

**REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**EXECUTIVE OFFICER SUMMARY REPORT
October 14, 2026**

ITEM 5

SUBJECT

Super El Niño Status and Preparations (Jimmy Smith)

STAFF RECOMMENDATION

Informational item only; no recommendation.

KEY ISSUE

There is currently an El Niño in the equatorial Pacific Ocean that is strengthening, with a greater than 90 percent chance of becoming a very strong event in the fall and winter of 2026-2027. A Super El Niño could have significant impacts to infrastructure, beaches, and Beneficial Uses of aquatic resources in the San Diego Region. Preparations for this event have already begun and will be detailed in this discussion item.

PRACTICAL VISION

The San Diego Water Board's [Practical Vision](#) values leadership, stewardship, communication and transparency. Two of its chapters relate directly to this item: Chapter 7 Mitigate Climate Change Impacts and Chapter 8 Provide Effective Community Engagement and Communication. This item further raises awareness of the potential impacts of a Super El Niño and provides an opportunity for municipalities, stakeholders, and staff to share how various permit holders and programs are preparing for the expected impacts.

DISCUSSION

A Super El Niño event developing through late calendar year 2026 and into 2027 is expected to drive record temperatures and severe weather extremes worldwide. Expected Super El Niño effects of drought, wildfires, heavy rainfall and flooding all have the potential to severely impact the San Diego Region. Municipal water supplies, riparian habitat, and recreation and aquatic life Beneficial Uses could all be impaired by these expected extremes. Today's presentation will include information from research scientists, meteorologist, stormwater and wastewater owners and operators, and the United States International Boundary and Water Commission.

El Niño is a natural climate pattern characterized by the abnormal warming of surface waters in the central and eastern tropical Pacific Ocean. It occurs every two to seven years and disrupts normal weather patterns around the globe. Under normal conditions, trade winds blow from east to west across the equator, pushing warm water toward Asia and Australia. During an El Niño event, these trade winds weaken or even reverse, allowing that warm water to push backward toward South America. Sea surface temperatures in the eastern Pacific rise by at least 0.5°C (0.9°F) above average for several consecutive months. The shift in ocean heat alters the path of the jet stream, changing where storms and high-pressure systems develop globally. El Niño is the

oceanic phase of a larger cycle called the El Niño-Southern Oscillation (ENSO). Its counterpart, La Niña, brings abnormally cold ocean temperatures.

Climate change induced global warming acts to increase El Niño event frequency and intensity. Higher baseline ocean temperatures provide more thermal energy, "supersizing" the warm water that shifts eastward during an El Niño cycle leading to more severe droughts, heavier floods, and extreme weather. Three El Niños have recently occurred prior to the current event, with the 2023-2024 event possibly contributing to the intense storms that caused severe local flooding, especially impacting the lower Chollas Creek community.

Season	SST Anomaly (°C)	Strength (Oceanic Niño Index)	Comments
2023 - 2024	+2.0	Strong to Very Strong	Tied as the 5th strongest since 1950. It combined with climate change to fuel record-breaking global surface temperatures
2018 - 2019	+0.9	Weak	Had mild atmospheric impacts and a relatively short lifespan
2015 - 2016	+2.6	Very Strong (Super El Niño)	One of the top three strongest El Niños in recorded history, causing massive coral bleaching, severe droughts in Africa, and extreme global heat

National Oceanic and Atmospheric Administration (NOAA) data as presented by Golden Gate Weather Services ([ENSO ONI Tracker](#))

Since mid-April 2026, above average equatorial sea surface temperatures (SSTs) increased across the eastern Pacific Ocean. NOAA predicts a 90 percent chance of a Super El Niño (SST > 2.6°C) and a 69 percent chance of a El Nino that would exceed the strength of events dating back to 1950.

The San Diego Region may experience impacts from a compound event that combines attributes from several phenomena. Higher seas from global warming will combine with a Kelvin Wave from El Niño winds pushing seas from west to east that could raise sea levels by 10 to 14 inches. This winter will also experience a 19-year natural high tide cycle. Any intense storms arriving during a high tide cycle are likely to cause severe coastal flooding, beach erosion and bluff failures. Stormwater conveyance systems may not only be overwhelmed but also backed up by ocean storm surges that prevent discharge. Sewage collection systems will see greater inflow and infiltration (I&I) challenging collection system and treatment plant capacity. Stream erosion along canyons could also expose collection system pipes thus jeopardizing the physical integrity of the system.

Extreme heat (as already experienced in early September 2026) disproportionately impacts lower income communities who may not have access to air conditioning or lack the ability

to temporarily relocate to cooler areas. Ecosystems will shift as warmer waters are more welcoming to animals not typical to the area and will also allow some local species to thrive. Subtropical sportfish may come closer to San Diego while stingray and shark activity will surge. Viruses and pathogens may also be longer lived and more prevalent in coastal waters.

Today's item will provide an opportunity to learn from local scientists from the Scripps Institution of Oceanography who will share the latest scientific predictions from long studied patterns of SSTs and rainfall, as well as economic ramifications of extreme weather events. The Meteorologist from the County of San Diego will provide a more down-scaled perspective on potential local impacts. Stormwater and wastewater owners and operators will provide updates on measures planned and taken to maintain operational integrity and permit compliance during and after the anticipated events.

San Diego Water Board staff will also be available to share how the many programs are proactively collaborating with permittees to issue permits and prepare not only stormwater and wastewater system, but also landfills, agricultural facilities and construction sites for the coming months. Staff have reached out to permittees offering assistance in their preparations. This includes notifying construction sites, prioritizing inspections of catch basins in flood prone areas, reducing I&I to sewage collection systems, ensuring adequate capacity in equalization basins and storage facilities and clearing channels of debris. This year's Super El Niño makes annual notices to landfill owners and operators especially important. Implementation of additional BMPs to prevent scouring, erosion, exposed waste, and ponding; monitoring site compliance; and notifying staff of any storm-related damage are all encouraged. Board staff began partnering with the City of San Diego (City) early to facilitate its efforts to proactively maintain storm drain conveyance systems. The Clean Water Act Section 401 Water Quality Certification No. R9-2021-0115 streamlines the process to perform routine maintenance at stormwater facilities and channels citywide. The permit was administratively extended in April 2026, allowing the City to continue channel maintenance for another 5 years and increasing the number of eligible facilities to 65.

The developing Super El Niño portends to be an event of unprecedented historical significance. The potential synergistic impacts of higher seas and intense storms could threaten beneficial uses and coastal infrastructure, while heat waves risk the human health of the region's most vulnerable citizens. Planning, collaboration and implementing proactive and protective measures that incorporate the latest scientific understanding is critical to the well-being of the San Diego Region. Preparing for and reacting to this season's El Niño will also provide valuable lessons as climate change continues to manifest as extreme weather events for the foreseeable future.

PUBLIC NOTICE

The agenda notice for today's meeting was posted on the San Diego Water Board's website and sent to subscribers to the email list for Board meetings. This satisfies the Bagley-Keene Open Meeting Act requirements to publish the meeting notice and agenda.

SUPPORTING DOCUMENTS

None.