The threat of climate change and sea level rise is becoming increasingly apparent in coastal communities around the world, as tidal and storm-driven flooding events increase in magnitude, duration and frequency. Specific events punctuate the long-term changes underway and create greater urgency for communities to prepare, but the impacts of events are not felt uniformly throughout a region, leading to variability in the motivation of communities in a region to invest in adaptation strategies. This variation creates a barrier to coordinated regional action, which must be overcome if a region is going to avoid a piecemeal, and likely sub-optimal, approach to climate change adaptation. In order to facilitate regional planning, it is important that multi-scale interactions, including the regional costs of local actions (or inaction) and the local costs of regional actions, be clearly understood. In this talk, I will use sea level rise in the San Francisco Bay Area as a case study to understand regional interdependencies in adaptation to climate change. Using future scenarios for environmental forcing and shoreline configurations to drive linked hydrodynamic-transportation models, I will quantify three different types of interdependence: shared experiences, interdependent vulnerabilities and interdependent adaptations. Each creates particular incentives for regional action, whether in the form of sharing information, investing in local solutions, or developing a regional vision for Bay shorelines. I will finish the talk with consideration of alternative futures for the San Francisco Bay area and contrast the regional outcomes that may emerge.