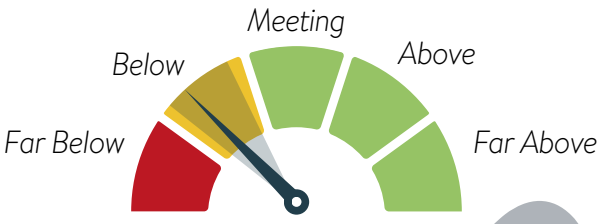
KELP CALIFORNIA OCEAN & COAST REPORT CARD

WHAT ARE KELP? Kelp are large marine algae that grow on temperate rocky reefs, creating kelp forests that shape coastal ecosystems. California has two canopy-forming kelp species: giant kelp in southern and central California and bull kelp in central and northern California.

WHY ARE KELP IMPORTANT? Kelp forests are home to many species that are economically, ecologically, and culturally important. They are world-renowned for their biodiversity and are incredibly significant to California Native American tribes.

2024 STATUS

How is kelp doing?

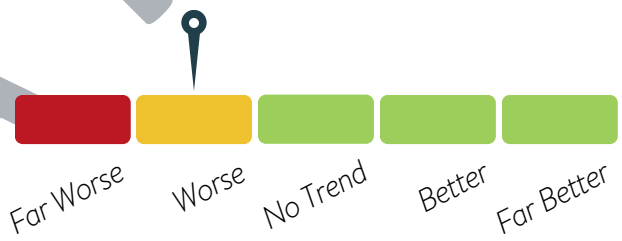


Below Expectation

relative to reference condition

TREND

How is kelp changing?



Getting Worse

over the past 40 years

KEY TAKEAWAYS

Kelp cover canopy is **below average**. Coast-wide, average canopy cover is less than 50% of historical cover, and 3/4 of kelp beds are below historic norms. This is the third lowest year on record since 1984.

Kelp canopy is **declining coast-wide**. Kelp canopy varies from year to year, and it is currently at near an all-time low compared to the last 40 years.

Kelp is most impacted in **northern California**. Kelp in **central and southern California** have rebounded slightly from 2023, and some of the **Channel Islands** are doing well.

WHERE THIS INFORMATION COMES FROM

A team of kelp scientists reviewed decades of satellite imagery that measures the amount of kelp canopy on the ocean's surface.

2024 Status is the percent of the coastline with kelp canopy below historical amounts.

Trend is the change over the most recent 40 years (1984-2024).

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DIVE DEEPER INTO THE DATA

Kelp numbers have not been this low for more than two decades. An unprecedented marine heat wave in 2014-2016 led to massive kelp die-offs across the West Coast, and kelp canopies have not rebounded along large portions of California. The State is investing in kelp research, recovery, and restoration.

Numbers in bubbles indicate regional average canopy coverage relative to the historical baseline.

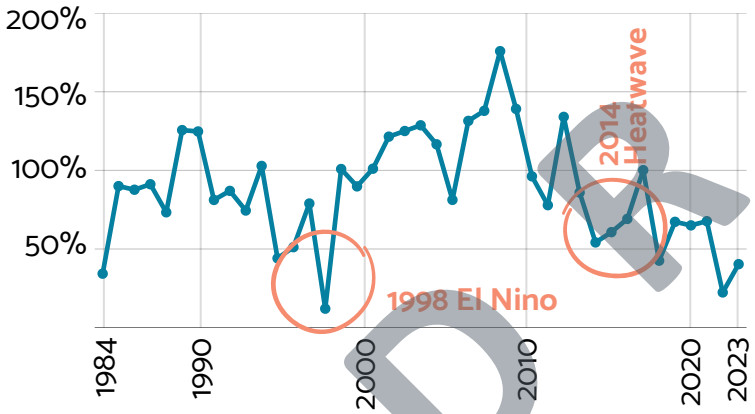
-97%

In **northern California**, substantial declines started in 2016 2014 when a marine heat wave coincided with the loss of sea stars and an explosion in the population of kelp-eating purple sea urchins. This area has yet to recover.

-60%

Central California rebounded from a particularly poor year in 2023 but is still below historical canopy area.

Percent of Coastwide Historical Kelp Canopy



Southern California kelp canopy is lower than historical canopy area and has remained low since 2023. Scientists are actively studying this area.

-77%

+7%

The southern **Channel Islands**, such as San Clemente and Catalina, have abundant kelp canopies. The northern islands, such as San Miguel and Santa Rosa, are experiencing variable declines in kelp canopy.

LOOKING AHEAD

Marine heat waves, which negatively impact kelp, are expected to become more frequent and more severe with climate change. Early investments in restoration, protection, and mitigation show promise for improving kelp forest ecosystem resilience status.

ADD QR CODE

Scan to learn more about this project and access related maps, data, tools, and indicator reports.

CALIFORNIA OCEAN SCIENCE TRUST

West Coast OCEAN ALLIANCE

OCEAN PROTECTION COUNCIL

This report is part of the California Coast and Ocean Report Card, developed through a partnership between the Ocean Protection Council, the Ocean Science Trust, and the West Coast Ocean Alliance.

Learn more at URL