

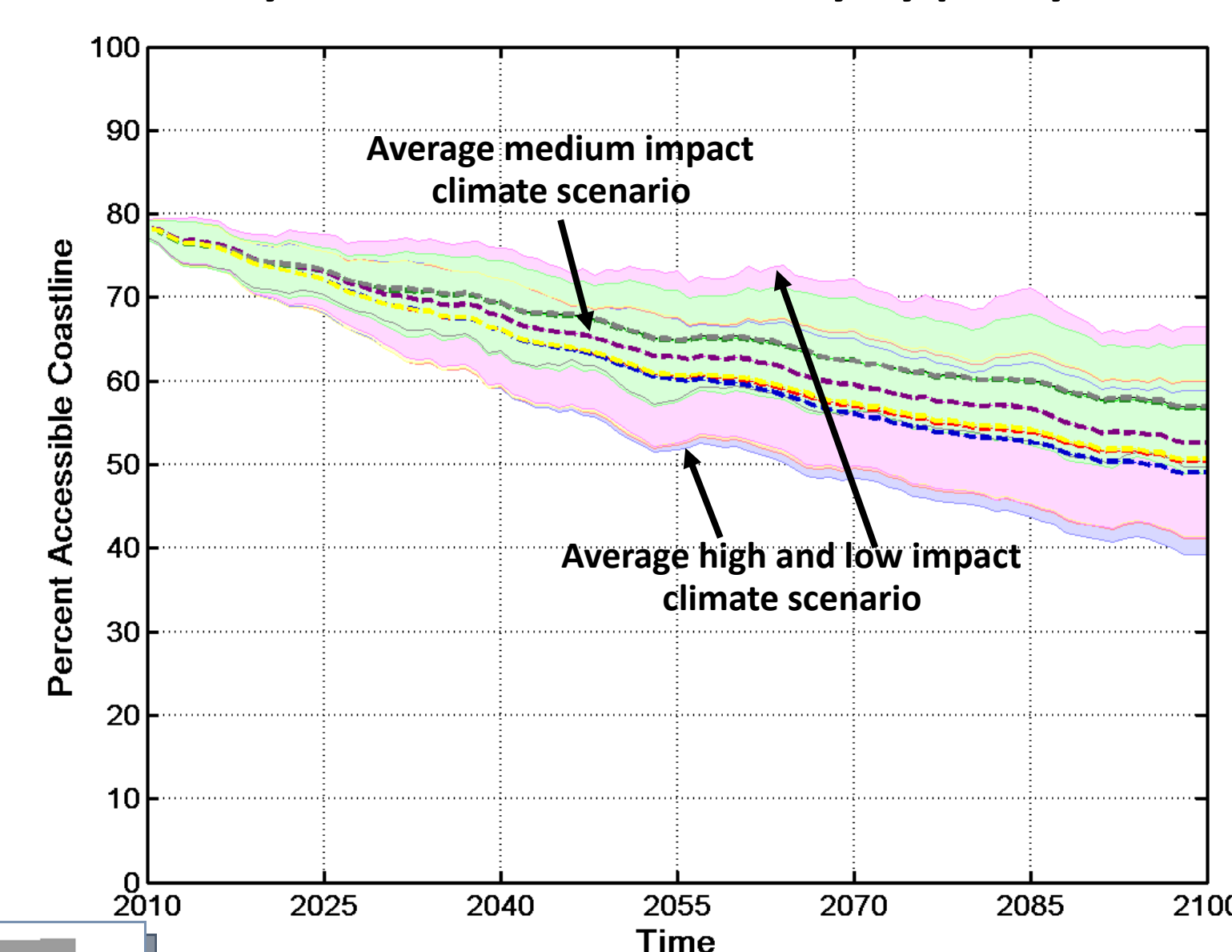
TILLAMOOK COUNTY COASTAL FUTURES PROJECT:
PUBLIC GOOD STORYLINE

What extent of the beach is accessible?

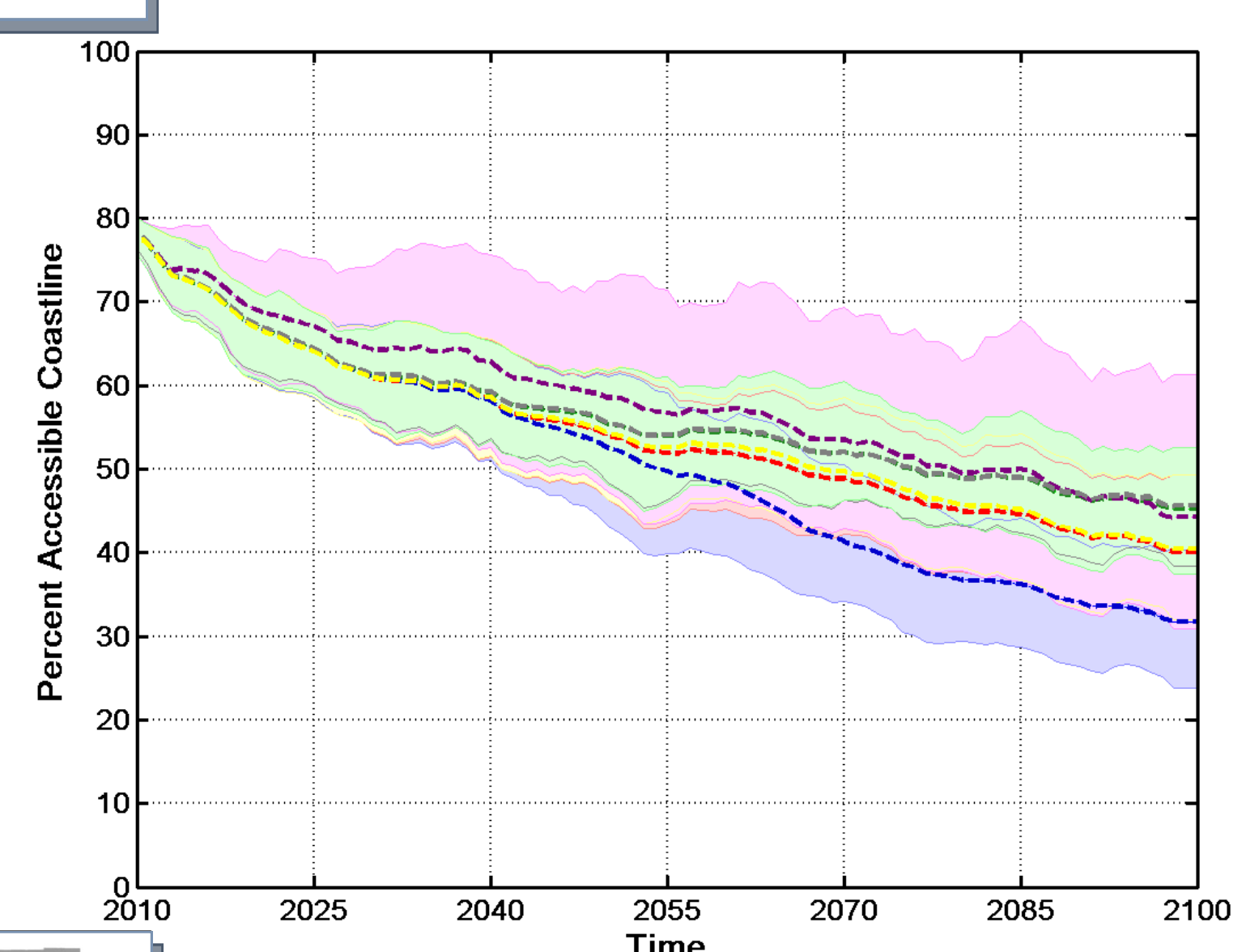
Take Home Messages:

- By 2100, the combination of climate impacts and hardening of the shoreline significantly reduces beach accessibility (walk-ability).
- Beach accessibility decreases under all policy scenarios by 2100, but less so in the **Hold the Line**, **ReAlign**, and **Hybrid** policy scenarios.

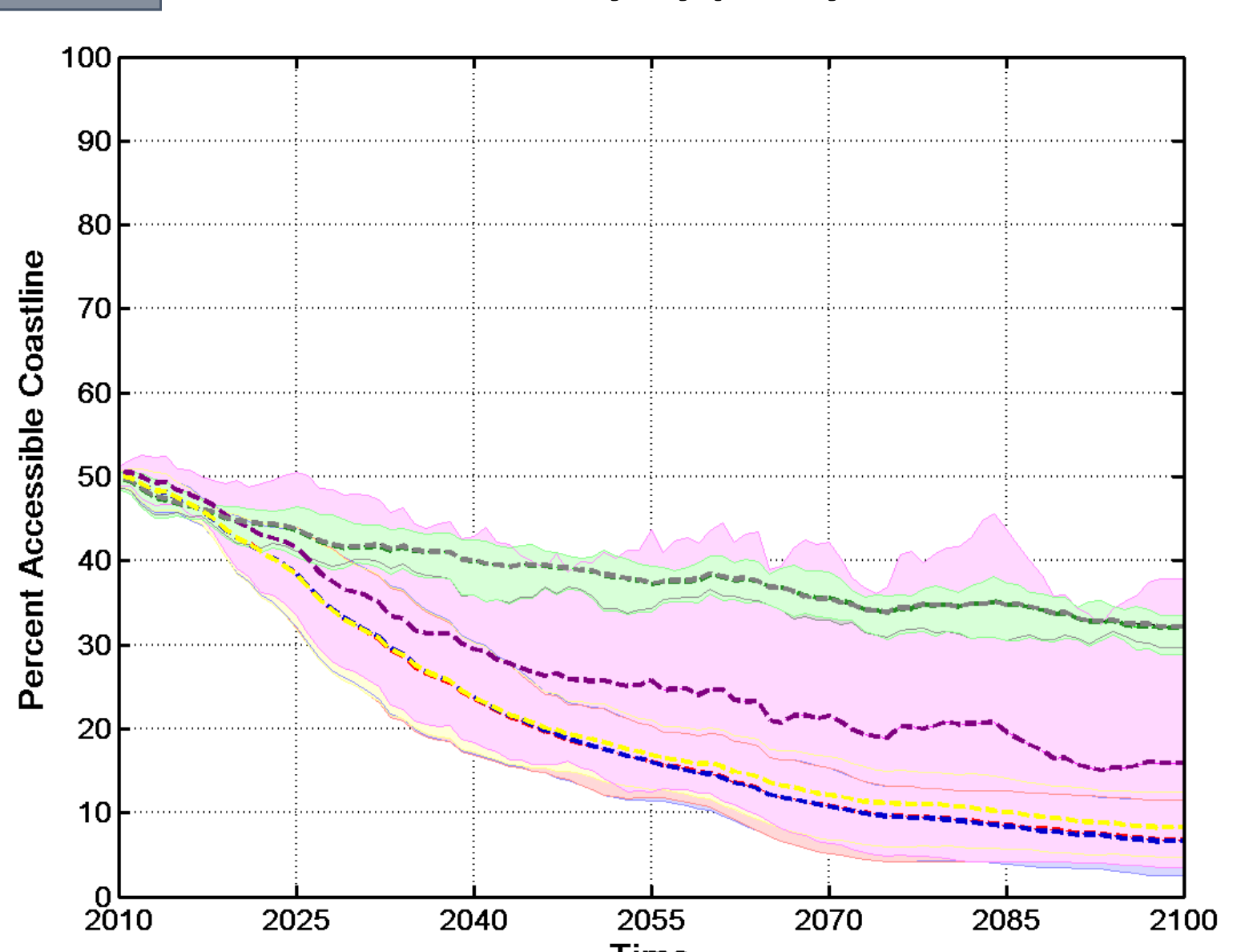
1. County-wide beach accessibility by policy scenario



2. Neskowin beach accessibility by policy scenario



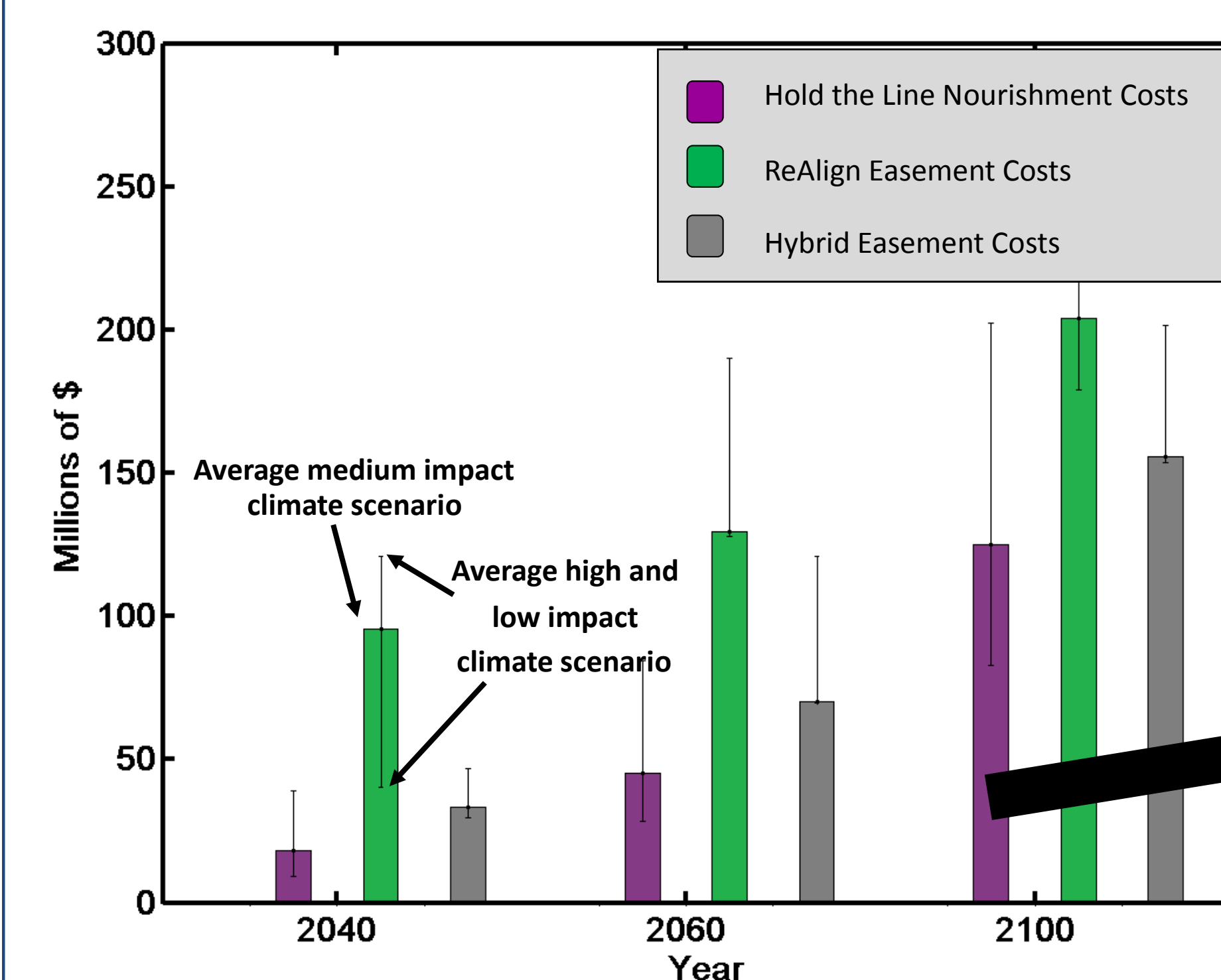
3. Rockaway Beach littoral subcell beach accessibility by policy scenario

Key Points:

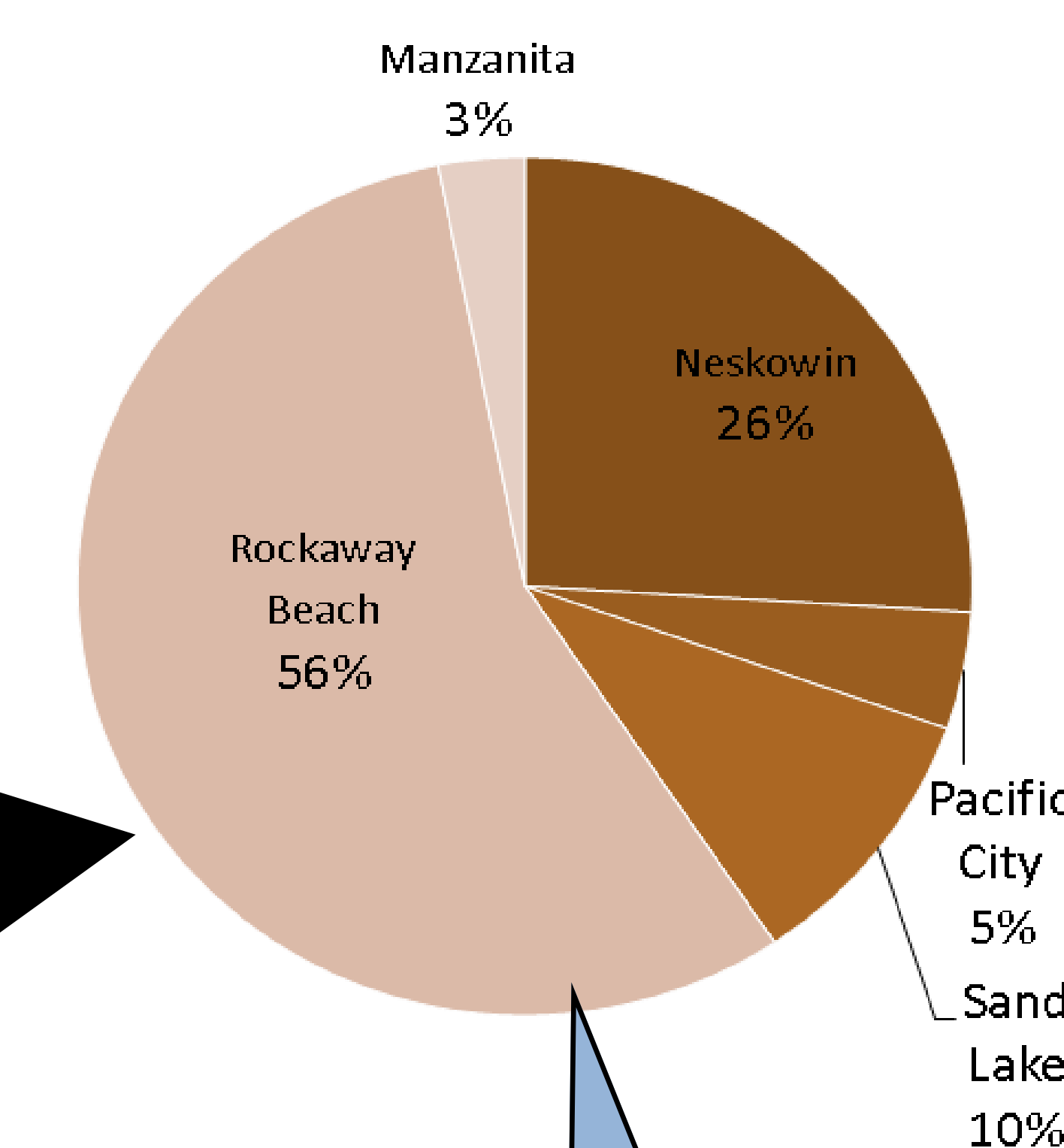
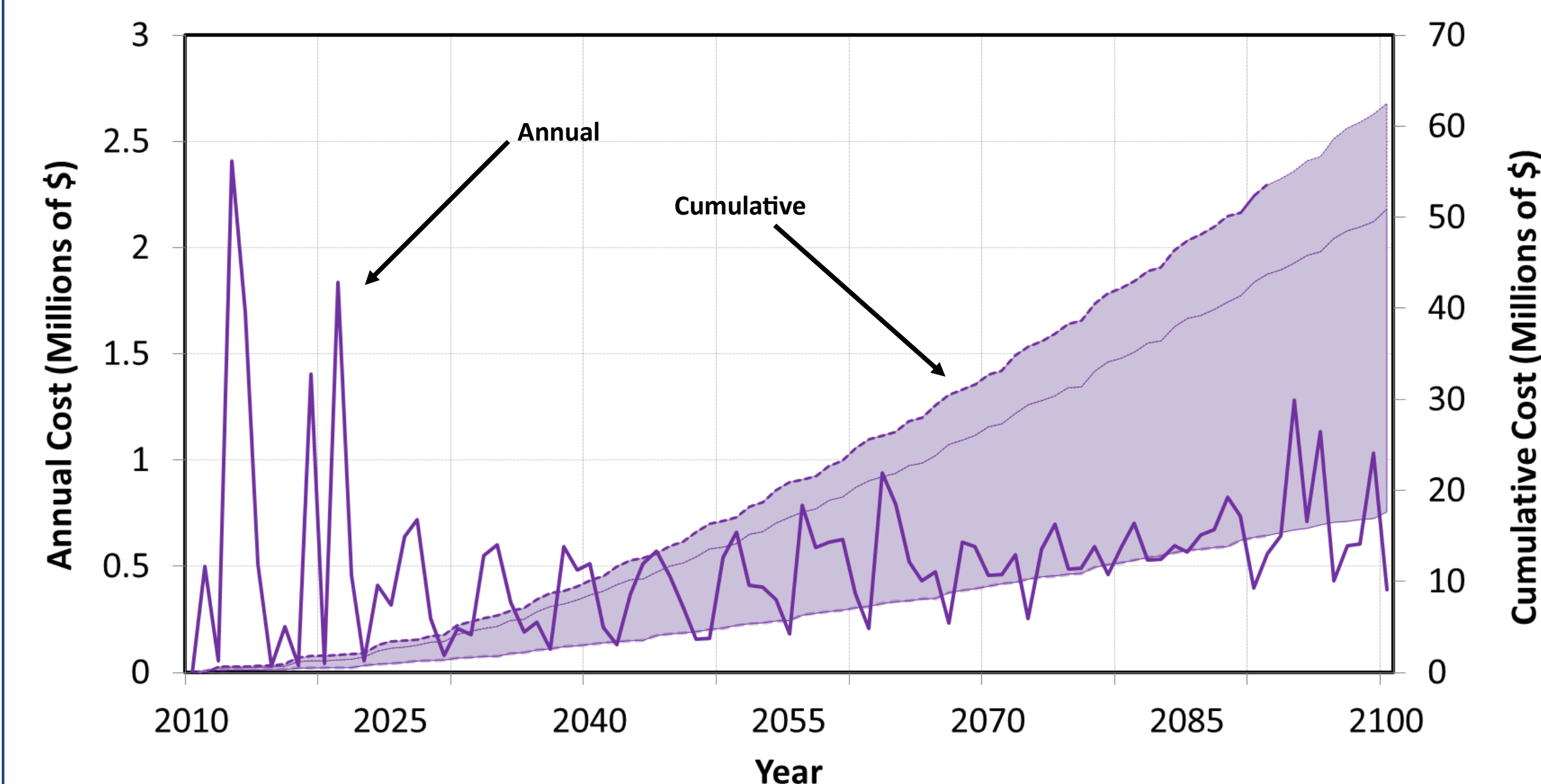
- Different policies affect beach access differently, with the **most accessibility** under the **ReAlign**, **Hybrid**, and **Hold the Line** policy scenarios, and the **most limited access** occurs under the **Status Quo** and **Laissez-Faire** scenarios (Graphs 1-3, Map 4).
- Nourishment in the **Hold the Line** scenario does not always maintain beach access under medium and high impact climate scenarios (Graphs 1-3).
- By 2100, the northern Rockaway Beach littoral subcell coastline is more accessible under the **ReAlign** and **Hybrid** policy scenarios (due to prevention of new BPS and relocation of impacted buildings, Map 4).
- Under the **Status Quo**, **Laissez-Faire**, and **Neskowin** policy scenarios, the beach alongside BPS is highly **inaccessible** in 2100.

What are the relative costs of keeping the beach accessible?

Take Home Message: By 2100, the cost of converting beachfront property into easements is more than the cost of nourishing beaches across the county under all climate impact scenarios.

5. County-wide cumulative cost of maintaining beach access under the **Hold the Line**, **ReAlign**, and **Hybrid** policy scenarios

6. Breakdown of beach nourishment costs by location

7. Annual and cumulative cost of beach nourishment in a **Hold the Line** policy scenario in the Rockaway Beach littoral subcell

Breakdown of cumulative nourishment costs by location under the **Hold the Line** scenario in the mean medium impact climate scenario

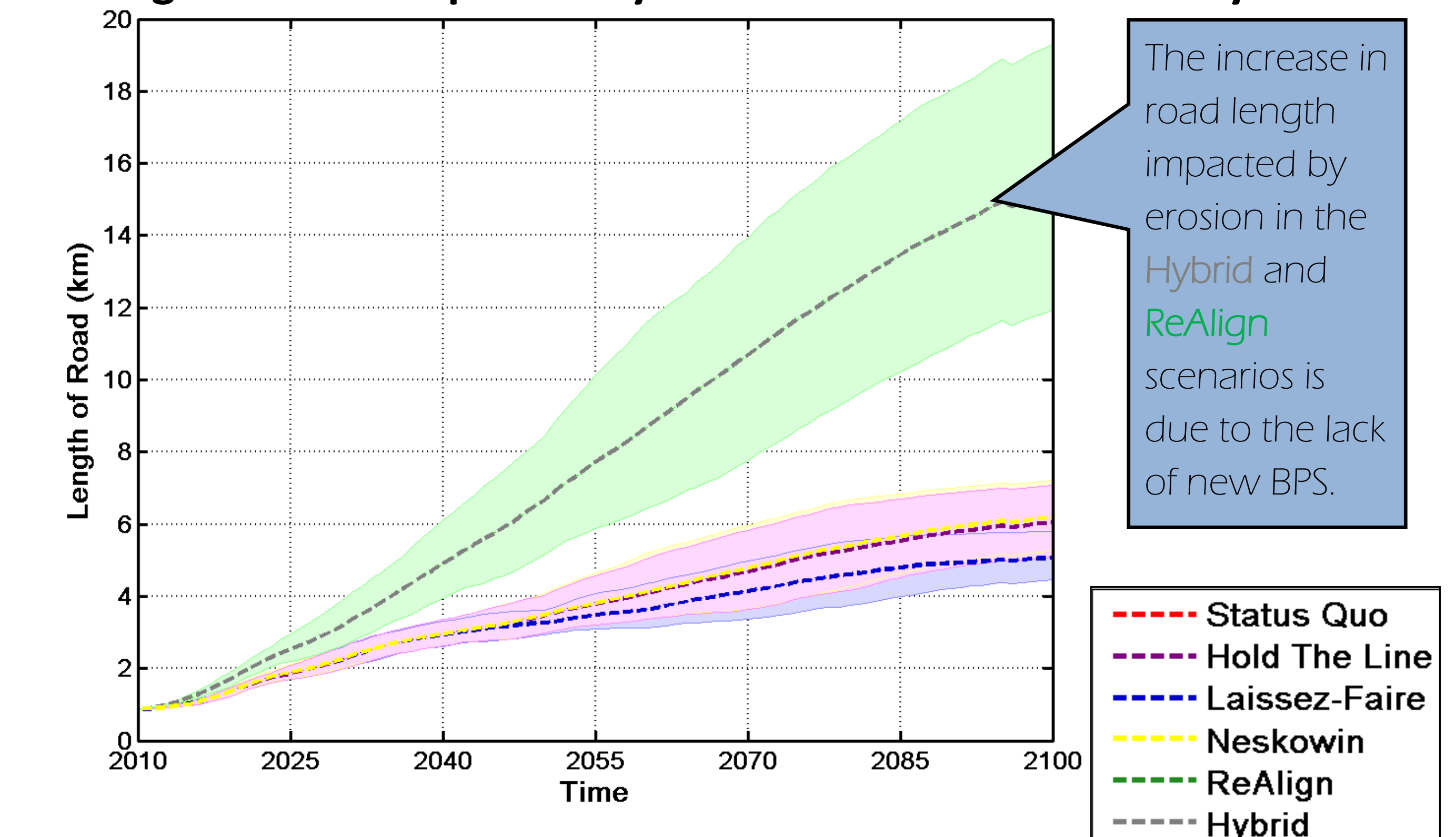
Key Points:

- By 2100, the costs associated with converting beachfront property into easements in the **ReAlign** policy scenario is approximately **\$50 million more** than beach nourishment in the **Hold the Line** policy scenario (Graph 5).
- The communities of Neskowin and the Rockaway Beach littoral subcell contribute to approximately **80% of the total county-wide nourishment costs** by 2100 (Graph 6).
- The **annual cost** of beach nourishment varies due to annual differences in storminess and the rate of re-nourishment (every 5 years if needed) (Graph 7). The largest amount spent in a year is ~ \$2.3 million. The cumulative cost varies by ~ \$40 million between average **low** and average **high** impact climate scenarios.

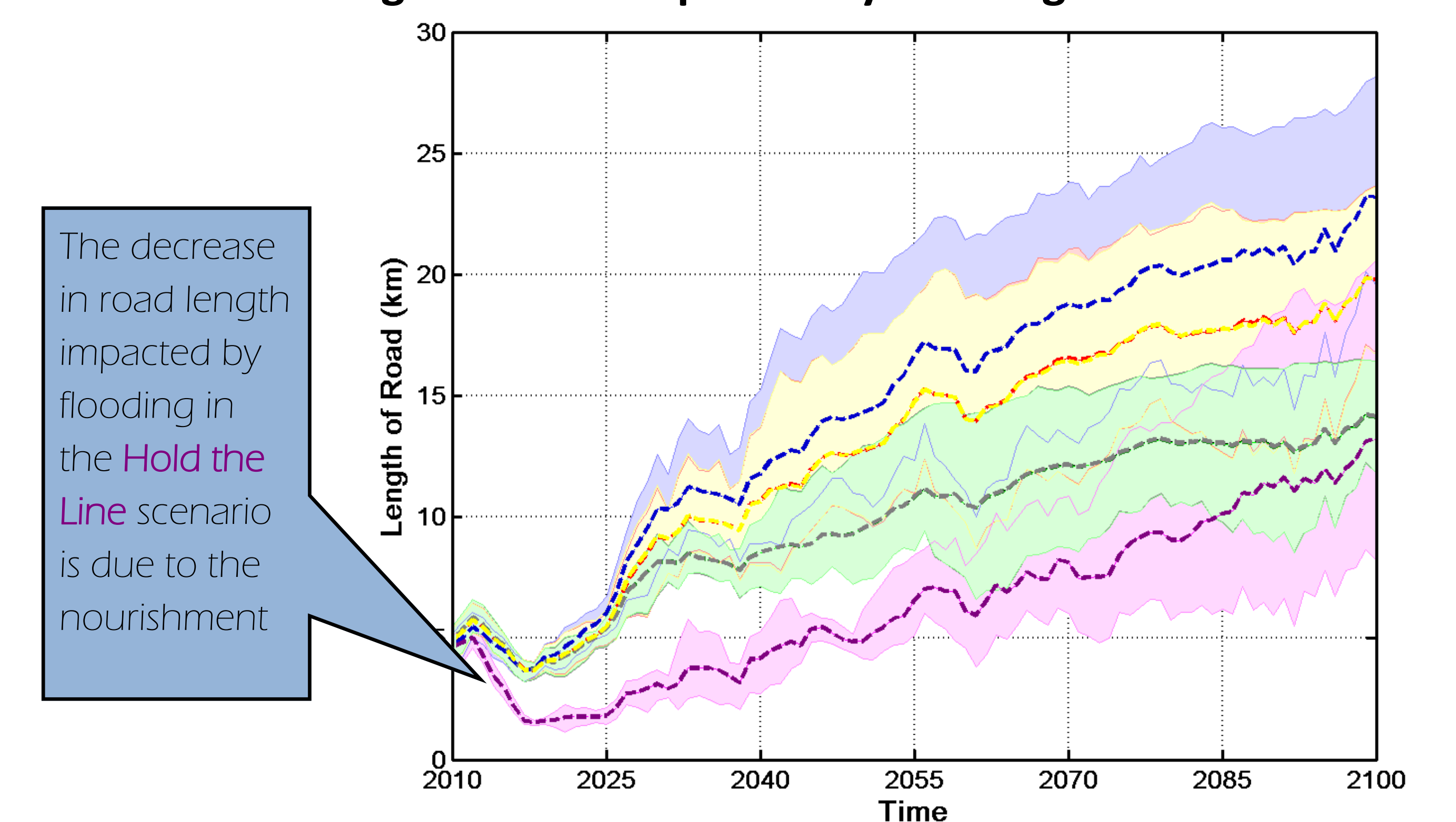
How will roads be impacted by coastal hazards?

Take Home Message: Policies that add BPS significantly reduce the length of road impacted by erosion, but increase the length of road exposed to flooding.

8. Length of road impacted by erosion in Tillamook County



9. Length of road impacted by flooding in Tillamook County

Key Points:

- The length of road impacted by erosion is greatest in the **ReAlign** and **Hybrid** policy scenarios as a result of lack of new BPS construction (Graph 8).
- The length of road impacted by erosion is similar across the **Status Quo**, **Hold the Line**, **Laissez-Faire**, and **Neskowin** policy scenarios in which new BPS are constructed in response to erosion hazards (Graph 8).
- The length of road impacted by flooding is greatest in the **Laissez-Faire** policy scenario as a result of increased total water levels due to beach narrowing caused by the presence of BPS (Graph 9).
- By 2100, the length of road impacted by flooding is similar in the **Hold the Line**, **ReAlign**, and **Hybrid** policy scenarios (Graph 9).