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ENVIRONMENTAL CONFLICT RESOLUTION IN THE SANTA BARBARA CHANNEL



Featured Speakers



Carrie Kappel

Ph.D.

Associate Research Scientist

National Center for Ecological Analysis and Synthesis (NCEAS)

University of California, Santa Barbara

Planning for Aquaculture in the Southern California Bight, with Models, Maps, and Real Stakeholders

Abstract: Marine spatial planning (MSP) is increasingly used to reduce conflicts and environmental impacts and promote sustainable use of marine ecosystems. We developed a modeling framework to coordinate the development of multiple emerging ocean uses while balancing multiple existing management objectives. In this talk I will demonstrate its value for guiding offshore aquaculture (bivalve, finfish and kelp farming) development in relation to existing sectors and environmental concerns (wild-capture fisheries, view shed quality, benthic pollution and disease spread) in the Southern California Bight. We identified >250,000 MSP solutions that show that aquaculture can be highly compatible with other ocean uses while generating significant seafood supply and billions of dollars in revenue with minimal impacts. To illustrate, I'll discuss how these results are being used to inform offshore shellfish aquaculture planning, and stakeholder engagement in Ventura, CA.

Bio: Carrie Kappel is an Associate Research Scientist at University of California's National Center for Ecological Analysis and Synthesis. She earned a B.S. with Honors in Biology from Brown University and a Ph.D. in Biology from Stanford University. A marine conservation biologist and community ecologist by training, she has worked in coral reefs, kelp forests and rocky intertidal systems and now uses collaborative synthesis science to develop conservation solutions that protect marine ecosystems and enhance human well-being.



Morgan Visalli
MESM
Channel Islands National Marine Sanctuary

Whales, Ships, and Missiles in the Santa Barbara Channel: Solving Complex Environmental Problems with Innovative Spatial Tools

Abstract: The Santa Barbara Channel region has an exceptional abundance and diversity of marine species, and provides important habitat for Gray, Blue and Humpback whales. The area is also heavily transited by large cargo ships and serves as a military testing ground. These dynamics have resulted in fatal ship strikes on endangered whales and conflicts among ocean users. This talk will explore how spatial tools and mapping are used to help solve complex environmental problems with diverse stakeholders.

Bio: **Morgan Visalli** is a California Sea Grant Fellow (2015) and a graduate of the Bren School of Environmental Science and Management (MESM 2014). She has worked on mapping and spatial analysis projects at the Sustainable Fisheries Group, NOAA, and as a thru-hiker on the California Coastal Trail. She is excited about marine spatial planning, connecting science and policy, and reducing marine debris.



Moderator:
Grace Goldberg
Director of Operations
SeaSketch & McClintock Lab
University of California, Santa Barbara

Bio: **Grace Goldberg** coordinates activities at the SeaSketch and McClintock Lab, and serves as an interface between the lab and collaborators. She is trained as a scientist, interested in research questions that include human users in marine ecosystems, with relevance to spatial management and real conservation goals. Goldberg received her M.S. in Marine Systems and Conservation from Stanford University, completing a thesis on sea turtle spatial dynamics to inform sustainable development. She spent time at Hopkins Marine Station as a scientific diver, and in the Earth Systems Program, which focuses on interdisciplinary environmental problem solving, systems thinking, and communication.

CIRGIS PRESENTERS

Zacharias Hunt

GIS Manager

Z-WORLD GIS

CIRGIS Past-President and Board Member

2017–2018 Aerial Imagery Project

Bio: Zacharias Hunt has been working in the Geospatial Technology industry for 17 years. He received his B.A. in Geography from the University of California, Santa Barbara and an M.A. in Public Administration from California State University of Northridge. He also has certification in the use of Global Positioning Systems (GPS) from Ventura College, California.

Hunt is currently a GIS Manager for Z-WORLD GIS, a geospatial consulting business that provides a wide array of Geospatial Information System services and solutions, assisting agencies through every aspect of a GIS system. He has helped the company expand with his unique experience in GIS data development, mapping, GIS data maintenance, and larger enterprise GIS program needs such as strategic planning, enterprise implementation, and project/program management.

Formerly Hunt worked as the Geographic Information Officer (GIO) for Santa Barbara County, where he managed all aspects of a County Enterprise GIS program which included development and implementation of a County GIS Strategic Plan; managing GIS web based applications for both internal County staff as well as the public; implementation of GIS policy and standards; annual budgeting and procurement process for GIS; developing sustainable GIS revenue opportunities. He also recruited and trained GIS staff; managed the County GIS Internship program; and coordinated GIS based systems for the County Office of Emergency Services (OES).

He participates in the Channel Island Regional GIS (CIRGIS) Collaborative, and served as President (2010–2015). With a background in both private and public sector geospatial projects and government contracts, Hunt has been integral in the development of fiscal strategy and planning for regional collaborative geospatial projects.

Hassan Kasraie

Kasraie Consulting

CIRGIS Past-President and Board Member

Floodplain Management using Super-Lidar

Abstract: The presentation will discuss the use of the 2016 Lidar point cloud and elevation data for a detail floodplain management re-analysis and re-mapping project. With the advent of 20–40 points per square meter point cloud, a.k.a “Super-Lidar,” we are now able to see the physical environment around us in far more detail than ever before. The new Lidar elevation data meets or exceeds FEMA’s elevation accuracy standards. We are now also able to determine the depth and extent of flooding on individual

properties with pin-point accuracy, alerting property owners, public agencies and first responders of potential dangers from flooding. It can also help private property owners determine if they need to acquire flood insurance or not. Dynamic 2- or 3-dimensional visualization of a floodplain is priceless as it shows us how an area may be inundated during a flood event and how the flow travels in and around structures. The next challenge is to merge mobile on the ground Lidar with air-borne Super-Lidar, augmented by drone-based Lidar collection to get a true 3-dimensional virtual reality of our physical environment.

Bio: Hassan Kasraie is a Water Resources professional and the Principal of Kasraie Consulting. He has more than thirty-two years of professional civil engineering and mapping experience in Southern California. He is a licensed hydrologist and a certified floodplain manager. Kasraie was on the CIRGIS Board of Directors for three years through 2016.

Kasraie Consulting is a local Ventura County-based civil engineering/hydrology consulting firm. It has been in business for more than 14 years, providing conceptual drainage design, hydrology, hydraulics, floodplain management, engineering plan checking, analysis, GIS mapping, and LiDAR topography services to the local municipalities, water agencies for both private development and the engineering community.