

Coastal and Nearshore Mapping of Alaska

FY2023 Request: \$5,000,000

Reference No: 64372

AP/AL: Appropriation

Project Type: Life / Health / Safety

Category: Health/Human Services

Location: Statewide

House District: Statewide (HD 1-40)

Impact House District: Statewide (HD 1-40)

Contact: Theresa Cross

Estimated Project Dates: 07/01/2022 - 06/30/2027

Contact Phone: (907)269-6398

Brief Summary and Statement of Need:

Accurate and contemporary mapping of Alaska’s coastal and nearshore regions is critical to managing coastal resources, maritime domain awareness, safeguarding the health and security of coastal communities, and strengthening the Blue Economy. This request is to increase the Federal spending authority of DGGs to accommodate a \$5,000,000 line item in the National Oceanic and Atmospheric Administration FY23 Federal budget to conduct mapping in Alaska’s coastal and nearshore regions. Funding to be received 10/2022.

Funding:	<u>FY2023</u>	<u>FY2024</u>	<u>FY2025</u>	<u>FY2026</u>	<u>FY2027</u>	<u>FY2028</u>	<u>Total</u>
1002 Fed Rcpts	\$5,000,000						\$5,000,000
Total:	\$5,000,000	\$0	\$0	\$0	\$0	\$0	\$5,000,000

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> Ongoing
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	5,000,000	0
Ongoing Operating:	0	0
One-Time Startup:	0	
Totals:	5,000,000	0

Prior Funding History / Additional Information:

Much of Alaska’s coast lacks sufficient mapped data to inform community and economic development, lay the groundwork for resilient engineering and planning, enable safety and security activities, and equip sustainable ecological management. Mapped data that form the foundation for these activities include topography and bathymetry (elevations above and below the water’s surface).

Project Description/Justification:

Much of Alaska’s coast lacks sufficient mapped data to inform community and economic development, lay the groundwork for resilient engineering and planning, enable safety and security activities, and equip sustainable ecological management. Mapped data that forms the foundation for these activities include topography and bathymetry (elevations above and below the water’s surface). Derivative products such as shorelines, stream and river hydrography, and vegetation and wetland characterizations are created from these data.

The connection of bathymetry to topography through the tidal zone is key to modeling and predicting coastal flooding from storm surges and tsunami threats. Additionally, shoreline delineation eliminates ambiguities of land ownership and enables comprehensive management of coastal resources.

Iterated datasets inform change models and predictions (e.g., for coastal erosion, wetlands, and habitat) which are key to long-term planning for both communities and industry.

DGGS seeks federal authority to spend funds outlined in the FY23 Federal budget to map coastal and nearshore regions of Alaska, more specifically for:

- Nearshore topobathymetric lidar data collection.
- Nearshore bathymetric data collection.
- Satellite-derived bathymetric data collection.
- Improvements to coastal and nearshore survey and tidal control.
- Seamless topobathymetric grid development.

The geographic coverage of these data collection efforts will be determined through prior (from 2019) and ongoing efforts of AMEC and AGC to identify stakeholder needs across the state (see Kumle and Overbeck, 2021). This project will also be coordinated with other efforts to map the coast of Alaska through existing AMEC and AGC project planning and data tracking tools.

DGGS will offer this data to the public and provide outreach to data users to improve awareness and ensure long-term accessibility with data preservation. This project will not be able to provide seamless data coverage for Alaska's >60,000+ miles of coastline, however, and it will take a targeted and stakeholder driven approach to fulfill the greatest needs.