

Lidar-derived topo-bathymetric bare earth model, Skokomish, WA

COASTAL SOLUTIONS

**ACQUIRE
ANALYZE
ANSWER**

NV5G EDGE

We understand the scientific, technical, and policy-related issues facing the coastal and marine resource management community. Our client-focused approach starts with understanding your needs, then leveraging state-of-the-art technologies to develop a solution that empowers you with high-quality geospatial intelligence.

A LEADER IN COASTAL & MARINE IMAGERY

NV5 Geospatial has been at the forefront of collecting and processing high-resolution lidar and ortho imagery for coastal and marine resource programs for over four decades. We offer experience acquiring data with close attention to tides, water clarity, airspace restrictions, and weather patterns to ensure success. We also provide integrated GIS solutions to harness data into actionable information. Guided by coastal geospatial experts, our data products, analytics, and enterprise GIS solutions inform resource management, habitat mapping, and coastal resiliency planning for future generations.

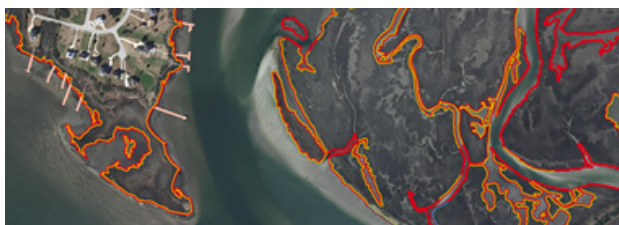


Split view of the North Carolina shoreline showing the above-ground lidar point cloud colored by classification (left) and imagery right) overlaying the bare earth model (bottom)

Ortho imagery of Coos Estuary, OR, collected for eelgrass mapping

ACQUIRE
ANALYZE
ANSWER

APPLICATIONS



SHORELINE MAPPING

Using topobathymetric lidar, processing algorithms, feature extraction, and photogrammetric tools, we model shoreline topography, map the land-water interface, and depict coastal features with high detail and accuracy for effective nautical charting, resource management, urban development, land management, infrastructure maintenance, and emergency response.



BENTHIC HABITAT MAPPING

From topobathymetric lidar data and innovative processing tools, we can classify benthic and submerged environments (seagrass, kelp beds, algae, coral reefs) to identify critical habitat for marine species and facilitate effective resource management. Our radiometric calibration of lidar intensities is a significant contributor to mapping the underwater environment and sea floor.



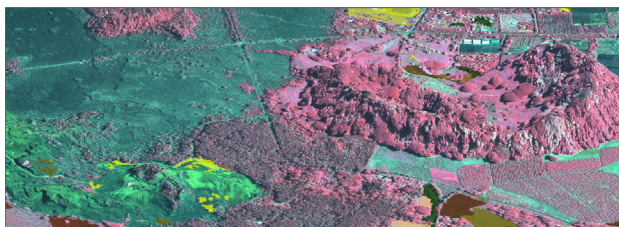
HYDROLOGY, HYDRAULICS & INUNDATION

From topobathymetric lidar data and innovative processing tools, we can classify benthic and submerged environments (seagrass, kelp beds, algae, coral reefs) to identify critical habitat for marine species and facilitate effective resource management. In addition, our radiometric calibration of lidar intensities is a significant contributor to mapping the underwater environment and seafloor.



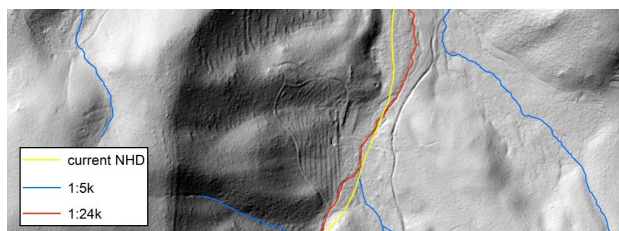
ENTERPRISE GIS

We have delivered marine eGIS solutions to serve as decision support tools for managing marine minerals, improving sea turtle safety, and mapping essential fish habitats. In addition, we have updated environmental sensitivity index (ESI) maps for many states to ensure oil spill response preparedness.



COASTAL LAND COVER & CHANGE ANALYSIS

With the aid of recurring surveys and temporal comparisons, our trend analyses quantify, model, and visualize important changes taking place along coastal environments. Detecting and quantifying these patterns empowers planners and resource managers to accurately evaluate, respond, monitor, predict or mitigate change, improving knowledge and enhancing preparedness.



UPDATED NATIONAL HYDROGRAPHY DATASET

With the aid of recurring surveys and temporal comparisons, our trend analyses quantify, model, and visualize significant changes taking place along coastal environments. Detecting and quantifying these patterns empowers planners and resource managers to evaluate accurately, respond, monitor, predict or mitigate change, improve knowledge, and enhance preparedness.