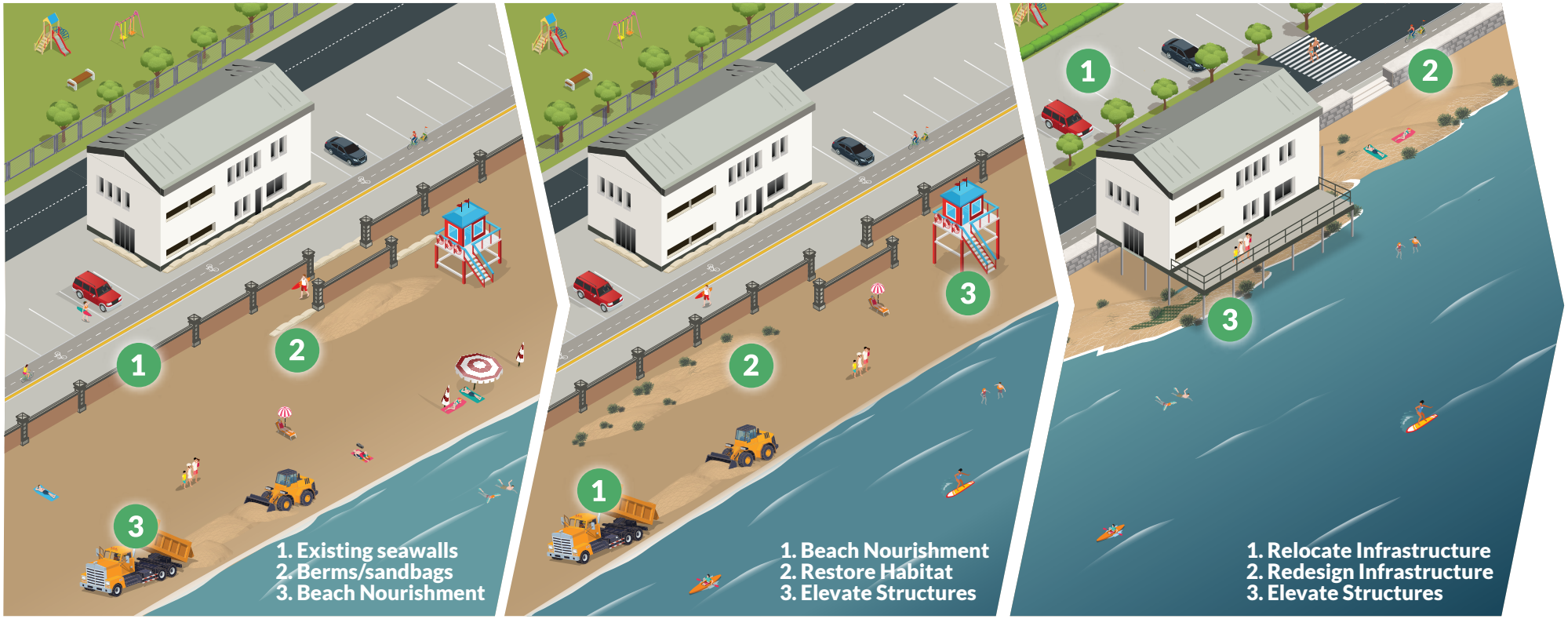
Today's proactive choices prepare Los Angeles for rising seas.

To prepare for the rapid increase in the rate of sea level rise (see other side), our communities need to implement short-term strategies directly linked to long-term solutions. This **phased adaptation** can help communities make small, manageable, and affordable changes in the near-term that will cumulatively result in long-term improvements. Today's decisions should put us on the path to resilience before the high sea levels projected for mid-century irreversibly impact our beaches, our communities, our neighbors, and our homes.

Below is one example of a community adapting to sea level rise through a phased approach. Each community will have a different vision for the future. There is no one size fits all when it comes to adaptation.

SOLUTIONS



2020 OUTCOMES: TODAY
Existing infrastructure, beaches, and natural resources are protected while long-term shoreline management plans are outlined.

2050 OUTCOMES: MID-TERM
Smaller projects have been put in place to buy time to implement larger, long-term solutions that will address rapidly increasing sea levels.

2080 OUTCOMES: LONG-TERM
Larger, more comprehensive solutions have been implemented to enhance commercial, recreational, and natural assets.

RESULTS OF NO ACTION: TODAY AND BEYOND

Delaying planning today could lead to irreversible impacts to our beaches, habitats, and communities.

Repetitive damage to infrastructure leading to expensive repairs

Reduced access to recreation due to shrinking beaches and public safety concerns

Loss of coastal habitats including wetlands, dunes, and tidepools.

Sea levels are rising now...

California has experienced several extreme sea level events in recent years. Los Angeles experienced one of its highest recorded sea levels in November 2015.

Flooded streets throughout the LA Area during the November 2015 event.

Left: Newport Beach Peninsula. Photo Credit: Elena Perez

Center: Alamitos Peninsula, Long Beach. Photo Credit: USC Sea Grant

Right: Sunset Beach in Pacific Palisades. Photo Credit: Elena Perez

... and will rise even faster beyond 2050.

The graph below shows how extreme events like the one experienced in November 2015 will become increasingly more common as sea levels rise. The biggest coastal floods and hazards will happen when El Nino, high tides, severe storms and high waves occur at the same time.

Days per year above the 3rd highest recorded sea level (5.0 ft on Nov 2015)

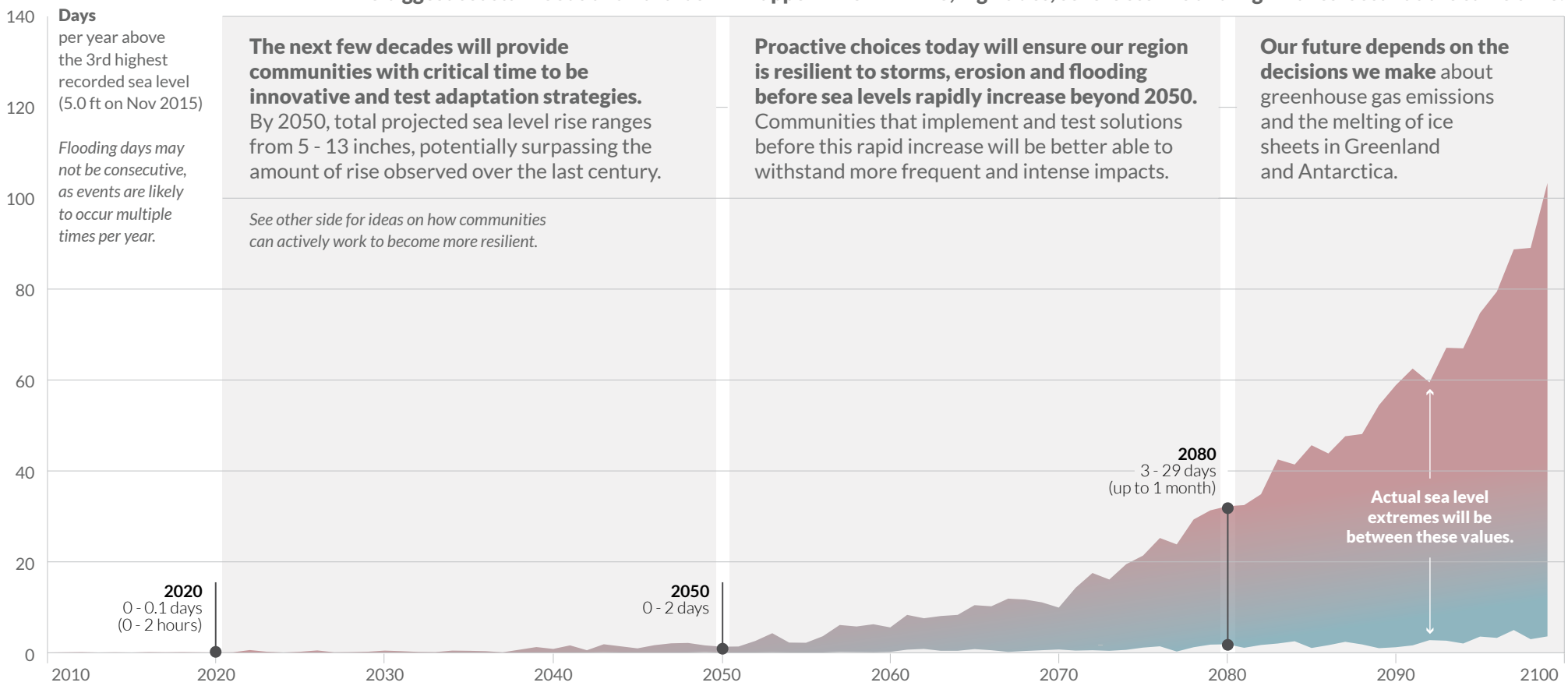
Flooding days may not be consecutive, as events are likely to occur multiple times per year.

The next few decades will provide communities with critical time to be innovative and test adaptation strategies. By 2050, total projected sea level rise ranges from 5 - 13 inches, potentially surpassing the amount of rise observed over the last century.

See other side for ideas on how communities can actively work to become more resilient.

Proactive choices today will ensure our region is resilient to storms, erosion and flooding before sea levels rapidly increase beyond 2050. Communities that implement and test solutions before this rapid increase will be better able to withstand more frequent and intense impacts.

Our future depends on the decisions we make about greenhouse gas emissions and the melting of ice sheets in Greenland and Antarctica.



The **most flooding** is projected under a high scenario, where there are no changes to how we emit greenhouse gases.

The **least flooding** is projected under a moderate scenario, assuming the global community will act to reduce emissions.

October 2019 | Scenarios are based on global climate models and sea level rise projections from Kopp et al., 2014, used in the Ocean Protection Council's latest guidance. This handout was made possible through a partnership of the Tijuana River National Estuarine Research Reserve and CNAP, a NOAA RISA Team.