

ENVIRONMENTAL

GEOTECHNICAL

SMALL UNMANNED AERIAL VEHICLE SERVICES FOR ENGINEERING PROJECTS

HOLDREGE & KULL provides Small Unmanned Aerial Vehicle (Drone) services to the public and private sector for geotechnical, environmental, and construction quality assurance engineering projects. Services include: photo and video inspection and documentation; production of 2D orthomosaic maps, interactive 3D models, elevation profiles, and contour maps*. High resolution drone images and maps may be integrated with AutoCAD, Civil 3D, ArcGIS, GoogleEarth, and other CAD, graphics, modeling, and animation programs. H&K staff are licensed by the Federal Aviation Administration to conduct commercial drone operations under 14 CFR Part 107 and maintain industry standard insurance coverages. H&K may utilize drone services when providing engineering services to the California Office of Emergency Response under the following work codes.

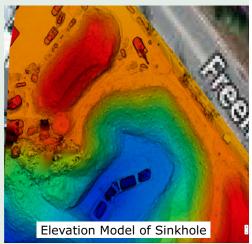
California Work Code Description	Code
Geophysical and Geotechnical Instruments	411138
Geology and Earth Science	601044
Environmental Impact Assessment	771015
Environmental Planning	771016
Environmental Advisory Services	771017
Environmental Rehabilitation	771116
Civil Engineering	811015
Mining Engineering	811020
Transportation Engineering	811022
Quality Control	811415
Geology	811517

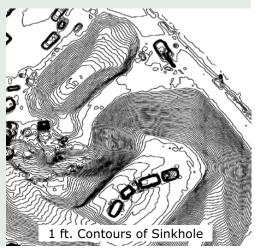
*Contour and elevation information produced through drone-based photogrammetry techniques are not considered to have the accuracy and precision of a topographic survey prepared by a California licensed land surveyor.



GEOLOGY & HYDROGEOLOGY





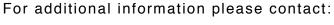




RELEVANT PROJECT EXPERIENCE

Project Name	Photo/Video	Торо	3D Model
Caltrans - Highway 49 - Landslide Repair	×		
Little Wolf Creek Sinkhole - Grass Valley	X	X	X
Tuolumne County - Emergency Landslide Response	×	X	×
Amador County - Emergency Landslide Response	×	X	×
Jackson Valley Irrigation District - Levee Overtopping	X	X	×
Weber Ghio - Jackson WTP Rd Landslide Repair	×	X	×
Cascade Shores Landslides - Nevada County	×	X	×
Jackson Valley Irrigation Dist Lake Amador Spillway	×	X	×
Nevada Irrigation District - Scotts Flat Spillway	×		
NEMDC Levee - Sacramento - SWPPP Closure	×		
11st Street Bridge - Chico - Abutment Design	X	X	×
Spring Mtn. Vineyard - Napa - Landslide Repair	X	X	X
Lower Sacramento Road - Lodi - Widening	X		
Nelson Lane - Lincoln - New Bridge and Widening	X		
5th St. Bridge - Yuba City - Presentation Content	X		X
Oroview Drive - Oroville - Slope Stability Analysis	X	X	X
Grass Valley DMV - Grass Valley - Site Monitoring	X	X	X
Closed Lincoln Landfill - Lincoln - Site Monitoring	X		
Cascade WWTP - Nevada Co Monitoring	×		
Jawbone Pipeline - Kern Co Inspection Test	X	X	×
McHenry Roundabout - Escalon - Monitoring	X		
I-5 Bridge - Shasta Lake - Shoring Design	X		
Hirschdale Bridge - Truckee - Demo Project	×		×
Multiple Bridges - Placer Co Pre-Proposal Info.	×		
Squaw Creek Slope - Squaw Valley - Monitoring	×		
Donner Summit WWTP - Norden - Monitoring	×		
Multiple Bridges - Lake County - Pre-Proposal	×		
Forest Springs Mobile Home Park - Grass Valley	×	X	×
Briar Patch - Grass Valley - Photovoltaic Installation	×		
Dorsey Drive Interchange - Grass Valley	×		
Timberline Mix Use - Auburn - Monitoring	×	X	
Sacramento Silos Demolition - Demo Project	×		
Bridge & Sutter Streets - Yuba City - Interview Video	×	X	
Yankee Jim's Bridge - Placer Co Pre-Proposal Info.	×	X	X
San Andreas Fault - Carrizo Plain, CA	×	X	X
Miscellaneous Photovoltaic Sites - California	X		

Underlined blue $\underline{\times}$ links to video or 3D model



Mr. Jeff Cox

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