

HIGH SPATIAL RESOLUTION LAND COVER DEVELOPMENT FOR THE COASTAL UNITED STATES

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ABSTRACT:

In response to the growing demand for information about our coastal areas derived from high-spatial-resolution imagery, the NOAA Coastal Service Center's Coastal Change Analysis Program (C-CAP) produces nationally standardized land cover and land change information for selected geographies of the U.S. These products deliver a spatially detailed inventory of intertidal areas, wetlands, and adjacent uplands, with the intent of monitoring these habitats by updating the land cover maps every five years. By bringing NOAA's national mapping framework to the local level, managers have relevant data for addressing site specific issues related to the protection of critical coastal and estuarine resources.

Since 2006, C-CAP's high-resolution mapping effort has been operational and has relied heavily on publicly available data, which has demanded that consistent land cover be derived from imagery acquired by both satellite and aerial platforms. This presentation will provide an overview of the methods that C-CAP uses to develop high-resolution land cover and change data as well as approaches for integrating ancillary data sources such as lidar data and derivatives. Additionally, consideration will be given to the challenges associated with high resolution mapping with an emphasis on data acquisition, image processing, and data distribution. Several examples from past and current high-resolution C-CAP mapping projects will be highlighted.

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