

Geodetic Control Theme



Dr. Daniel Roman

Acting Chief Geodesist

NOAA's National Geodetic Survey

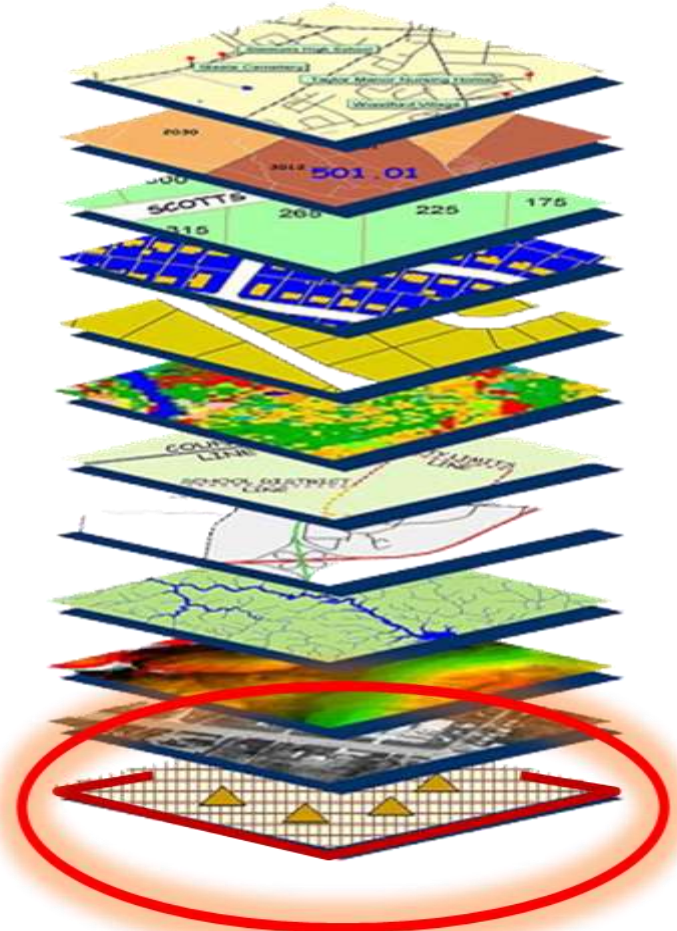
June 16, 2016

Geodetic Control Theme

Description: Survey control points or other related data sets which are accurately tied to the National Spatial Reference System (the official, common federal system for establishing coordinates for geospatial data that are consistent nationwide).

Geodetic control examples include: passive geodetic control marks, active geodetic observing systems, data from Global Navigation Satellite Systems (e.g., GPS), gravity measurements, and models of the earth's gravity field (geoid).

Theme Agency: National Oceanic and Atmospheric Administration, National Geodetic Survey



Geodetic Control Theme Leadership

Executive Champion

Juliana Blackwell, Director, National Geodetic Survey

Theme Lead

Dr. Daniel Roman

Datasets and Managers

Airborne Gravity – Monica Youngman

Continuously Operating Reference Stations (CORS) – Dr. Giovanni Sella

Geodetic Control Information on Passive Marks – Krishna Tadepalli

Geoid Models – Dr. Yan Wang

Geodetic Control Coordination

Federal Geodetic Control Subcommittee coordinates geodetic data-related activities among 24 Federal and non-Federal agencies and will report its activities to FGDC.

Geospatial Summits held in 2015 and 2010. NGS plans to hold additional events, including a summit in 2017.



Community of Interest

- FGDC Geodetic Control Subcommittee
- National Geodetic Survey website
- Utilization of Geospatial Platform Community of Interest and Marketplace

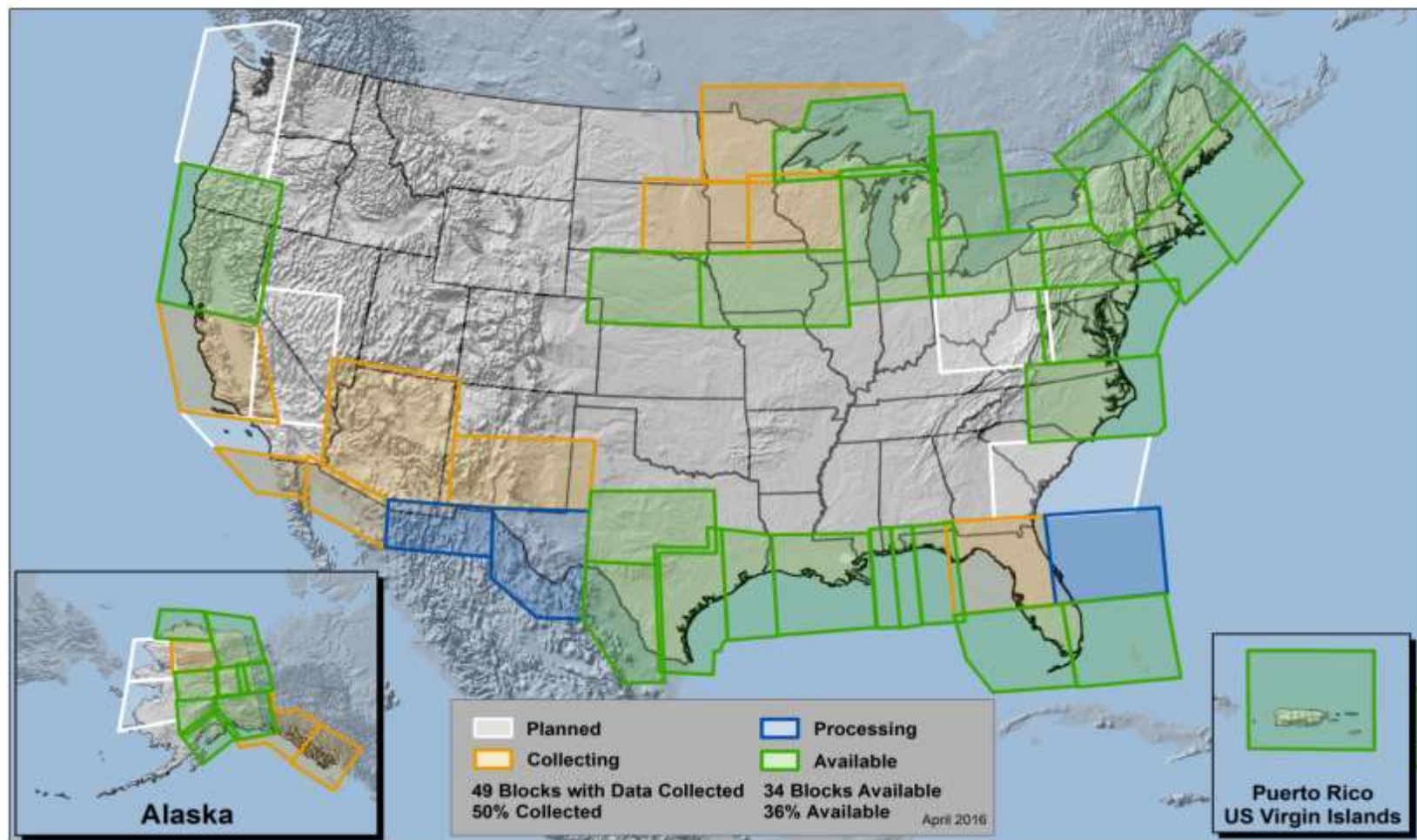
Dataset Dashboard Geodetic Control Theme

Dataset	General	Define	Inventory Evaluation	Obtain	Access	Maintain	Use Evaluation	Archive	Overall	Agency
Theme Rollup	5/5	5/5	5/5	5/5	5/5	4/5	5/5	5/5	5/5	
Airborne Gravity (GRAV-D)	4/5	5/5	5/5	4/5	5/5	4/5	4/5	3/5	4/5	DOC-NOAA
Continuously Operating Reference Stations (CORS)	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	DOC-NOAA
Geodetic Control Information on Passive Marks	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	DOC-NOAA
Geoid Models	5/5	5/5	5/5	4/5	5/5	3/5	5/5	5/5	5/5	DOC-NOAA

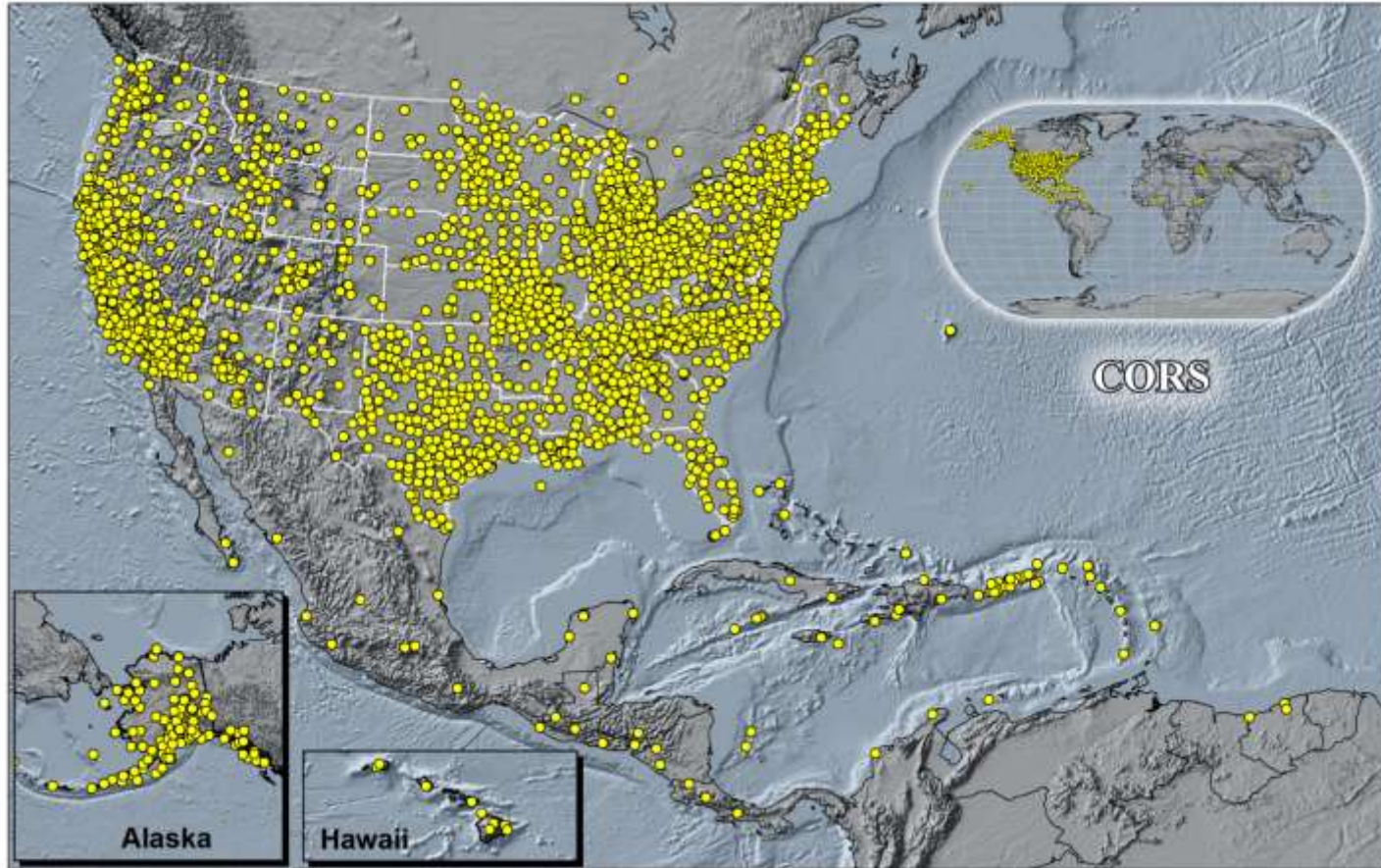
Dataset Requirements

- Funding provided through agency budget for maintenance and select data acquisition
- Currency of data varies
- Full coverage for airborne gravity in progress
- Federal, state, and local stakeholders collect and submit geodetic control data to NGS
- Datasets available through NGS website

Geodetic Control Datasets – Airborne Gravity



Geodetic Control Datasets - CORS



Geodetic Control Datasets – Passive Marks

The screenshot shows the NGS Survey Marks and Datasheets website. The header includes the NGS logo and navigation links: NGS Home, About NGS, Data & Imagery, Tools, Surveys, Science & Education, and a search bar. The main content area is titled "Survey Marks and Datasheets" and "National Geodetic Survey".

Finding Survey Marks and Datasheets
NGS provides information about survey marks (including bench marks) in text **datasheets** or in GIS **shapfiles**. Note some survey markers installed by other organizations may not be available through NGS. To learn more about survey marks, visit our **Frequently Asked Questions (FAQs)**. Visit here for **updates to the Datasheet format**.

Select a data format:

- Datasheets** can be viewed in word processors or as text files. [View an example datasheet online.](#)
- Shapfiles** can be used in GIS software.

Select a retrieval method:

- Interactive Map:** Zoom to your location of interest and search for geodetic control. Use [NGS Data Explorer](#) or [DS Work](#).
- Archived Control:** Download data for an entire state at once (generated once a month). Read more about [archived datasheets](#) and [archived shapfiles](#). Archived control by state is recommended for large downloads (1-20).

Search By: Submit queries based on location (e.g. county) or mark information (e.g. station name).

Mark Recovery
You may find or "recover" a survey mark and review information about it online. Sometimes, you may want to update the information about a mark you find by reporting its current condition or submitting a photograph. This can be very helpful if you find physical evidence that the mark is destroyed. [Learn more about submitting a recovery note online.](#)

Tidal Bench Marks
Tidal bench mark also refers to a stable object containing a marked point of known elevation with respect to a datum. Some tidal bench marks have known elevations referenced to both geodetic datums (e.g. North American Vertical Datum of 1988 or NAVD 88) and local datums (e.g. Mean Sea Level or MSL). [You can retrieve this tidal elevation information online.](#)

Retrieval Options:

- Interactive Map:** Click to browse map for survey control.
- In the menus below click the icons for different formats: for text Datasheets or for GIS Shapfiles.

Archived Control

Monthly Archives by State:

Search By

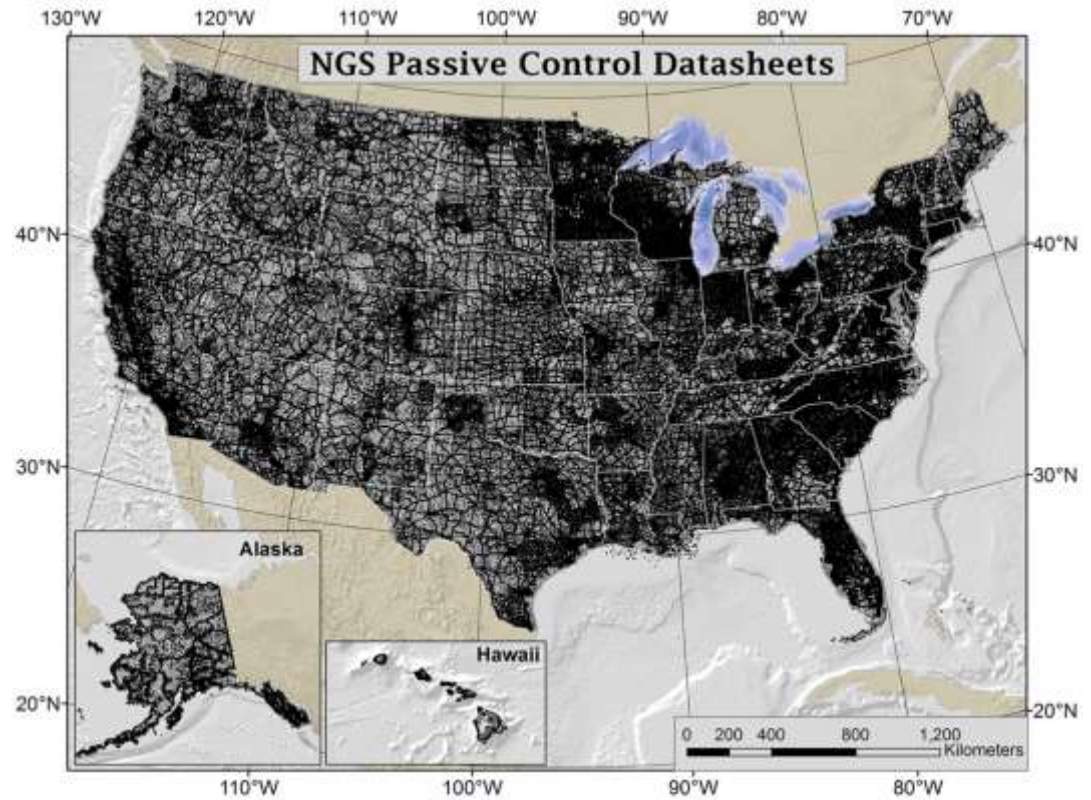
- Station Name(s)
- PIDs - Permanent Identifiers
- County
- Radial Search
- Rectangular Search
- USGS Quad(s)
- Project Identifier(s)
- Load Date(s)
- CORS Site ID(s)

For NGS internal use only

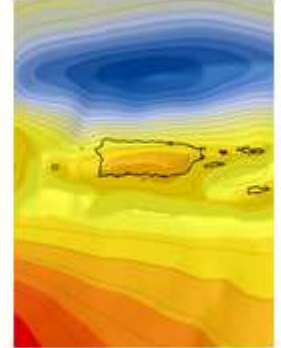
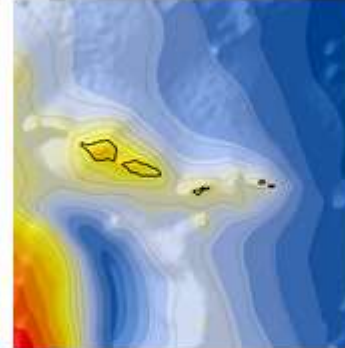
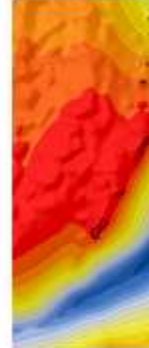
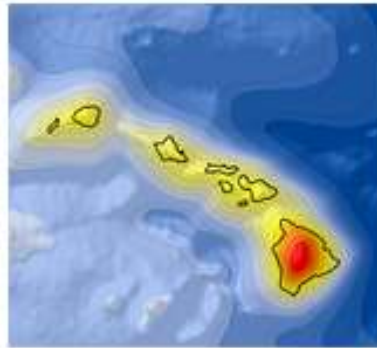
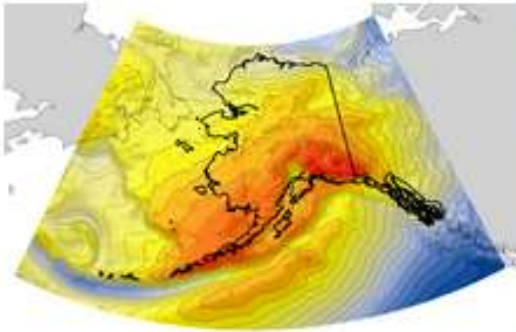
Website Owner: National Geodetic Survey / Last modified by NGS Information Center Dec 10 2014

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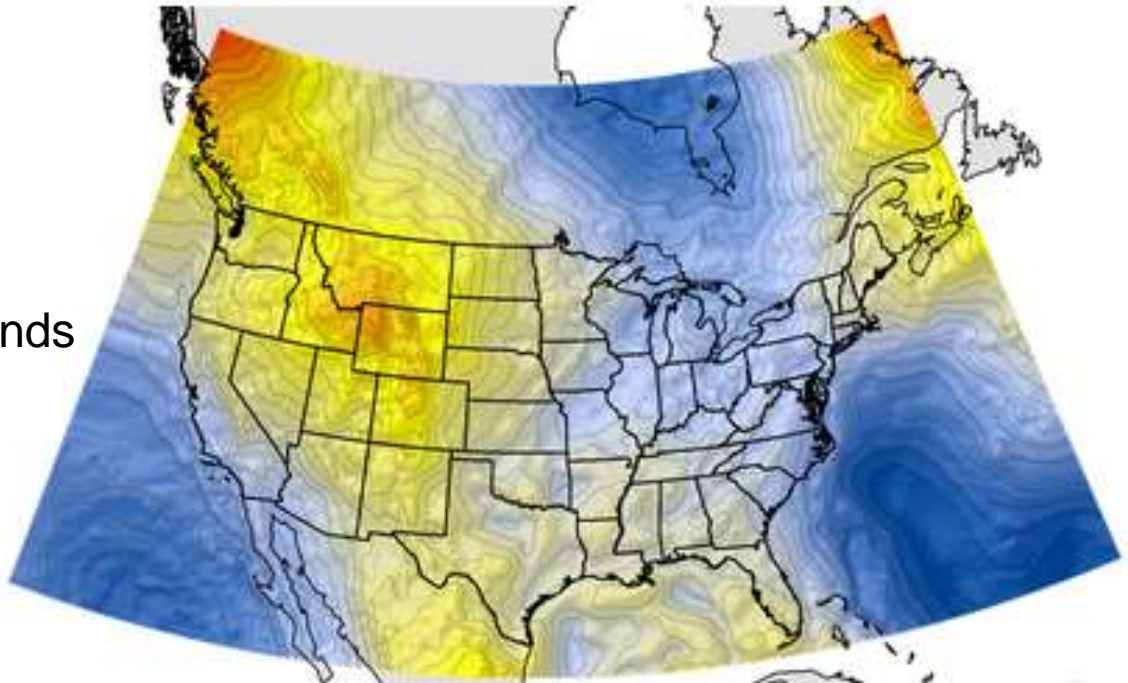
~800,000 Published Geodetic Control Datasheets



Geodetic Control Datasets – Geoid Models



- CONUS
- Alaska
- Hawaii
- American Samoa
- Puerto Rico & US Virgin Islands
- Guam and Northern Mariana Islands

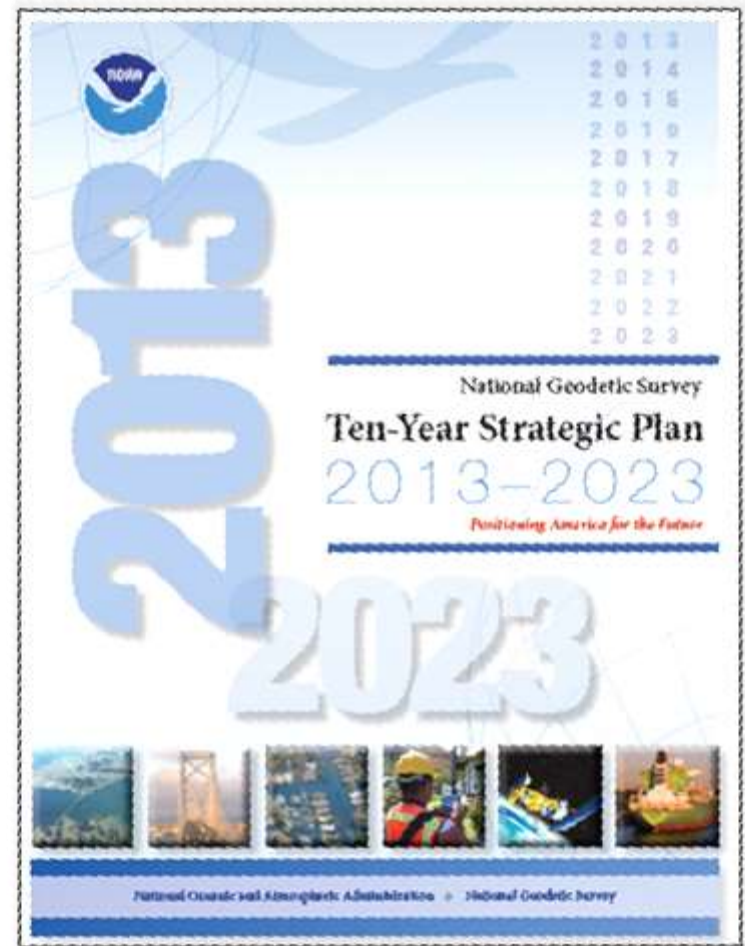


The National Geodetic Survey Ten-Year Plan

Support the users of the National Spatial Reference System.

Modernize and improve the National Spatial Reference System.

Expand the National Spatial Reference System stakeholder base through partnerships, education, and outreach.



New Datums are coming in 2022!

Both a new geometric and a new geopotential (vertical) datum will be released in 2022 following FGCS approval.

NGS will provide the tools for geospatial users to easily transform between the new and old datums.

