20 July, 2012

NOAA's National Geodetic Survey

Alaska Coastal/Shoreline Mapping Program

- NOAA's Coastal Mapping Program (CMP) has direct economic benefits estimated at $100 million according to a socio-economic scoping study released this April. Additionally, CMP supports approximately1,500 jobs outside of the program. NGS shoreline used to compile nautical charts, provides critical baseline information to manage coastal resources and to define America's territorial limits, including the Exclusive Economic Zone.

- Most of the shoreline in the Arctic along Alaska's northern and western coasts has not been mapped since 1960, if ever, and confidence in the shoreline depicted on the region's nautical charts is extremely low.

- Less than 10% of Alaska has contemporary shoreline data and less than 1% is mapped annually.

- NGS regularly uses both government and commercial satellite imagery to support nautical charting in Alaska.

Wrangell, Alaska. Features added include Mean High Water, Mean Low Water, obstructions, dangers, and aids to navigation.

- Plans for FY12 include compiling (via satellite) approximately 390 miles of Arctic shoreline and 933 miles of Alaska shoreline in FY12. At this time, there are no plans to use OMAO aircraft to conduct large area surveys; however use of the aircraft may be required in port areas or areas in need of more detailed charts.

- In the last 10 years eight ports have been updated: Kivilina/Red Dog Mine, Valdez, Anchorage, Dutch Harbor, Ketchikan, Petersburg, Kodiak and Juneau. NGS has also provided shoreline coverage (full or partial) for five Alaska National Parks: Bering Land Bridge, Cape Krusentern, Glacier Bay, Kenai Fjords and Wrangell-St.Elias

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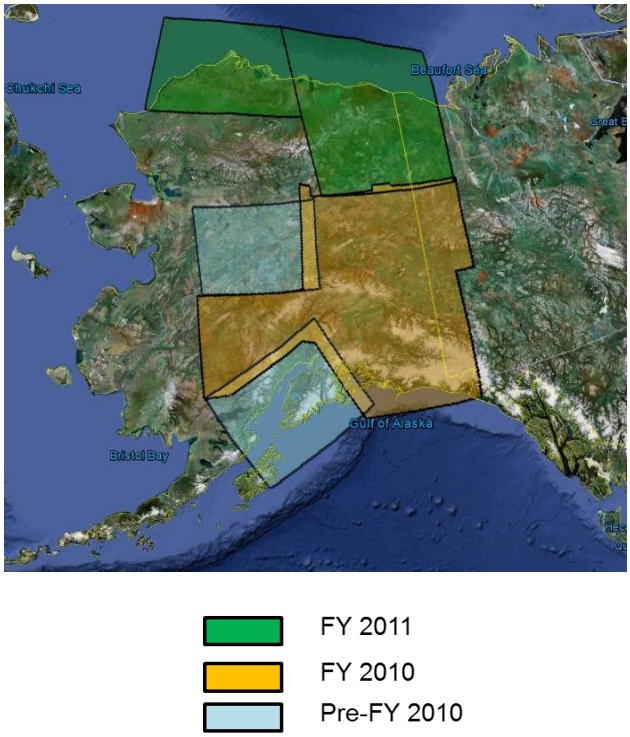
GRAV-D Status for Alaska (Completed and Planned Areas)

- NOAA's National Geodetic Survey (NGS) is undertaking an ambitious program to redefine the vertical reference system of the United States called Gravity for the Redefinition of the American Vertical Datum, or GRAV-D. As part of this initiative, NGS is working to collect airborne gravity data throughout the country and in Alaska as a priority.

- This is the most cost-effective way to establish geodetic control (for precise positioning) in Alaska and will allow elevation measurement accuracy (relative to sea level) to improve from two meters or worse to two centimeters in most areas. For the first time, this will give Alaska the same basic geodetic infrastructure as the rest of the Nation.



- Efforts through 2013 are expected to cover over 50% of Alaska and its coastal waters, with the exception of the Aleutians. Including the Aleutians, NGS will have collected approximately 40% of the total area.

- In 2013, NGS plans to complete the inland areas of northwestern Alaska that haven't yet been surveyed. Also in 2013, Alaska gravity surveys are planned for southeastern Alaska and the area around Juno.

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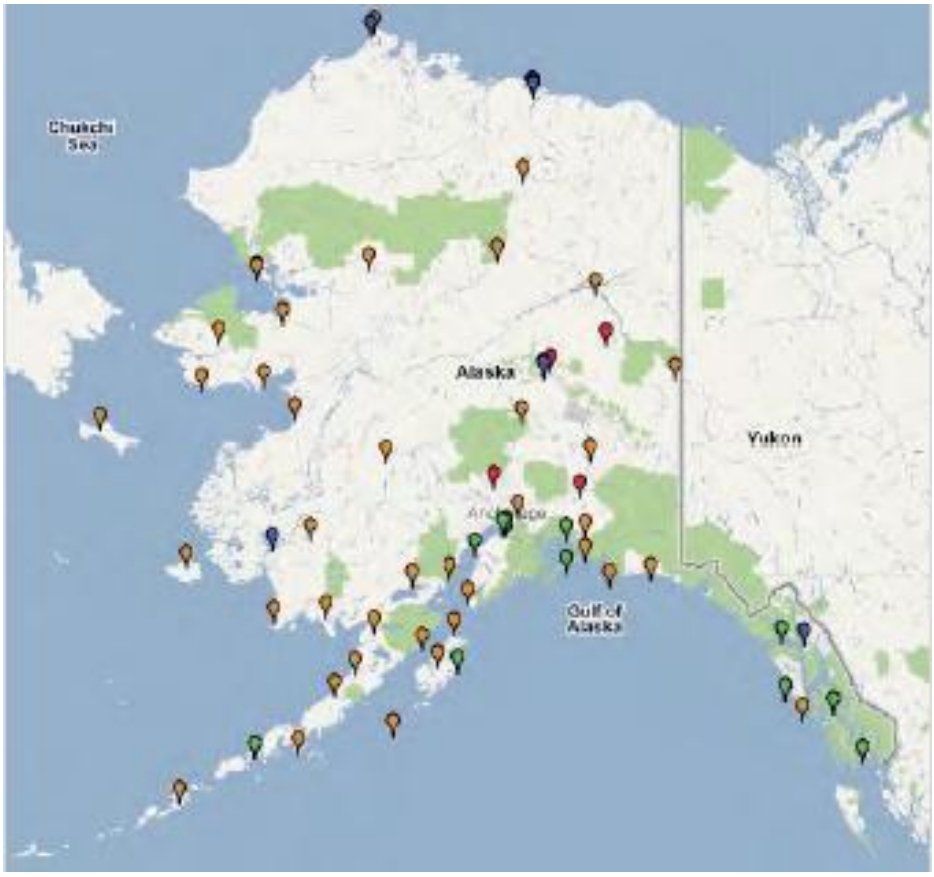
CORS in Alaska

Sampling Rate:

- 1 sec
- 5 sec
- 10 sec
- 15 sec
- 30 sec



- NOAA's National Geodetic Survey (NGS) manages a national Continuously Operating Reference Station (CORS) network of highly accurate GPS receivers that continuously collects data broadcast by Global Navigation Satellite System satellites.
- CORS are used to support three dimensional positioning, meteorology, space weather, and geophysical applications throughout the United States and are critical for applications such as navigation requiring precise positioning.
- NGS is continuously working with partners to add CORS stations to the network to fill critical gaps in coverage for Alaska. In FY2010 and FY2011, NOAA added over 40 stations owned and operated by partners such as the Plate Boundary Observatory to the NOAA CORS Network in Alaska.
- Total, there are almost 100 active CORS in the CORS Network for Alaska. However, CORS sites serving the Alaskan Arctic are very few, with only nine CORS Network sites along the Aleutian Chain, six in Arctic coastal areas of the Bering Sea, and seven serving the North Slope.