Dry Tortugas National Park
USGS-NPS-NASA EAARL Submarine Topography
Map Tile 306000e_2732000n

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This lidar-derived submarine topography map was produced as a collaborative effort between the U.S. Geological Survey and the National Park Service, with the assistance of NASA Wallops Flight Facility. The map shows the topography of the Dry Tortugas National Park, generated from the lidar data tile and incorporated into this map product.

The laser soundings used to create this map were collected during July and August 2004 by the NASA EAARL system mounted on a Cessna 310 aircraft. The EAARL uses a "waveform-resolving" green laser capable of mapping submarine and subaerial topography with high spectral resolution, water-column correction, and low costs.

The data were processed by the USGS Center for Coastal and Watershed Studies to produce 1-meter resolution raster images that can be easily ingested into a Geographic Information System (GIS). The data were organized as 2 km by 2 km data tiles in 32-bit floating-point integer GeoTiff format. Contour line and hillshade layers were generated from the lidar data tile and incorporated into this map product.

High spectral resolution, water-column correction, and low costs were found to be key factors in providing accurate and affordable imagery to managers of coastal habitats. The EAARL system is typically flown at 300 m altitude AGL, resulting in a 240 m swath. The laser soundings used to create this map were collected during July and August 2004 by the NASA EAARL system mounted on a Cessna 310 aircraft. The EAARL uses a "waveform-resolving" green laser capable of mapping submarine and subaerial topography with high spectral resolution, water-column correction, and low costs.

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FURTHER READING

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