certain number of events in a certain time frame to trigger development requirements).* (10) • Require all new construction on bluff-backed sites to be beyond the 50-year annual erosion rate (as determined by a geologic report) + 20-ft buffer distance (not modeled). • Apply new specified runoff and drainage standards, especially for oceanfront property (not modeled).

Metrics Currently Tracked in the Model

The table below indicates metrics that we are able to visualize as model outputs. The outputs are summarized by UGB and by littoral cell.

Buildings Impacted by Flooding	Number of Properties Transitioned into Easements
Buildings Impacted by Yearly Event-Based Erosion	Number of Surface Structures Impacted by Flooding
Buildings Destroyed by Long-Term Erosion	Number of Surface Structures Impacted by Erosion
Road Impacted by Flooding	Number of Support Structures Impacted by Flooding
Road Impacted by Erosion	Number of Support Structures Impacted by Erosion
Beach Accessibility	Percent of Shoreline Hardened
Value of Flooded Property	Population
Value of Eroded Property	Portion of Population Growth Added Inside Hazard Zone
Cost of BPS ($)	Portion of Population Growth Added Outside UGB
Cost of BPS Removal ($)	Portion of Population Growth Added Within A Half Mile of the Shoreline
Cost of Nourishment ($)	Portion of Population Growth Added Within UGB
Flooded Area (sq m)	Spatially Averaged Dune Overtopping Days per Year
Length of BPS (m)	Spatially Averaged Dune Toe Impact Days per Year
Number of BPS Projects	Spatially Averaged Maximum Yearly TWL
Number of Buildings	Total Cost of BPS Maintenance ($)
Number of Goal 18 Eligible Lots with BPS	Unconstrained Expenditure ($)
Number of Goal 18 Ineligible Properties with BPS	Value of Developed Land Impacted by Erosion ($)
Number of New Buildings	Value of Developed Land Impacted by Flooding ($)
Number of New Buildings in DOGAMI Moderate Hazard Zone	Value of Properties Transitioned into Easements ($)
Number of New Buildings on Goal 18 Ineligible Beachfront Properties	Volume of Nourishment (cu m)
Number of Nourishment Projects	

Generalized Summary of Key Metrics

Metric	Status Quo	Hold the Line	Laissez-Faire	ReAlign	Neskowin
% Shoreline Hardened				N/A	
% Beach Accessibility					
# Buildings Impacted by Flooding					
# Buildings Impacted by Erosion					
Cost by 2100 (millions of $)	80	150	125	110	130