

National Geodetic Survey

Educational and Training Opportunities at NOAA's National Geodetic Survey



National Oceanic and Atmospheric Administration

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FIG, San Jose Costa Rica
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Casey Brennan

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Overview

- **Part 1: Educational Lesson Plans and activities**
- **Part 2: Workshops and training**
- **Part 3: The COASTAL program**

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Education

- **Surveying is an aging profession in the USA, and there is a need to involve and expose younger people to the field**
- **GPS technology is an opportunity to grab peoples attention (and keep it)**
- **Teachers and students want to work with real data and "solve" real problems**

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The Geodesy Tutorial



<http://oceanservice.noaa.gov/education/kits/geodesy/welcome.html>

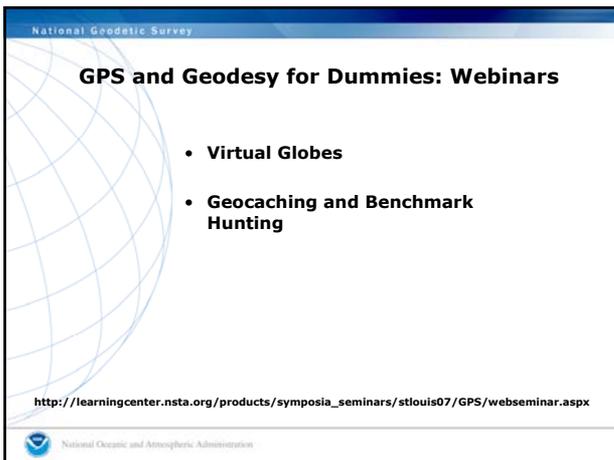
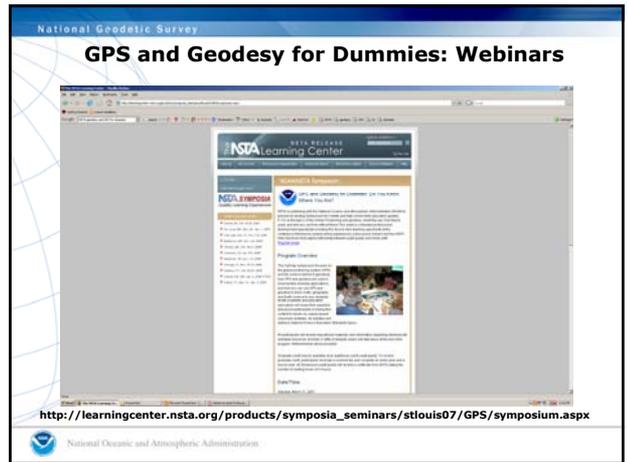
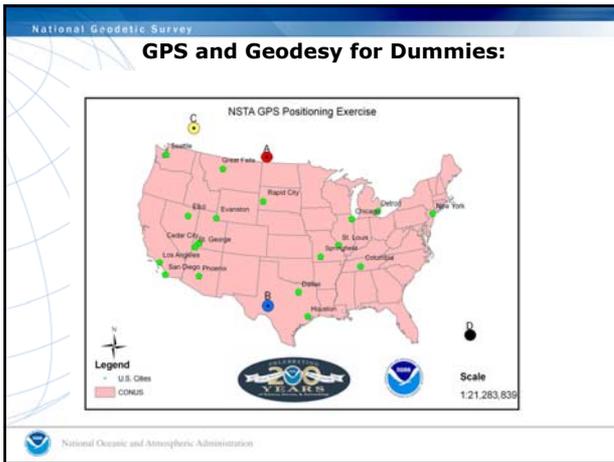
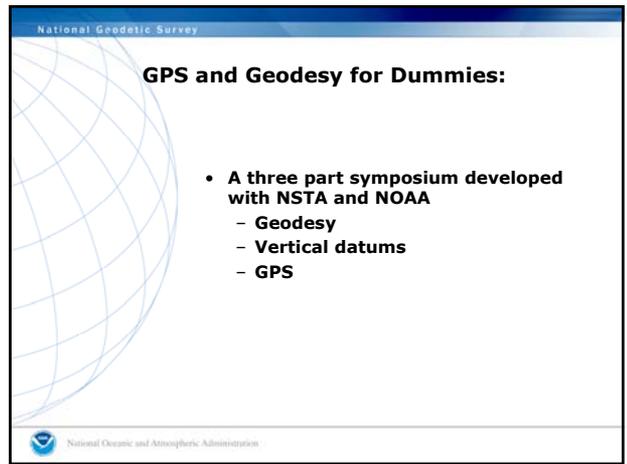
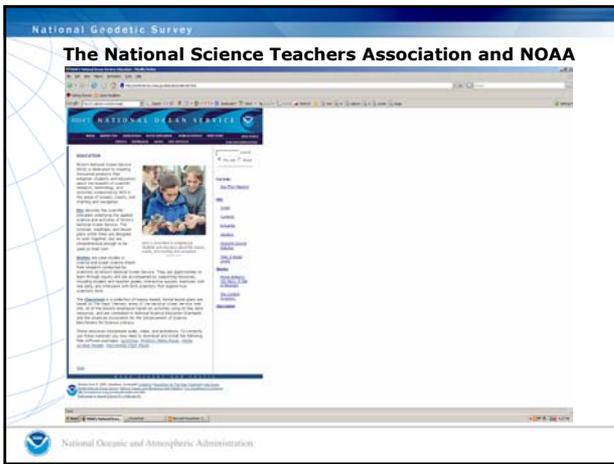
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NGS Workshops:

- GPS Data Collection
- GPS Processing (PAGES)
- Adjusting GPS projects using NGS ADJUST software
- Leveling
- Positioning Accuracy and Standards
- State Plane Coordinates and Datum Transformations
- Implementation of Height Modernization
- CORS Usage
- OPUS
- RTK/RTN
- Tidal and Geodetic Vertical Datums
- NAVD 88
- Fundamentals or Basics of Geodesy/Datums and Map Projections
- GPS-Derived Heights
- Development, Implementation and Future of NSRS
- Developing an Accurate GIS/LIS
- Submission of GPS Survey Projects to NGS
- NGS Products and Services
- Calibration Baselines
- Using GPS and Geodesy to teach math and science
- NGS Educational materials and professional workshops: what's out there

Digital Leveling workshop



Potential future workshops

- Gravity Collection
- Gravity Processing
- Discreet series of classes under the 'Height Modernization' heading, that may include technical information in addition to the federal grants process
- Future direction of workshops/classes may be guided by feedback from the County Scorecard (GPRA)

Corbin, Virginia



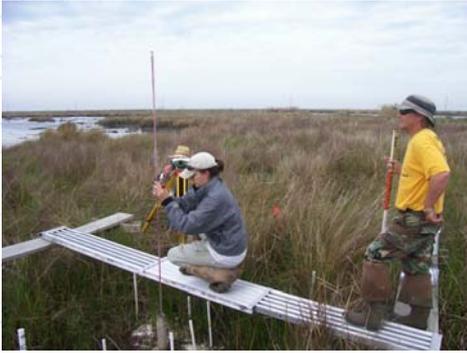
Classes most likely to be offered at the Corbin Training Center:

- Leveling
- Gravity Collection and Processing
- PAGES/ADJUST
- Training on specific equipment
- RTK
- Various aspects of height modernization, such as leveling, GPS collection and processing, and the federal grants process

The NOAA COASTAL Program



The NGS COASTAL Program



The NGS COASTAL Program



Conclusion and discussion

- **Lots of Educational products are available, free of charge**
- **Training opportunities should be increasing**
- **Geodesy and Surveying will play an increasingly large role in Coastal Management as climate change become a reality**