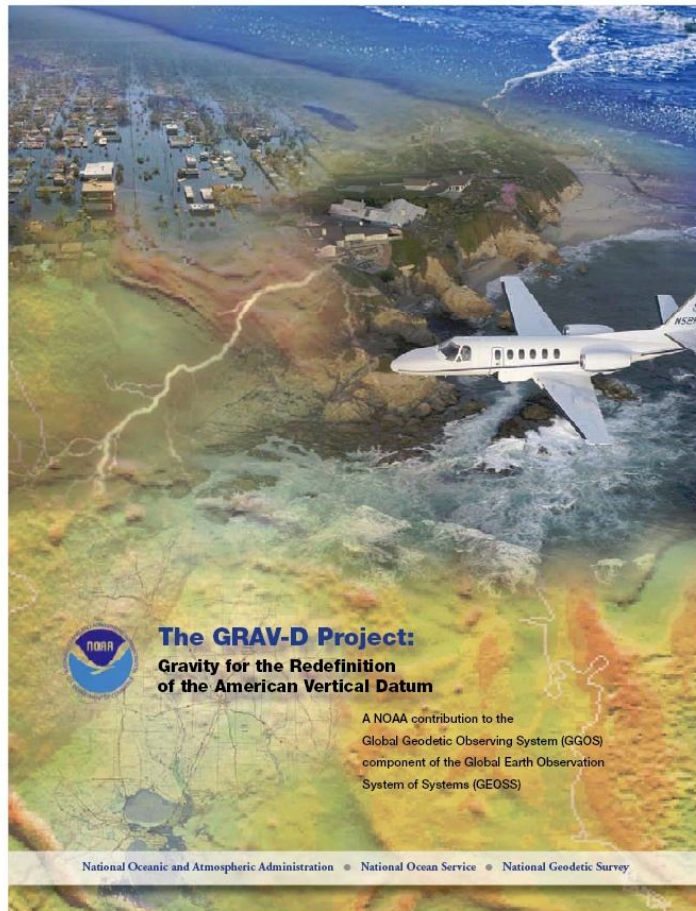


Workshop on Long Term Monitoring of Geoid Change

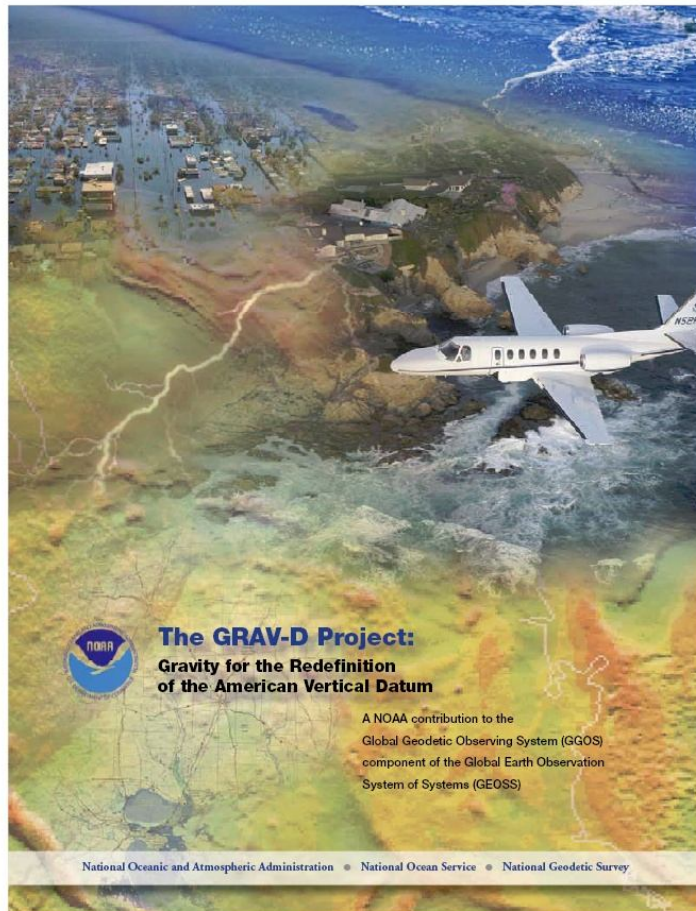
Steering Committee Meeting

GRAV-D Objectives



- Define a high-accuracy gravimetric geoid model over the United States and its territories (at least)
- Redefine the official vertical datum as the geoid
- Realize the datum through the use of GNSS technology, and
- **Target: 2 cm accuracy orthometric heights** derived from GNSS and a geoid model

The GRAV-D Project



- Three Thrusts of GRAV-D:
 - Gravity field “snapshot”: get initial baseline through airborne campaign
 - “Slow-motion movie”: Long-term monitoring of geoid change
 - Regional partnership surveys
- If fully funded, GRAV-D would produce a new vertical datum in 10 years

Long-Term Geoid Monitoring

- Address the time-varying component to keep geoid accurate as time passes
- Upgrade of the Table Mountain Geophysical Observatory (TMGO)
- Creation of a long-term measurement plan

TMGO



Before



After



New and Upgraded Instruments

- New A-10 Absolute Gravimeter
- Upgrading relative meters
- Repairing SG



Long-Term Geoid Monitoring and GRAV-D

Register Agenda Travel Information



2009 Workshop on Monitoring North American Geoid Change

A Collaboration Between Canadian Height Modernization and GRAV-D

October 21, 22, and 23, 2009
Boulder, Colorado

Agencies responsible for vertical reference frames in Canada and the United States are moving towards the adoption of a gravimetric geoid model as their datum surface. With that comes the requirement of tracking changes to the geoid. This workshop will seek to develop a collaborative plan to use common standards to monitor the geoid model over North America, through a combination of a dedicated absolute gravity campaign and reliance on continued satellite gravity missions.

National Geodetic Survey Positioning America for the Future

- A primary mission goal is to model the *dynamic geoid* for North America
- IAG-sponsored workshop was held in Boulder to address how to monitor geoid change
- Included representatives from the absolute/relative gravity communities, GRACE, and CORS
- Formed a steering committee of interested parties to help craft plan to monitor geoid change
- Group will re-convene at CMOS-CGU meeting in Ottawa in May/June

Workshop Objectives

- How do we predict geoid change in order to construct our sampling plan?
- Once measurements are made and change is detected, how is the geoid updated to reflect those changes?
- What sampling strategy (given our resources and existing measurement programs) will best capture geoid change? Partnerships?
- **Develop a draft plan of a measurement campaign**