



# Location, Location and Elevation!

*Billions of Dollars in Benefits to the Nation from NOAA Positioning Services*

## Invitation to Congressional Briefing:

**Monday, June 15, 2009**

**10:00AM to 11:00AM**

**U.S. Capitol Visitor Center**

**Room 215**

safe evacuation routes  
floodplain mapping  
precision agriculture  
predicting sea level rise  
better levee heights  
precise storm surge modeling  
positioning  
community resilience  
automated construction  
crustal motion

### Invited speakers include:

**Senator Mark Begich** (D-AK), *invited*

**Senator Mary Landrieu** (D-LA), *invited*

**Juliana Blackwell**  
*Director, NOAA's National Geodetic Survey*

**Windell Curole**  
*General Manager, South Lafourche Levee District,  
Galliano, Louisiana*

**Roy Dokka**  
*Director, Louisiana Spatial Reference Center  
and Professor, Civil and Environmental Engineering,  
Louisiana State University*

**Nick Mastrodicasa**  
*Project Manager, Alaska Aviation Safety Project,  
Statewide Digital Mapping Initiative*

**Gary Thompson**  
*Director, North Carolina Geodetic Survey*

**Irv Leveson**  
*Expert in Economic and Strategic Analysis,  
Leveson Consulting*

A new independent study shows **billions of dollars in benefits to states and communities** from NOAA's positioning products and services, including the fundamental geospatial infrastructure for transportation, mapping and charting, and a multitude of scientific and engineering applications.

Details of the study and a new NOAA initiative to more accurately establish precise elevations will be discussed in a briefing presented by NOAA's National Geodetic Survey on **Monday, June 15, 2009**.

**Critical areas to benefit from NOAA's positioning products include** the calculation of sea level rise, precision agriculture, vessel under-keel and bridge clearances, establishment of safe hurricane evacuation routes, subsidence monitoring, storm surge modeling, improved flood plain mapping, crustal motion monitoring, restoration of coastal habitats, and many other applications.

RSVP requested, but not required. Please RSVP to:  
[NGS.RSVP@NOAA.GOV](mailto:NGS.RSVP@NOAA.GOV)

**[WWW.NGS.NOAA.GOV](http://WWW.NGS.NOAA.GOV)**

Refreshments provided by *The American Surveyor* magazine.





## Rich Rewards from NOAA's CORS and GRAV-D Programs

Since 1807, **NOAA's National Geodetic Survey (NGS)** and its predecessor agencies have partnered with surveyors in both the public and private sectors to place hundreds of thousands of survey marks throughout the United States, **determining positional information** for each mark. Each survey mark is published with accurate horizontal and/or vertical information such as latitude, longitude, and/or height. This collection of more than 1,500,000 points, plus more than 1,300 **Continuously Operating Reference Stations (CORS)** which the National Geodetic Survey coordinates and monitors, form the **National Spatial Reference System (NSRS)**. **The NSRS provides more than \$2.4 billion in potential annual benefits to the U.S. economy**, according to a new independent study. The study finds that the NOAA CORS network alone provides an estimated \$758 million per year in benefits.

The study estimates that an additional \$522 million in annual economic benefits could be generated by the implementation of a new vertical reference system, allowing users to **determine more precise elevations using the Global Positioning System (GPS)**, with approximately \$240 million saved from improved floodplain management alone. Development of this new reference system would result from the completion of a new NOAA initiative, **Gravity for the Redefinition of the American Vertical Datum (GRAV-D)**, which will allow surveyors and scientists to employ GPS to **determine more precise and accurate elevations than currently possible, in less time and with less effort**. Because the current



vertical datum is anchored by less accurate, more costly survey monuments, there are elevation errors ranging from 16 inches to 6 feet relative to sea level. When GRAV-D is successfully completed and the new elevation system is accessed using the CORS network, these **elevation errors will be reduced to just to under an inch**.

The study, conducted for NGS by Leveson Consulting of Jackson, New Jersey, will be followed by a more refined evaluation of the benefits of the CORS network and the future impact of the new NOAA GRAV-D initiative designed to replace the existing North American Vertical Datum established in 1988 (NAVD88).

### For more information, contact NGS:

- **On the Web**  
WWW.NGS.NOAA.GOV
- **NOAA Office of Legislative Affairs**  
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