

RESUME

LEE DODDS

COASTAL SCIENTIST II

B.S., Earth Sciences (University of California, San Diego, 2011)

Graduate Certificate, Coastal Engineering (Old Dominion University, 2022)

Coastal science and engineering consultant specialized in maintaining Southern California's beaches and lagoons, and supporting industrial development in the nearshore Alaskan Arctic.

Principal investigator in a pilot study to explore the technical feasibility and utility of CoastSnap: an open-source shoreline mapping tool, which uses community-contributed smartphone photos of the beach to quantitatively assess shoreline change.

Ongoing since 2012, assessed the condition of San Diego County's beaches to evaluate the net impact of natural events and human intervention. Considerations in these assessments include: (1) beach nourishment, including SANDAG's Regional Beach Sand Project II in 2012 and the San Elijo Lagoon Restoration Project in 2018; (2) dredging and sand bypassing from coastal lagoons; (3) precipitation and streamflow; (4) wave conditions; (5) ocean climate conditions including El Niño and Pacific Decadal Oscillation.

Comparable beach monitoring programs performed on behalf of clients including: the County of Santa Barbara, SANDAG (San Diego Association of Governments), the San Elijo Lagoon Restoration Project, and the Cities of Newport Beach, Seal Beach, San Clemente, Oceanside, Carlsbad, Encinitas, and Solana Beach.

On behalf of the US Army Corps of Engineers, currently co-leading one of the first-ever studies to evaluate the impact of beach nourishment on surfing conditions, marrying the worlds of surfing and scientific wave analysis.

Passionate photographer with professional application in aircraft- and drone-based reconnaissance of beaches and sea ice. From floating sea ice canopy, utilized underwater photography to document the spatial extent of endangered Arctic kelp species near offshore project site. FAA licensed sUAS (drone) pilot and practiced in photogrammetry.

Extensive experience performing sonar-based bathymetric surveys in support of dredging operations. Precise and rapid seafloor survey beneath bridge enabled critical nighttime passage of barge from ocean into lagoon with tight tolerance. In Arctic latitudes, annually performs bathymetric surveys to quantify hazardous seabed ice gouging and under-ice scouring in the vicinity of subsea pipelines.

Red Cross Instructor in First Aid, CPR and AED. Has been certified in Basic Offshore Safety Induction and Emergency Training (BOSIET), which includes helicopter egress, emergency first aid, sea survival, firefighting, self-rescue, and TEMPSC lifeboat training.